# ANSI Approved Standards

Listed below are all ANSI approved standards as of 3/23/2007. Many of these ANSI approved standards that are published are available in electronic format (PDF) via ANSI's Electronic Standards Store (ESS) at http://webstore.ansi.org.

## 3 (3-A Sanitary Standards, Inc.)

## AA (Aluminum Association)

ANSI H35.1/H35.1M-2006, American National Standard Alloy and Temper Designation Systems for Aluminum

*Covers systems for designating wrought aluminum and wrought aluminum alloys, aluminum and aluminum alloys in the form of castings and foundry ingot, and the tempers in which wrought products and castings are produced. Covers both US Customary and Metric (SI) Units.*

ANSI H35.2(M)-2006, Dimensional Tolerances for Aluminum Mill Products (Metric)

*This standard includes dimensional tolerance for aluminum mill products accepted by both the aluminum industry and users of the metal. They are the basis of dimensional tolerances specified in government, technical societies and other specifications for aluminum.*

ANSI H35.2-2006, Dimensional Tolerances for Aluminum Mill Products

*This standard includes dimensional tolerance for aluminum mill products accepted by both the aluminum industry and users of the metal. They are the basis of dimensional tolerances specified in government, technical societies and other specifications for aluminum.*

ANSI H35.3-1997 (R2006), Designation System for Aluminum Hardeners

*Covers a system for designating aluminum hardeners used primarily for the addition of alloying, or grain refining elements, or modifiers to aluminum alloy melts.*

ANSI H35.4-2006, Designation System for Unalloyed Aluminum

*This Standard provides a system for designating unalloyed aluminum not made by a refining process and used primarily for remelting.*

ANSI H35.5-1993 (R2006), Nomenclature System for Aluminum Metal Matrix Composite Materials

*Covers system for designating wrought and cast aluminum metal matrix composite materials by appending suffixes to existing aluminum designation systems, including generic tempers.*

## AAMI (Association for the Advancement of Medical

ANSI/AAMI AT6-2005, Autologous Transfusion Devices

*Establishes labeling and performance requirements, test methods, and terminology that will help establish a reasonable level of safety and efficacy for autologous transfusion devices. Specifically, includes requirements for sterile, disposable systems and associated electromechanical hardware designed to collect and filter or process, or both, extravasated blood for reinfusion or erythrocytes or filtered whole blood into the patient's circulation. Aspects of these systems related to collection, anticoagulation (systemic and regional), storage, processing and filtration, and reinfusion are within the scope of this standard.*

ANSI/AAMI BE78-2002, Biological Evaluation of Medical Devices – Part 10: Tests for Irritation and Sensitization

*Gives guidance to agencies, manufacturers, research laboratories and others for evaluating the interactions of medical devices with blood.*

ANSI/AAMI BE78-2002/A1-2006, Biological evaluation of medical devices - Part 10: Tests for irritation and delayed-type hypersensitivity (Amendment 1)

*Changes clauses 4(d), 6.4.4.3.5, 6.4.5.3(e), 7.5.4.3.1, and Annex B.*

ANSI/AAMI BE83-2006, Biological evaluation of medical devices - Part 18: Chemical characterization of materials

*Describes a framework for the identification of a material and the identification and quantification of its chemical constituents.*

ANSI/AAMI BF64-2002, Leukocyte Reduction Filters

*Contains labeling requirements, performance requirements, test methods, and terminology for disposable filters used for the reduction of leukocytes from blood or blood components during transfusion.*

ANSI/AAMI BF7-1989 (R2002), Blood Transfusion Micro-Filters

*Describes safety and performance requirements for disposable microfilters used for the removal of microaggregates from blood or blood products during transfusion.*

ANSI/AAMI BP22-1994 (R2006), Blood Pressure Transducers

*Specifies safety and performance requirements for transducers, including cables, designed for blood pressure measurements through an indwelling catheter or direct puncture and disclosure requirements to permit the user to determine compatibility between the transducer and blood pressure monitor.*

ANSI/AAMI DF80-2003, Medical electrical equipment - Part 2-4: Particular requirements for the safety of cardiac defibrillators (including automated external defilrillators)

*Specifies requirements for the safety of medical electrical equipment intended to defibrillate the heart by an electrical pulse via electrodes applied either to the patient's skin (external electrodes) or to the exposed heart (internal electrodes). This standard does not apply to implantable defibrillators, remote control defibrillators, external transcutaneous pacemakers, or separate cardiac monitors. This adoption of an international standard with modifications was previously listed for comment under AAMI/IEC 60601-2-4.*

ANSI/AAMI EC11-1991 (R2001), Diagnostic Electrocardiographic Devices

*Establishes minimum safety and performance requirements for electrocardiographic (ECG) systems with direct writing devices which are intended for use, under the operating conditions specified in this standard, in the analysis of rhythm and of detailed morphology of complex cardiac complexes. Subject to this standard are all parts of the electrocardiographic system necessary to obtain the signal from the surface of the patient's body, to amplify this signal, and to display it in a form suitable for diagnosing the heart's electrical activity.*

ANSI/AAMI EC12-2000 (R2005), Disposable ECG Electrodes

*This standard contains minimum labeling, safety and performance requirements; test methods; and terminology for disposable electrocardiographic electrodes.*

ANSI/AAMI EC13-2002, Cardiac Monitors, Heart Rate Meters, and Alarms

*Establishes minimum safety and performance requirements for cardiac monitors, heart rate meters, and alarms, which are used to acquire and/or display electrocardiographic signals with the primary purposes of continuous detection of cardiac rhythm.*

ANSI/AAMI EC38-1998, Ambulatory Electrocardiographs

*Establishes minimum safety and performance requirements for long-term electrocardiographic monitoring devices (ECGs), also commonly called ambulatory electrocardiographs (AECGs), that are intended for use under the operating conditions specified in this standard, in the analysis of rhythm and of relevant morphology of cardiac complexes.*

ANSI/AAMI EC53-1995 (R2001), ECG Cables and Wires

*Covers cables and patient leadwires used for surface electrocardiographic (ECG) monitoring in cardiac monitors. This standard covers both disposable and reusable leadwires.*

ANSI/AAMI EC53A-1998 (R2001), ECG Cables and Wires

*Covers cables and patient leadwires used for surface electrocardiographic (ECG) monitoring in cardiac monitors. This standard covers both disposable and reusable leadwires.*

ANSI/AAMI EC57-1998 (R2003), Testing and Reporting Performance Results of Cardiac Rhythm and ST Segment Measurement Algorithms

*This recommended practice establishes a method for testing and reporting the performance of algorithms used to detect cardiac rhythm disturbances, including the ST segment.*

ANSI/AAMI EC71-2001, Standard Communications Protocol for Computer-Assisted Electrocardiography

*Covers the two-way digital transmission of remote requests and results between digital electrocardiographs (ECG carts) and heterogeneous computer systems (hosts). It documents the common conventions required for the cart-to-host as well as cart-to-cart interchange of specific patient data (demographic, recording…), ECG signal data, ECG measurement and ECG interpretation results.*

ANSI/AAMI EQ56-1999 (R2004), Recommended Practices for a Medical Equipment Management Program

*Specifies the minimum required characteristics for a management program designed to minimize certain risks associated with equipment that is used during routine care of patients in a health care organization. The document addresses the structure of the program, the documentation that must be produced by the program, and the staffing and resources allocated to those responsible for maintaining the medical equipment.*

ANSI/AAMI ES60601-1-2005, Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance

*Baseline of standards for the safety of all medical electrical equipment used by or under the supervision of qualified personnel in the general medical and patient environment. Also contains certain requirements for reliable operation to ensure safety.*

ANSI/AAMI HE48-2001, Human Factors Engineering Guidelines and Preferred Practices for the Design of Medical Devices

*To provide ergonomic information and human factors engineering guidance so that optimum user and patient safety, system safety and performance, and operator effectiveness will be reflected in medical device design. Specifically, the recommended practice deals with the controls, displays, consoles, size, weight, and general user interface design of medical devices and is extensively illustrated. User instructions, manuals, software, and algorithms associated with medical devices are also discussed briefly.*

ANSI/AAMI ID26-2004, Medical Electrical Equipment - Part 2: Particular Requirements for the Safety of Infusion Pumps and Controllers

*Establishes minimum labeling, safety, performance, and testing requirements for electromechanical infusion devices that have a pumping or gravity-feed controlling function, that deliver fluid from either a separate or a self-contained source, and that are intended for use with parenteral fluids for such purposes as parenteral nutrition and administration of drugs and routine fluids. Public review of this revised document was originally announced in the May 21 2004 edition of ANSI Standards Action, and closed on July 20 2004. Comments received by a member of the document's authoring committee prompted the two additional revisions encompassed in the current review.*

ANSI/AAMI ID54-1996 (R2005), Enteral Feeding Set Connectors and Adapters

*Specifies safety requirements for enteral feeding set connectors and adapters.*

ANSI/AAMI II36-2004, Infant Incubators

*Establishes safety requirements for baby incubators with the view to minimizing hazards to the patient and user. It also specifies tests by which compliance requirements can be verified. It does not apply to transport incubators nor infant radiant warmers which are covered in other publications.*

ANSI/AAMI II51-2004, Medical electrical equipment - Part 2: Particular requirements for safety of transport incubators

*Specifies safety requirements for transport incubators with the view to minimizing hazards to the patient and user. It also specifies tests by which compliance requirements can be verified. It does not apply to infant incubators nor infant radiant warmers which are covered in other publications.*

ANSI/AAMI NS14-1995 (R2002), Implantable Spinal Cord Stimulators

*This standard establishes safety and performance requirements for internally and/or externally powered implantable spinal cord stimulators. This standard covers all electrode configurations and all elements of the spinal cord stimulation system. The system consists of an implanted pulse generator, connected electrodes placed over the spinal cord, and an external transmitter or programmer for transmitting energy and/or information across the patient's skin to the implanted pulse generator.*

ANSI/AAMI NS15-1995 (R2002), Implantable Peripheral Nerve Stimulators

*Establishes safety and performance requirements for internally and/or externally powered implantable peripheral nerve stimulators. This standard covers all elements of the peripheral nerve stimulation system, which consists of an implanted pulse generator, connecting electrodes placed on or around the nerve, and an external transmitter or programmer for transmitting energy and/or information across the patient's skin to the implanted pulse generator.*

ANSI/AAMI NS28-1988 (R2006), Intracranial Pressure Monitoring Devices

*Establishes minimum labeling, safety, and performance requirements for intracranial pressure monitoring devices, whether percutaneous, fully implantable, or noninvasive. Also covered by this standard are test and calibration methods needed to establish compliance with the standard.*

ANSI/AAMI PAC49-1993 (R2000), Pacemaker Emergency Intervention System

*Specifies labeling and performance requirements for a pacemaker emergency intervention system (EIS), which consists of a magnet and a bradycardial pacemaker. When a pacemaker conforming to this standard is perceived to be operating in a nonstandard way, or in a way that is not understood by the examiner, the magnet can be used to reprogram the pacemaker to a standard mode as specified by the standard. An EIS is intended to be used in emergency rooms, clinics, or other medical locations where a physician skilled in pacemakers is not immediately available. Follow-up to use of the EIS should always occur so that the pacemaker can be reprogrammed to an optimum setting by a physician skilled in the use of pacemakers.*

ANSI/AAMI PB70-2003, Liquid Barrier Performance and Classification of Protective Apparel and Drapes Intended for Use in Health Care Facilities

*Establishes a barrier performance classification system for protective apparel and drapes used in health care facilities. It provides manufacturers with a consistent basis for creating device labeling claims regarding barrier efficacy against liquid-borne microorganisms. Through labeling requirements, the standard is also intended to assist end-users in selecting the appropriate protective apparel and drapes to inhibit the transfer of microorganisms associated with blood, body fluids, and other potentially infections materials (OPIM). The standard uses industry-accepted laboratory test methods to form the basis for barrier claims.*

ANSI/AAMI PC69-2000, Active Implantable Medical Devices - Electromagnetic Compatibility - EMC Test Protocols for Implantable Cardiac Pacemakers and Implantable Cardioverter Defibrillators

*Specifies test methods appropriate to the interference frequencies at issue. The standard may specify performance limits or require disclosure of performance in the presence of electromagnetic emitters where appropriate. Provides manufacturers of electromagnetic emitters with information about the level of immunity to be expected from active implantable cardiovascular devices.*

ANSI/AAMI RD16-1996 (R2005), First-Use Hemodialyzers

*Establishes labeling requirements, safety and performance requirements, and tests for hemodialyzers in the purification of the blood by diffusion and convection between the blood and a solution of chemicals through a semipermeable membrane.*

ANSI/AAMI RD16-1996/A1-2002 (R2005), Hemodialyzers

*Establishes labeling requirements, safety and performance requirements, and tests for hemodialyzers in the purification of the blood by diffusion and convection between the blood and a solution of chemicals through a semipermeable membrane.*

ANSI/AAMI RD17-2005, Hemodialyzer Blood Tubing

*Provides minimum requirements to ensure safe and effective performance of hemodialysis blood tubing sets. Includes all tubing segments which are used to transport blood (or fluids) from a patient's vascular access device to a hemodialyzer, as well as all tubing segments that are used to transport blood (or fluids) to a patient's vascular access device from a hemodialyzer. This standard is technically identical to the 1994 standard and its 2002 amendment but has been consolidated into a single document and informative material (the committee roster and foreword) have been updated."*

ANSI/AAMI RD47-2002, Reuse of Hemodialyzers

*This recommended practice is addressed to the physician responsible for reprocessing hemodialyzers. It covers personnel and patient considerations, records, equipment, physical plant and environmental safety, reprocessing material, patient identification and hemodialyzer labeling, reprocessing and storage procedures, disposition of rejected dialyzers, preparation for subsequent use, patient monitoring, and quality assurance and quality control.*

ANSI/AAMI RD47:2002/A1:2003, Reuse of Hemodialyzers Amendment 1

*This amendment modifies storage temperature requirements for used dialyzers prior to reprocessing.*

ANSI/AAMI RD5-2003, Hemodialysis Systems

*Covers the dialysis machine used to proportion dialysate, monitor the dialysate and the accessories normally found on the dialysis machine.*

ANSI/AAMI RD52-2004, Dialysate for Hemodialysis

*The intent of this recommended practice is to provide dialysis practitioners with guidance on the preparation of dialysate for hemodialysis and related therapies, from the point at which municipal water enters their dialysis facility to the point at which the final dialysate enters the dialyzer. Included in the scope of the recommended practice is: (1) equipment used to purify and distribute water used for the preparation of dialysate and other hemodialysis applications, (2) equipment used to prepare concentrate from powder at a dialysis facility, and (3) preparation of the final dialysate from purified water and concentrate.*

ANSI/AAMI RD61-2006, Concentrates for Hemodialysis

*Specifies manufacturing, labeling and testing requirements for concentrates to be diluted for use as dialyzing fluids in hemodialyzers. The requirements established by this standard will help ensure the effective, safe performance of hemodialysis concentrates and related materials. This document is a revision, in part, of ANSI/AAMI RD5:1993, Hemodialysis systems.*

ANSI/AAMI RD62-2006, Water Treatment Equipment for Hemodialysis Applications

*Addresses devices used to treat water intended for use in the delivery of hemodialysis. Included in the scope of the standard is water used for (1) the preparation of concentrates from powder at a dialysis facility, (2) the preparation of dialysate, and (3) the reprocessing of dialyzers for multiple use.*

ANSI/AAMI SP10-2002, Manual, Electronic, or Automated Sphygmomanometers

*Establishes safety and performance requirements for all sphygmomanometers, whether non-automated, automated or electronic, that are used with an occluding cuff for the indirect determination of arterial blood pressure. The devices which sense or display pulsations, flow, or sounds in connection with the measurement, display, or recording of blood pressure are included in this document.Establishes safety and performance requirements for all sphygmomanometers, whether non-automated, automated or electronic, that are used with an occluding cuff for the indirect determination of arterial blood pressure. The devices which sense or display pulsations, flow, or sounds in connection with the measurement, display, or recording of blood pressure are included in this document. This standard was listed for public review in the 4/20/2001 issue of Standards Action. It is*

ANSI/AAMI SP10-2002/A1, Manual, electronic or automated sphygmomanometers

*This amendment modifies sections 4.1.3 and 4.4.5.1B of the ANSI/AAMI SP10:2002.*

ANSI/AAMI SP10-2002/A2-2006, Amendment to ANSI/AAMI SP10:2002, Manual, electronic or automated sphygmomanometers

*This is the second amendment to ANSI/AAMI SP10:2002 and will include changes to sections 4.3.1.1; 4.5.2.1; 5.5.1; and 4.2.3.2.A.*

ANSI/AAMI ST24-1999 (R2005), Automatic, General-Purpose Ethylene Oxide Sterilizers and Ethylene Oxide Sterilant Sources Intended for Use in Health Care Facilities

*Covers minimum labeling, safety, performance and testing requirements for ethylene oxide sterilizers that are intended for general-purpose use in health care facilities and that have automatic controls. It also covers labeling, product composition, and container requirements for ethylene oxide sterilant sources and requirements for emission control systems.*

ANSI/AAMI ST35-2003, Safe Handling and Biological Decontamination of Medical Devices in Health Care Facilities and in Nonclinical Settings

*Covers safe handling and biological decontamination of reusable medical devices, design criteria for decontamination areas; staff qualifications and personnel considerations; immediate handling of contaminated items; transport of contaminated items; and decontamination processes. Also includes informative annexes on principles of infection transmission; chemical disinfectants, thermal disinfection; safe handling of devices returned to manufacturers for service, repair, & failure investigation.*

ANSI/AAMI ST40-2004, Table-Top Dry Heat (Heated Air) Sterilization and Sterility Assurance in Dental and Medical Facilities

*Provides guidelines for dry heat sterilization in health care facilities. Covers functional and physical design criteria for work areas; staff qualifications, education, and other personnel considerations; sterilization processing procedures; installation, care and maintenance of table-top dry heat sterilizers; and quality control.*

ANSI/AAMI ST41-1999 (R2005), Ethylene oxide sterilization in health care facilities: Safety and effectiveness

*Covers the safe and effective use of ethylene oxide as a sterilant in health care facilities. The provisions of this document are intended to promote assurance of sterility, help minimize occupational exposure to ethylene oxide, and guide health care personnel in the proper use of processing equipment.*

ANSI/AAMI ST50-2004, Dry Heat (Heated Air) Sterilizers

*Establishes minimum labeling and performance requirements for dry heat (heated air) sterilizers intended for use in dental and physicians offices, laboratories, ambulatory-care clinics, hospitals, and other health care facilities.*

ANSI/AAMI ST55-2003, Table-Top Steam Sterilizers

*Covers minimum labelling, safety, performance and testing requirements for small steam sterilizers that have a volume of lesst that or equal to 2 cubic feet, have automatic controls, generate steam from water within the chanber or from and integral steam generator and provide means of controlling process time and termperature.*

ANSI/AAMI ST58-2005, Chemical sterilization and high-level disinfection in health care facilities

*Provides guidelines for the selection and use of liquid chemical sterilants (LCS) high-level disinfectants (HLDs) and gaseous chemical sterilizers for use in hospitals and other health care facilities. Includes functional and design criteria for chemical sterilization and high-level disinfection processing areas; staff qualifications, education and other personnel considerations; criteria for selecting LCSs/HLDs and gaseous chemical sterilizers; safety and efficacy considerations; preparation of devices for LCS or HLD processing; quality control methods; and quality process development.*

ANSI/AAMI ST63-2002, Sterilization of health care products-Requirements for the development, validation, and routine control of an industrial sterilization process for medical devices-Dry heat

*Specifies requirements and guidance for the development, validation and routine control of a dry heat sterilization process for medical devices. Although the scope of this standard is limited to medical devices, it specifies requirements and provides guidance that may be applicable to other health care products. This standard does not apply to processes that utilize infrared or microwaves as the heating medium and does not detail a specified requirement for designation of a medical device as "sterile".*

ANSI/AAMI ST65-2000, Processing of Reusable Surgical Textiles for Use in Health Care Facilities

*Provides guidelines for the proper handling, processing, and preparation of reusable surgical textiles, either on-site or off-site for use in health care facilities. Specifically addressed are design criteria for functional work areasl staff qualifications, education, training, dress codes, and other personnel considerationsl receiving and handling of soiled surgical textilesl laundry processing considerationl reasport of both soiled and slean surgical textiles; installation, care, and maintenance of laundry equipment; quality control; and regulatory considerations. Definitions of term and a bibliography are provided.*

ANSI/AAMI ST66-1999, Sterilization of Health Care Products - Chemical Indicators - Part 2: Class 2 Indicators for Air Removal Test

*Specifies the requirements for an indicator and alternative test system used to evaluate the effectiveness of air removal during the pre-vacuum phase of pre-vacuum steam sterilization cycles. Additionally, this standard includes test methods and equipment used to meet these performance requirements.*

ANSI/AAMI ST67-2003, Sterilization of health care products - Requirements for products labeled "STERILE"

*Establishes requirements and provides guidance for the selection of an appropriate Sterility Assurance Level (SAL) for terminally sterilized medical devices labeled "sterile." Also establishes acceptance criteria for maximum contamination rates for aseptically-filled products labeled "sterile."*

ANSI/AAMI ST72-2002, Bacterial Endotoxin -Test Methodologies, Routine Monitoring and Alternatives to Batch Testing

*Specifies general criteria to be applied in the determination of bacterial endotoxins (pyrogens) on sterilized or sterilizable healthcare products, components or raw materials. Endotoxin methodologies covered include both qualitative (limit) methods and quantitative (end-point) methods. Determination of pyrogens other than bacterial endotoxins is not covered and acceptable levels for bacterial endotoxins are not covered.This standard was listed for public review in the 4/20/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/AAMI ST77-2006, Containment devices for reusable medical device sterilization

*Covers minimum labeling and performance requirements for rigid sterilization container systems and for instrument cases, cassettes, and organizing trays.*

ANSI/AAMI ST79-2006, Comprehensive guide to steam sterilization and sterility assurance in health care facilities

*This recommended practice covers steam sterilization in health care facilities. The recommendations are intended to promote assurance of sterility and to guide health care personnel in the proper use of processing equipment. Included within the scope of the recommended practice are functional and physical design criteria for sterilization processing areas (decontamination, preparation, sterilization, and sterile storage areas); staff qualifications, education, and other personnel considerations; processing procedures; installation, care, and maintenance of steam sterilizers; quality control; and quality process improvement.*

ANSI/AAMI ST8-2001, Hospital Steam Sterilizers

*Establishes minimum construction and performance requirements for steam sterilizers that are intended for use in health care facilities, have a volume greater than 2 cubic feet (cu ft) (56 liters [l]), and have automatic controls, generally use an external steam source (but may also have an integral electric boiler), and provide a means for automatically recording time and temperature. Definitions of terms and normative references are also included. NOTE: For the purposes of this standard, health care facilities means hospitals, nursing homes, extended-care facilities, free-standing surgical centers, clinics, and medical and dental offices.*

ANSI/AAMI ST81-2004, Sterilization of medical devices -- Information to be provided by the manufacturer for the processing of resterilizable medical devices

*Specifies the information to be be provided by the medical device manufacturer on the processing of a medical device claimed to be resterilizable. This information is required so that the medical device can be adequately processed and will continue to meet its performance specification.*

ANSI/AAMI SW68-2001, Medical Device Software - Software Life Cycle Processes

*Defines the life cycle requirements for medical device software. The set of processes, activities and tasks described in this standard establishes a common framework for medical device software life cycle processes, with well-defined terminology, that can be referenced by the medical device software industry.*

ANSI/AAMI/IEC 60601-1-2-2001, Medical Electrical Equipment - Part 1: General Requirements for Safety - 2. Collateral Standard: Electromagnetic Compatibility - Requirements and Tests

*Specifies requirements and tests for electromagnetic compatibility of equipment and/or systems and serves as the basis of electromagnetic compatibility requirements and tests in Particular Standards. This standard was originally listed for public review in the April 24, 1998 issue of Standards Action. It is being resubmitted due to substantive changes in the text.*

ANSI/AAMI/IEC 60601-1-2:2001/A1-2004, Medical electrical equipment, Part 1: General requirements for safety. 2. Collateral standard: Electromagnetic compatibility - Requirements and tests (Amendment 1 to IEC 60601-1-2, Ed.2:2001.)

*This amendment deals primarily with requirements for equipment and systems that comply with CISPR 11 Class A Group 2 and are not intended for sale to the general public but are intended for use in domestic establishments or connected to the public mains network..*

ANSI/AAMI/IEC 60601-2-2-2006, Medical electrical equipment, Part 2-2: Particular requirements for the safety of high frequency surgical equipment

*Specifies requirements for the safety of high frequency surgical equipment and HF surgical accessories used in medical practice. High frequency surgical equipment having a rated output power not exceeding 50 W (for example for micro-coagulation, or for use in dentistry or ophthalmology) is exempt from certain of the requirements of this particular standard.*

ANSI/AAMI/IEC 60601-2-21 & 60601-2-21 Amd 1-2000, Medical Electrical Equipment - Part 2: Particular Requirements for the Safety of Infant Radiant Warmers

*Provides minimum labeling, performance, and safety requirements that will help assure a reasonable level of clinical efficacy and patient safety.*

ANSI/AAMI/IEC 60601-2-50-2006, Medical electrical equipment - Part 2-50: Particular requirements for the safety of infant phototherapy equipment

*Specifies requirements applicable to infant phototherapy equipment that by means of visible radiation serves to reduce billirubin in the body of infants suffering from icterus in the first months of life.*

ANSI/AAMI/IEC 62304, Ed.1-2006, Medical device software - Software life-cycle processes

*Defines the life-cycle requirements for medical device software. The set of processes, activities, and tasks described in this standard establishes a common framework for medical device software life-cycle processes.*

ANSI/AAMI/ISO 10993-1-2003, Biological Evaluation of Medical Devices – Part 1: Guidance on Selection of Tests

*Specifies the general principles governing the biological evaluation of medical devices; the categorization of medical devices based on the nature and duration of their contact with the body; and the selection of appropriate tests.*

ANSI/AAMI/ISO 10993-12-2002, Biological Evaluation of Medical Devices – Part 12: Sample Preparation and Reference Materials

*Specifies requirements and gives guidance on procedures to be followed in the preparation of samples of medical devices for testing in biological systems in accordance with the other parts of ISO 10993. Revisions are listed in their entirety.*

ANSI/AAMI/ISO 10993-13-1999 (R2004), Biological evaluation of medical devices - Part 13: Identification and quantification of degradation products from polymers

*Provides guidance on general requirements for the design of tests for identifying and quantifying degradation products from finished polymeric medical devices ready for clinical use.*

ANSI/AAMI/ISO 10993-14-2001 (R2006), Biological Evaluation of Medical Devices - Part 14: Identification and Quantification of Degradation Products from Ceramics

*Specifies two methods for obtaining solutions of degradation products from ceramics (including glasses) for the purpose of quantification. Also gives guidance on the analysis of these solutions.*

ANSI/AAMI/ISO 10993-15-2000 (R2006), Biological Evaluation of Medical Devices - Part 15: Identification and Quantification of Degradation Products from Metals and Alloys

*Provides guidance on general requirements for the design of tests for identifying and quantifying degradation products from finished metallic medical devices or corresponding materials samples finished as ready for clinical use.*

ANSI/AAMI/ISO 10993-16-1997 (R2003), Biological Evaluation of Medical Devices - Part 16: Toxicokinetic Study Design for Degradation Products and Leachables

*Gives principles on how toxicokinetic studies relevant to medical devices should be designed and performed.*

ANSI/AAMI/ISO 10993-17-2002, Biological Evaluation of Medical Devices - Part 17: Establishment of Allowable Limits for Leachable Substances

*Specifies the methods to be used to determine allowable limits for leachable substances in medical devices. It is intended for use in deriving standards and estimating appropriate limits where standards do not exist. It describes a systematic process through which identified risks arising from toxicologically hazardous substances present in medical devices can be quantified.*

ANSI/AAMI/ISO 10993-2-1993 (R2001), Biological Evaluation of Medical Devices – Part 2: Animal Welfare Requirements (included in ANSI/AAMI/ISO 10993-1993: A collection)

*Specifies minimum requirements for the use of animals in biological testing.*

ANSI/AAMI/ISO 10993-2-2006, Biological evaluation of medical devices - Part 2: Animal welfare requirements

*This part of ISO 10993 is aimed at those who commision, design and perform tests or evaluate data from animal tests undertaken to assess the biocompatibility of materials intended for use in medical devices, or of the meducal devices themselves. It specifies the miniumum requirements to be satisfied to ensure and demonstrate that proper provission has been made for the welfare of animals used in animal tests to assess the biocompatibility of materials used in medical devices.*

ANSI/AAMI/ISO 10993-3-2003, Biological Evaluation of Medical Devices – Part 3: Tests for Genotoxicity, Carcinogenicity and Reproductive Toxicity (included in ANSI/AAMI/ISO 10993-1993: A collection)

*Gives guidance to agencies, manufacturers, research laboratories and others for evaluating the interactions of medical devices with blood. This standard was first listed in the February 12, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/AAMI/ISO 10993-4-2002, Biological evaluation of medical devices - Part 4: Selection of tests for interactions with blood

*Gives guidance to agencies, manufacturers, research laboratories and others for evaluating the interactions of medical devices with blood.*

ANSI/AAMI/ISO 10993-4-Amd1-2006, Biological evaluation of medical devices - Part 4: Selection of test for interactions with blood (Amendment 1)

*Amendment to ANSI/AAMI/ISO 10993-4:2002*

ANSI/AAMI/ISO 10993-5-1999, Biological Evaluation of Medical Devices – Part 5: Test for Cytotoxicity: In Vitro Methods (included in ANSI/AAMI/ISO 10993-1993: A collection)

*Describes tests methods to assess the in vitro cytotoxicity of medical devices. These methods specify the incubation of cultured cells either directly through diffusion with extracts of the device, and/or in contact with a device. These methods are designed to determine the biological response of mammalian cells in vitro using appropriate biological parameters. This is the second public review for this standard. It previously appeared in the July 5, 1996 issue of Standards Action and is being resubmitted now due to substantive changes to the text.*

ANSI/AAMI/ISO 10993-6-1993 (R2001), Biological Evaluation of Medical Devices - Part 6: Tests for Local Effects after Implantation

*Specifies test methods for the assessment of the local effects of an implant material on living tissue, at both the macroscopic and microscopic level.*

ANSI/AAMI/ISO 10993-7-1995 (R2001), Biological Evaluation of Medical Devices – Part 7: Ethylene Oxide Sterilization Residuals

*Specifies allowable limits for residual ethylene oxide (EO) and ethylene chlorohydrin (ECH) in individual EO-sterilized medical devices, procedures for the measurement of EO and ECH, and methods for determining compliance so that devices may be realeased.*

ANSI/AAMI/ISO 10993-9-1999 (R2005), Biological Evaluation of Medical Devices - Part 9: Framework for Identification and Quantification of Potential Degradation Products

*Provides general principles for the systematic evaluation of the potential and observed biodegradation of medical devices and on the design and performance of biodegradation.*

ANSI/AAMI/ISO 11135-1994, Medical Devices – Validation and Routine Control of Ethylene Oxide Sterilization

*This standard establishes requirements and guidance for validation and routine control of ethylene oxide sterilization processes for ,,,edical devices.*

ANSI/AAMI/ISO 11137-1-2006, Sterilization of health care products - Radiation - Part 1: Requirements for the development, validation and routine control of a sterilization process for medical devices

*Specifies requirements for validation, process control and routine monitoring in the radiation sterilization for health care products. It applies to continuous and batch type gamma irradiators using the radionuclides 60 Co and*

*137 Cs, and to irradiators using a beam from an electron or x-ray generator.*

ANSI/AAMI/ISO 11137-1994, Sterilization of Health Care Products – Requirements for Validation and Routine Control – Radiation Sterilization

*This standard specifies requirements for radiation sterilization of health care products.*

ANSI/AAMI/ISO 11137-2-2006, Sterilization of health care products - Radiation - Part 2: Establishing the sterilization dose

*Describes methods of determining the minimum dose needed to achieve a specified requirement for sterility and methods to substantiate the use of 25 kGy or 15 kGy as the sterilization dose to achieve a sterility assurance level (SAL) of 10-6. This International Standard also describes methods of dose auditing to demonstrate the continued effectiveness of the sterilization dose.*

ANSI/AAMI/ISO 11137-3-2006, Sterilization of health care products - Radiation - Part 3: Guidance on dosimetric aspects

*Gives guidance on the requirements relating to dosimetry and dose measurement in ISO 11137 parts 1 and 2. It applies to gamma irradiators using the radionuclides 60Co and 137 Cs, and to irradiators using a beam from an electron or x-ray generator.*

ANSI/AAMI/ISO 11138-1-2006, Sterilization of health care products - Biological indicators - Part 1: General requirements

*Specifies general production, labeling and performance requirements for the manufacture of biological indicators and suspensions intended for use in the validation and monitoring of sterilization cycles.*

ANSI/AAMI/ISO 11138-2-2006, Sterilization of health care products - Biological indicators - Part 2: Biological indicators for ethylene oxide sterilization processes

*Provides specific requirements for test organisms and biological indicators intended for use in assessing the performance of sterilizers employing pure ethylene oxide gas or admixtures of the gas with diluent gases at sterilizing temperatures within the range of 20 degrees C to 65 degrees C.*

ANSI/AAMI/ISO 11138-3-2006, Sterilization of Health Care Products - Biological Indicators, Part 3: Biological Indicators for Moist Heat Sterilization Processes

*This part of ISO 11138 provides specific requirements for test organisms, inoculated carriers and biological indicators intended for use in assessing the performance of sterilization processes employing moist heat as the sterilizing agent.*

ANSI/AAMI/ISO 11138-4-2006, Sterilization of health care products - Biological indicators - Part 4: Biological indicators for dry heat sterilization processes

*Provides specific requirements for test organisms, inoculated carriers and biological indicators intended for use in assessing the performance of sterilization processes employing dry heat as the sterilizing agent.*

ANSI/AAMI/ISO 11138-5-2006, Sterilization of health care products - Biological indicators - Part 5: Biological indicators for low-temperature steam and formaldehyde sterilization processes

*Provides specific requirements for test organisms, inoculated carriers and biological indicators intended for use in assessing the performance of sterilization processes employing*
*low-temperature-steam-formaldehyde as the sterilizing agent.*

ANSI/AAMI/ISO 11140-1-2005, Sterilization of health care products - Chemical indicators - Part 1: General requirements

*This standard specifies general requirements and test methods for indicators that show exposure to sterilization processes by means of physical and/or chemical change of substances, and which are used to monitor the attainment of one or more of the variables required for a sterilization process. They are not dependent for their action on the presence or absence of a living organism.*

ANSI/AAMI/ISO 11607-1-2006, Packaging for teminally sterilized medical devices - Part 1: Requirements for materials, sterile barrier systems and packaging

*Specifies the requirements and test methods for materials, preformed sterile barrier systems, sterile barrier systems and packaging systems that are intended to maintain sterility of terminally sterilized medical devices to the point of use.*

ANSI/AAMI/ISO 11607-2-2006, Packaging for terminally sterilized medical devices - Part 2: Validation and requirements for forming, sealing and assembly processes

*Specifies the requirements for development and validation of processes for packaging medical devices that are terminally sterilized and maintain sterility to the point of use. These processes include forming, sealing and assembly of preformed sterile barrier systems, sterile barrier systems and packaging systems.*

ANSI/AAMI/ISO 11737-1-2006, Sterilization of medical devices - Microbiological methods - Part 1: Determination of a population of microorganisms on products

*Specifies requirements and provides guidance for the enumeration and characterization of the population of viable microorganisms on or in a medical device, component, raw material or package.*

ANSI/AAMI/ISO 11737-2-1998, Sterilization of Health Care Products - Microbiological Methods - Part 2: Tests of Sterility Performed in the Validation of a Sterilization Process

*Specifies the general criteria for tests of sterility on medical devices which have been exposed to a treatment with the sterilizing agent that is a fraction of the specified sterilization process. This standard was originally listed for public review in the July 21, 1995 issue of Standards Action. It is being resubmitted due to substantive changes in the text.*

ANSI/AAMI/ISO 11737-3-2004, Sterilization of medical devices - Microbiological methods - Part 3: Guidance on evaluation and interpretation of bioburden data

*Provides guidance on evaluating and interpreting the data generated from a program for monitoring the microbiological quality of medical devices. This guidance does not apply to the use of bioburden data generated for establishing the extent of treatment to be applied in a sterilization process or to microbiological data generated from sampling the environment in manufacturing areas.*

ANSI/AAMI/ISO 13485-2003, Quality Management Systems - Medical Devices - System Requirements for Regulatory Purposes

*Specifies requirements for a quality management system where an organization needs to demonstrate its ability to provide medical devices that consistently meet customer requirements and regulatory requirements applicable to medical devices.*

ANSI/AAMI/ISO 14155-1-2003, Clinical Investigation Of Medical Devices for Human Subjects - Part 1: General Requirements

*Defines procedures for the conduct and performance of clinical investigations of medical devices. Defines procedures for the conduct and performance of clinical investigations of medical devices. This standard was listed for public review in the 12/3/1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/AAMI/ISO 14155-2-2003, Clinical investigation of medical devices for human subjects - Part 2: Clinical investigation plans

*Defines procedures for the conduct and performance of clinical investigations of medical devices.*

ANSI/AAMI/ISO 14160-1998, Sterilization of Medical Devices - Validation and Routine Control of the Sterilization by use of Liquid Chemical Sterilants of Single-Use Medical Devices Incorporating Materials of Animal Origin

*Specifies specific requirements for the development, validation, process control and monitoring of the sterilization of single-use medical devices comprising, in whole or in part, materials of animal origin by the use of chemical sterilants.*

ANSI/AAMI/ISO 14161-2000, Guideline for the Use of Ethylene Oxide and Steam Biological Indicators in Industrial Sterilization Processes

*Provides guidance for the selection, use and interpretation of results from application of biological indicators when used in the development, validation and routine monitoring of sterilization processes. This document applies to biological indicators for which International Standards exist. Adoption of International Standard ISO 14161 as revision of ANSI/AAMI ST34.*

ANSI/AAMI/ISO 14937-2000, Sterilization of Health Care Products - General Requirements for Characteristics of a Sterilizing Agent and the Development, Validation and Routine Control of a Sterilization Process

*Specifies general requirements for the characterization of a sterilizing agent, and for the development, validation and routine control of a sterilization process for medical devices. Although the scope of this standard is limited to medical devices, the principles described may be applied to other health care products. This standard is intended to be applied by process developers, manufacturers of sterilization equipment, manufacturers of products to be sterilized and the organization with responsibility for sterilizing the product. This standard does not supersede or modify the published standards for particular sterilization processes.*

ANSI/AAMI/ISO 14969-1999, Quality Systems - Medical Devices - Guidance on the Application of ISO 13485 and ISO 13488

*Provides guidance for the application of the requirements for quality systems contained in ISO 13485 and ISO 13488. This is the second public review for this standard. It first appeared in the January 3, 1997 issue of Standards Action and is being resubmitted now due to substantive changes to the text.*

ANSI/AAMI/ISO 14971-2000/A1, Medical Devices - Application of Risk Management to Medical Devices - Amendment 1: Annex H - Rationale for the Requirements

*Provides rationale for establishing the various requirements contained in ISO 14971:2000.*

ANSI/AAMI/ISO 14971-2007, Medical devices - Risk management - Application of risk management to medical devices

*Specifies a process for a manufacturer to identify the hazards and hazardous situations associated with medical devices, including in vitro diagnostic (IVD) medical devices, to estimate and evaluate the resulting risks, to control these*
*risks, and to monitor the effectiveness of that control. This standard does not specify acceptable risk levels.*

ANSI/AAMI/ISO 15223-2000, Medical Devices - Symbols to be Used With Medical Device Labels, Labelling and Information to be Supplied

*Identifies symbols and their meanings which may be used to convey information essential to the user and others for safe and effective use of medical devices.*

ANSI/AAMI/ISO 15223/A1-2001, Medical Devices - Symbols to be Used With Medical Device Labels, Labelling and Information to be Supplied - Amendment 1

ANSI/AAMI/ISO 15223/A2-2004, Medical devices- Symbols to be used with medical device labels, labelling and information to be supplied - Amendment 2

*Specifies requirements for a quality management system where an organization needs to demonstrate its ability to provide medical devices that consistently meet customer requirements and regulatory requirements applicable to medical devices.*

ANSI/AAMI/ISO 15225-2000 (R2006), Nomenclature - Specification for a Nomenclature System for Medical Devices for the Purpose of Regulatory Data Exchange

*Specifies requirements and guidance for the construction of a nomenclature for medical devices to facilitate cooperation and exchange of regulatory data on an international level between such interested parties as regulatory authorities, manufacturers, suppliers, health care providers, and end users.*

ANSI/AAMI/ISO 15225-A1-2004 (R2006), Nomenclature - Specification for a nomenclature system for medical devices for the purpose of regulatory data exchange (AMENDMENT 1) pose of Regulatory Data Exchange

*AMENDMENT 1 to ANSI/AAMI/ISO 15225-2000.*

ANSI/AAMI/ISO 15674-2001, Cardiovascular Implants and Artificial Organs - Hard-Shell Cardiotomy/Venous Reservoir System (with/without filter) and Soft Venous Reservoir Bags

*Specifies requirements for sterile, single-use, extracorporeal hard shell cardiotomy/venous reservoir systems and soft venous reservoir bags intended for use as a blood reservoir during cardiopulmonary bypass (CPB) surgery.*

ANSI/AAMI/ISO 15675-2001, Cardiovascular Implants and Artificial Organs - Cardiopulmonary Bypass Systems - Arterial Blood Line Filters

*Specifies requirements for sterile, single-use, arterial filters intended to filter and remove emboli, debris, blood clots, and other potentially hazardous solid and gaseous material from the blood of humans during cardiopulmonary bypass surgery.*

ANSI/AAMI/ISO 15882-2003, Sterilization of health care products - Chemical indicators - Guidance for the selection, use and interpretation of results

*Provides guidance for the selection, use and interpretation of results of chemical indicators used in process definition, validation, and routine monitoring and control of sterilization processes. Applies to chemical indicators for which International Standards exist. Is not applicable to those processes that rely on physical removal of microorganisms, e.g. filtration. Is not intended to apply to combination processes, for example, washer-disinfectors or flushing and steaming of pipelines.*

ANSI/AAMI/ISO 17665-1-2005, Sterilization of health care products - Moist heat - Requirements for development, validation and routine control of a sterilization process for medical devices

*Specifies requirements for the development, validation and routine control of a moist heat sterilization process for medical devices. Moist heat sterilization processes covered by this standard include saturated steam venting processes, saturated steam active air removal processes, air steam mixture processes, water spray processes, and water immersion processes.*

ANSI/AAMI/ISO 18472-2006, Sterilization of health care products - Biological and chemical indicators - Test equipment

*Specifies the requirements for the test equipment to be used to test chemical and biological indicators fro steam, ethylene oxide, dry heat and vaporised hydrogen peroxide processes for conformity to the requirements given in ISO 11140, part 1 for chemical indicators, or the ISO 11138 series for biological indicators. This standard also provides informative methods useful in characterising the performance of biological and chemical indicators for intended use and for routine quality control testing.*

ANSI/AAMI/ISO 25539-1-2003, Cardiovascular Implants - Endovascular Devices - Part 1: Endovascular Prostheses

*Specifies requirements for endovascular prostheses, based upon current medical knowledge. With regard to safety, it gives requirements for intended performance, design attributes, materials, design evaluation, manufacturing, sterilization packaging and information to be supplied by the manufacturer. It should be considered as a supplement to ISO 14630, which specifies general requirements for the performance of non-active surgical implants.*
*NOTE- The document was formerly designated 15539-1 but was changed to 25539-1 at the DIS stage by ISO to distinguish it from ISO/TS 15539.*

ANSI/AAMI/ISO 25539-1-2003/A1, Amendment 1 to ANSI/AAMI/ISO 25539-1:2003, Cardiovascular implants - Endovascular devices - Part 1: Endovascular prostheses: Annex E - Test methods

*The Amendment provides guidance for the development of preclinical test methods to be used to characterize and evaluate endovascular prostheses, and for developing test reports.*

ANSI/AAMI/ISO 5840-2005, Cardiovascular implants - Cardiac valve prostheses

*Outlines an approach for qualifying the design and manufacture of a heart valve substitute through risk management. The selection of appropriate qualification tests and methods are to be derived from the risk assessment. Imposes design specifications and minimum performance specifications for heart valve substitutes where adequate scientific and/or clinical evidence exists for their justification.*

ANSI/AAMI/ISO 7198-2001 (R2004), Vascular Graft Prostheses

*Specifies requirements relating to testing, packaging, labeling and terminology for sterile tubular vascular prostheses intended to replace, bypass or to form shunts between segments of the vascular system in humans.*

ANSI/AAMI/ISO 7199-1996 (R2002), Cardiovascular implants and artificial organs- Blood-gas exchangers (oxygenators)

*Specifies requirements for sterile, single-use, extracorporeal blood-gas exchangers (oxygenators) intended for supply of oxygen to, and removal of carbon dioxide from, the blood of humans. It also applies to heat exchangers that are integral parts of oxygenators and to external equipment unique to the use of the device.*

## AAMVA (American Association of Motor Vehicle Administrators)

ANSI D20-2002, Data Element Dictionary for Traffic Records Systems

*Data Element Dictionary for Traffic Records Systems*
*To provide a common set of coding instruction for data elements related to highway safety, driver licensing, and vehicle registration.*

## ABMA (American Bearing Manufacturers Association)

ANSI B3.1-1992 (R1999), Rolling Element Bearings – Aircraft Engine, Engine Gearbox, and Accessory Applications – Eddy Current Inspection

*Specifies a method of detecting discontinuities in bearing components by means of eddy current interrogation. Applies to rolling element bearings used in aircraft engines, engine gearboxes and accessory applications.*

ANSI B3.2-1992 (R1999), Rolling Element Bearings – Aircraft Engine, Engine Gearbox, and Accessory Applications – Surface Visual Inspection

*This standard provides a sysstem for uniform visual acceptance criteria for surface imperfections on rolling element bearings used in aircraft engine, engine gerabox and accessory applications.*

ANSI B3.3-1992 (R1999), Rolling Element Bearings – Aircraft Engine, Engine Gearbox, and Accessory Applications – Surface Temper Etch

*Applies to rolling element bearings used in aircraft engines, engine gearboxes and accessory applications.*

ANSI/ABMA 10A-2001, Metal Balls for Unground Bearings and Other Uses

*Establishes the requirements for metal balls for unground bearings and for other uses. It is intended to complement the requirements for finished balls for rolling contact bearings contained in ANSI/ABMA/ISO 3290. It contains requirements for materials, physical properties and geometric properties for balls for unground bearings and for other uses. A designation system for ball grades is specified. Informational annexes provide descriptions of measurement of deviation from spherical form, microhardness testing, and case depth measurement.*

ANSI/ABMA 11-1990 (R1999), Roller Bearings, Load Ratings and Fatigue Life for

*Specifies the method of calculating the basic dynamic load rating of roller bearings within the size ranges shown in the relevant ANSI/AFBMA standards.*

ANSI/ABMA 12.1-1992 (R1998), Instrument Ball Bearings – Metric Design

*Covers the characteristics that define the requirements of precision and super-precision instrument ball bearings. It establishes their boundary dimensions, tolerances, internal clearances, and classification for selective assembly. The recommended practices for gauging, frictional torque determination, load rating determination, operational life prediction and yield rate limitation are provided. All components covered by this Standard are designed to S.I. (metric) dimentions and are presented in Part 1 of the tables provided. The equivalent U.S. Customary (inch) dimentions shown in Part 2 of the Tables are provided for the convenience of those using that system.*

ANSI/ABMA 12.2-1992 (R1998), Instrument Ball Bearings – Inch Design

*Covers the characteristics that define the requirements of precision and super-precision instrument ball bearings. It establishes their boundary dimensions, tolerances, internal clearances, and classification for selective assembly. The recommended practices for gauging, frictional torque determination, load rating determination, and operational life prediction an yield rate limitation are provided. All components covered by this standard are designed to U.S. Customary (inch) dimensions and are presented in Part 2 of the tables provided. The equivalent S.I. (metric) dimensions shown in Part 1 of the tables are provided for the convenience of those using that system.*

ANSI/ABMA 13-1987 (R1999), Rolling Bearing Vibration and Noise, Methods of Measuring

*Serves to define and specify, for purposes of bearing quality assurance, the physical quantities measured and the test conditions utilized in measurement of vibration and noise generated by roller bearings.*

ANSI/ABMA 14-1995 (R2001), Housings for Bearings with Spherical Outside Surfaces

*Establishes boundary dimensions and other dimensions, and tolerances values for those dimensions, for pillow block housings, flanged housings and take-up units for use with ball bearings with spherical outside surfaces (insert bearings).*

ANSI/ABMA 15-1991 (R1999), Ball Bearings with Spherical Outside Surfaces and Extended Inner Ring Width

*Specifies boundary dimensions and tolerances for bearings with spherical outside surfaces and extended inner ring width and eccentric locking collars.*

ANSI/ABMA 18.1-1982 (R1999), Radial Needle Roller Bearings, Metric Design

*Includes identification code, boundary dimensions, bearing tolerances, and fitting and mounting practice.*

ANSI/ABMA 18.2-1982 (R1999), Radial Needle Roller Bearings, Inch Design

*Includes identification code, boundary dimensions, bearing tolerances, and fitting and mounting practice.*

ANSI/ABMA 19.1-1987 (R1999), Tapered Roller Bearings – Radial, Metric Design

*Covers metric design radial tapered roller bearings of various types, part numbering systems, boundary dimensions, tolerances, and fitting practices.*

ANSI/ABMA 19.2-1994 (R1999), Tapered Roller Bearings -- Radial – Inch Design

*Covers inch-design radial-tapered roller bearings of various types, part numbering systems, tolerances, and fitting practices.*

ANSI/ABMA 21.1-1988 (R1999), Thrust Needle Roller and Cage Assemblies and Thrust Washers – Metric Design

*Includes identification code, symbols and nomenclature, boundary dimensions, tolerances, and mounting practice.*

ANSI/ABMA 21.2-1988 (R1999), Thrust Needle Roller and Cage Assemblies and Thrust Washers – Inch Design

*Includes identification code, symbols and nomenclature, boundary dimensions, tolerances, and mounting practice.*

ANSI/ABMA 22.2-1988 (R1999), Spherical Plain Radial Bearings, Joint Type, Inch Design

*Defines the characteristics of spherical bearings, joint type such as boundary dimensions, tolerances and terminology.*

ANSI/ABMA 23.2-1988 (R1999), Thrust Bearings of Tapered Roller Type, Inch Design

*Covers bearing number and type identity, symbols and nomenclature, boundary dimensions, tolerances, and mounting dimensions (covers only external dimensions).*

ANSI/ABMA 24.1-1989 (R1999), Thrust Bearings of Ball, Cylindrical Roller and Spherical Roller Types, Metric Design

*This standard covers identification code, symbols and nomenclature, boundary dimensions, tolerances, and mounting dimensions for specified bearings*

ANSI/ABMA 24.2-1989 (R1999), Thrust Bearings of Ball and Cylindrical Roller Types, Inch Design

*Covers identification code, symbols and nomenclature, boundary dimensions, tolerances, and mounting dimensions (external dimensions only).*

ANSI/ABMA 25.2-1990 (R1999), Rolling Bearings, Linear Motion, Recirculating Ball, Sleeve Type – Inch Series

*Covers boundary dimensions, tolerances, and terminology for these bearings.*

ANSI/ABMA 26.2-1994 (R2000), Thin Section Ball Bearings – Inch Design

*Specifies the boundary dimensions, running accuracies and internal clearances for thin-section ball bearings of single-row radial-contact, angular-contact and four-point angular-contact types.*

ANSI/ABMA 4-1994 (R1999), Tolerance Definitions and Gaging Practices for Ball and Roller Bearings

*Provides terms and definitions of tolerances for the boundary dimensions, running accuracy, and internal clearance of ball and roller bearings.*

ANSI/ABMA 7-1995 (R2001), Shaft and Housing Fits for Metric Radial Ball and Roller Bearings (Except Tapered Roller Bearings) Conforming to Basic Boundary Plan)

*Provides the general selection of shaft and housing fits for metric radial ball and roller bearings of tolerance classes ABEC-1 and BREC-1. Bearing type, loading and other design requirements influence the criteria for shaft and housing fits.*

ANSI/ABMA 8.1-1990 (R1999), Ball and Roller Bearing Mounting Accessories, Metric Design

*Establishes dimensions and minimum physical properties of these bearings consistent and compatible with ABMA, ANSI, and ISO standards related to ball and roller bearings. Mounting accessories covered in this standard are used for the location or fixing of ball and roller bearings to the shaft of a machine or mechanism. This is the second public review for this standard. It was originally listed in the January 29, 1999 issue of Standards Action. It is being resubmitted due to substantive changes in the text.*

ANSI/ABMA 8.2-1999, Ball and Roller Bearing Mounting Accessories, Inch Design

*Establishes dimensions and minimum physical properties of these bearings consistent and compatible with ABMA, ANSI, and ISO standards related to ball and roller bearings. Mounting accessories covered in this standard are used for the location or fixing of ball and roller bearings to the shaft of a machine or mechanism. This is the second public review for this standard. It was originally listed in the January 29, 1999 issue of Standards Action. It is being resubmitted due to substantive changes in the text.*

ANSI/ABMA 9-1990 (R2000), Ball Bearings, Load Ratings and Fatigue Life for

*Standard specifies method of calculating basic dynamic, static load ratings of certain rolling bearings.*

ANSI/ABMA/ISO 10285-1992 (R1997), Rolling Bearings, Linear Motion, Recirculating Ball, Sleeve Type – Metric Series

*Specifies the general boundary dimensions, tolerances and definitions for linear motion, recirculating ball, sleeve-type rolling bearings of the metric series.*

ANSI/ABMA/ISO 104-1994, Roller Bearings - Thrust Bearings - Boundary Dimensions, General Plan

*Speciifes the major boundary dimensions of single direction and double direction thrust bearings with flat back faces.*

ANSI/ABMA/ISO 12240-1-1998, Spherical Plain Bearings - Part 1: Radial Spherical Plain Bearings

*Specifies dimension series, tolerances and radial spherical plain bearings.*

ANSI/ABMA/ISO 12240-2-1998, Spherical Plain Bearings - Part 2: Angular Contact Radial Spherical Plain Bearings

*Specifies tolerance values applied to finished, angular, contact radial, spherical, plain bearings before any coating or plating.*

ANSI/ABMA/ISO 12240-3-1998, Spherical Plain Bearings - Part 3: Thrust Spherical Plain Bearings

*Specifies dimensions and tolerances for thrust spherical plain bearings.*

ANSI/ABMA/ISO 12240-4-1998, Spherical Plain Bearings - Part 4: Spherical Plain Bearing Rod Ends

*Specifies dimensions, tolerances and radial internal clearances for various dimension series of spherical plain bearing rod ends.*

ANSI/ABMA/ISO 13411:1997, Aerospace - Airframe Needle Roller, Cylindrical Roller and Track Roller Bearings - Technical Specification

*Specifies the required characteristics, inspections and test, quality assurance and conditions for qualification, static radial loads, acceptance and delivery conditions for needle roller, needle track roller and cylindrical roller bearings used as airframe rolling bearings designed to withstand, under load, slow, rotations and small oscillations only.*

ANSI/ABMA/ISO 13412:1997, Aerospace - Airframe Needle Track Roller, Yoke Type, Single-Row, Sealed - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible static radial loads of inch series, single row, yoke type, needle rollers used in airframe applications.*

ANSI/ABMA/ISO 13413:1997, Aerospace - Airframe Needle Track Roller, Yoke Type, Double-Row, Sealed - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible static radial loads of inch series, double row, yoke type, needle rollers used in airframe applications.*

ANSI/ABMA/ISO 13414:1997, Aerospace - Airframe Needle Roller Bearings, Single-Row, Shielded - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible static radial loads of inch series, single-row, needle roller bearings used in airframe design.*

ANSI/ABMA/ISO 13415:1997, Aerospace - Airframe Needle Roller Bearings, Stud Type, Single-Row, Sealed - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible static radial loads of inch series, single-row, stud type needle track rollers used in airframe application.*

ANSI/ABMA/ISO 13416:1997, Aerospace - Airframe Needle Track Roller, Yoke Type, Single-Row, Sealed - Metric Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible static radial loads of inch series, single-row, stud type needle track rollers used in airframe application.*

ANSI/ABMA/ISO 13417:1997, Aerospace - Airframe Needle Track Roller, Stud Type, Single-Row, Sealed - Metric Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible static radial loads of inch series, single-row, stud type needle track rollers used in airframe application.*

ANSI/ABMA/ISO 14190:1998, Aerospace - Airframe Rolling Bearings: Ball and Spherical Roller Bearings - Technical Specification

*Specifies the required characteristics, inspections and tests, quality assurance and conditions for qualification, permissible static loads, acceptance and delivery conditions for rigid and self-aligning airframe ball and spherical roller bearings.*

ANSI/ABMA/ISO 14191:1998, Aerospace - Airframe Spherical Roller Bearings, Single-Row, Self-Aligning, Diameter Series 3 and 4 - Metric Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads metric series single row, self-aligning spherical roller bearings of diameter series 3 and 4, in accordance with ISO 15, used in airframe applications.*

ANSI/ABMA/ISO 14192:1998, Aerospace - Airframe Spherical Roller Bearings, Single-Row, Self-Aligning, Shielded, Intermediate Duty - Metric Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads metric series single row, self-aligning, shielded, intermediate duty spherical roller bearings used in airframe applications.*

ANSI/ABMA/ISO 14193:1998, Aerospace - Airframe Spherical Roller Bearings, Single-Row, Self-Aligning, Sealed, Extended Inner Ring, Intermediate Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads inch series single row, self-aligning, sealed, intermediate duty spherical roller bearings with extended inner rings used in airframe applications.*

ANSI/ABMA/ISO 14194:1998, Aerospace - Airframe Spherical Roller Bearings, Double-Row, Self-Aligning, Sealed, Extended Inner Ring, Heavy Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads inch series double row, self-aligning, sealed, heavy duty spherical roller bearings with extended inner rings used in airframe applications.*

ANSI/ABMA/ISO 14195:1998, Aerospace - Airframe Spherical Roller Bearings, Double-Row, Self-Aligning, Sealed, Torque Inner Tube Design, Light Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads inch series double row, self-aligning, sealed, torque tube design, light duty spherical roller bearings with cylindrical rollers used in airframe applications.*

ANSI/ABMA/ISO 14196:1998, Aerospace - Airframe Spherical Roller Bearings, Double-Row, Self-Aligning, Sealed, Plain Inner Ring, Heavy Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads inch series double row, self-aligning, sealed, heavy duty spherical roller bearings with plain inner rings used in airframe applications.*

ANSI/ABMA/ISO 14197:1998, Aerospace - Airframe Spherical Roller Bearings, Single-Row, Self-Aligning, Sealed, Intermediate Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads inch series single row, self-aligning, sealed, intermediate duty spherical roller bearings used in airframe applications.*

ANSI/ABMA/ISO 14201:1998, Aerospace - Airframe Ball Bearings, Double-Row, Self-Aligning, Diameter Series 2 - Metric Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissable loads of metric series double row, self-aligned ball bearings of diameter series 2, in accordance with ISO 15, used in airframe applications*

ANSI/ABMA/ISO 14202:1998, Aerospace - Airframe Ball Bearings, Single-Row, Rigid, Diameter Series 0 and 2 - Metric Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of metric series - single row, rigid ball bearings of diameter series 0 and 2, in accordance with ISO 15, used in airframe applications*

ANSI/ABMA/ISO 14203:1998, Aerospace - Airframe Ball Bearings, Single-Row, Rigid, Diameter Series 8 and 9 - Metric Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of metric series single-row, rigid ball bearings in diameter series 8 and 9, in accordance with ISO 15, used in airframe applications.*

ANSI/ABMA/ISO 14204:1998, Aerospace - Airframe Ball Bearings, Double-Row, Rigid, Diameter Series 0 - Metric Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissable loads of metric series double-row, rigid, ball bearings of diameter series 0, in accordance with ISO 15, used in airframe applications.*

ANSI/ABMA/ISO 14206:1998, Aerospace - Airframe Ball Bearings, Single-Row, Rigid, Sealed, Light Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearance and permissible loads of inch series, single-row, sealed, rigid, light duty, ball bearings used in airframe application.*

ANSI/ABMA/ISO 14207:1998, Aerospace - Airframe Ball Bearings, Single-Row, Rigid, Precision, Sealed, Light Duty - Inch Design

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of inch series single-row, sealed, rigid, light duty, ball bearings with increased precision and reduced clearances used in airframe applications.*

ANSI/ABMA/ISO 14208:1998, Aerospace - Airframe Ball Bearings, Single-Row, Rigid, Sealed, Intermediate Duty - Inch Design

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of inch series single-row, sealed, rigid, intermediate duty, ball bearings used in airframe applications.*

ANSI/ABMA/ISO 14209:1998, Aerospace - Airframe Ball Bearings, Single-Row, Rigid, Precision, Intermediate Duty - Inch Design

*Specifies the characteristics, boundary dimensions, tolerances, load ratings of inch series, single-row, sealed, rigid, intermediate duty, ball bearings with increased precision and reduced internal clearances used in airframe applications.*

ANSI/ABMA/ISO 14210:1998, Aerospace - Airframe Ball Bearings, Single-Row, Rigid, Torque Tube Design, Light Duty - Inch Design

*Specifies the characteristics, boundary dimensions, tolerances, load ratings of inch series, single-row, sealed, rigid, light duty, ball bearings of torque tube design used in airframe applications.*

ANSI/ABMA/ISO 14211:1998, Aerospace - Airframe Ball Bearings, Single-Row, Rigid, Precision, Sealed, Torque Tube Design, Light Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, clearances and load ratings of inch series, single row, sealed rigid, light duty ball bearings of torque tube design with increased precision and reduced internal clearance used in airframe applications.*

ANSI/ABMA/ISO 14212:1998, Aerospace - Airframe Ball Bearings, Single-Row, Rigid, Torque Tube Design, Extra-Light Duty - Inch Design

*Specifies the characteristics, boundary dimensions, tolerances, load ratings of inch series, single-row, sealed, rigid, extra-light duty, ball bearings of torque tube design used in airframe applications.*

ANSI/ABMA/ISO 14213-1998, Aerospace - Airframe Ball Bearings, Single-Row, Rigid, Precision, Sealed, Torque Tube Designa, Extra-Light Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissable loads of metric series double row, self-aligned ball bearings of diameter series 2, in accordance with ISO 15, used in airframe applications*

ANSI/ABMA/ISO 14214:1998, Aerospace - Airframe Ball Bearings, Double-Row, Rigid, Sealed, Heavy Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of inch series, double row, sealed, rigid, heavy duty ball bearings with increased precision and reduced internal clearances used in airframe applications.*

ANSI/ABMA/ISO 14215:1998, Aerospace - Airframe Ball Bearings, Double-Row, Rigid, Precision, Sealed, Heavy Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of inch series, double row, sealed, rigid, heavy duty ball bearings with increased precision and reduced internal clearances used in airframe applications.*

ANSI/ABMA/ISO 14216:1998, Aerospace - Airframe Ball Bearings, Double-Row, Self-Aligning, Sealed, Heavy Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of inch series, double row, self-aligning, sealed, heavy duty ball bearings used in airframe applications.*

ANSI/ABMA/ISO 14217:1998, Aerospace - Airframe Ball Bearings, Double-Row, Self-Aligning, Precision, Sealed, Heavy Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of inch series, double row, self-aligning, sealed, heavy duty ball bearings with increased precision and reduced internal clearances used in airframe applications.*

ANSI/ABMA/ISO 14218:1998, Aerospace - Airframe Ball Bearings, Single-Row, Self-Aligning, Sealed, Heavy Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and pemissable loads of inch series, single row, self-aligning, sealed heavy duty ball used in airframe applications.*

ANSI/ABMA/ISO 14219:1998, Aerospace - Airframe Ball Bearings, Single-Row, Self-Aligning, Precision, Sealed, Heavy Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of inch series, single row, self-aligning, sealed, heavy duty ball with increasing precision and reduced internal clearances used in airframe applications.*

ANSI/ABMA/ISO 14220:1998, Aerospace - Airframe Ball Bearings, Single-Row, Self-Aligning, Sealed, Light Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of inch series, single row, self-aligning, sealed, light duty ball bearings used in airframe applications.*

ANSI/ABMA/ISO 14221:1998, Aerospace - Airframe Ball Bearings, Single-Row, Self-Aligning, Precision, Sealed, Light Duty - Inch Series

*Specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of inch series, single row, self-aligning, sealed, light duty ball bearings used in airframe applications.*

ANSI/ABMA/ISO 199-1997, Roller Bearings - Thrust Bearings -Tolerances

*Speciifes the major boundary dimensions and running accuracy of thrust rolling bearings and their technology.*

ANSI/ABMA/ISO 3096-1998, Rolling Bearings - Needle Rollers - Dimensions and Tolerances, Metric Design

ANSI/ABMA/ISO 3290-2000, Rolling Bearings - Balls - Dimensions and Tolerances

*Specifies the requirements for finished steel balls for rolling bearings. It covers sizes, geometry and surface quality, sorting accuracy and harness for balls.*

ANSI/ABMA/ISO 5593-1997, Rolling Bearings – Vocabulary

*Establishes a vocabulary of terms, with their definitions, applied in the field of rolling bearings and their technology.*

## ABMA (American Brush Manufacturers Association)

ANSI B165.1-2005, Power Tools – Power-Driven Brushing Tools – Safety Requirements for Design, Care, and Use

*Guidelines for the safe design, care and use of power driven brushing tools. Responsibilities of all perties involver in the usage chain from designer and manufacturer to specific end user.*

## ABYC (American Boat and Yacht Council)

ANSI/ABYC A-16-1998, Electric Navigation Lights

*Establishes guidelines for the design, construction, performance, and installation of electric navigation lights on vessels under 20 meters (65 feet) in length.*

ANSI/ABYC A-28-1998, Galvanic Isolators

*Covers the design and construction of galvanic isolators. It establishes a minimum level of DC current blocking capability, establishes requirements for continuous duty current-carrying capacity, minimum level of conduction for AC current, and a temperature rise over time limitation. Establishes the requirements for design, construction, and installation of galvanic isolators for AC electrical systems for boats. This standard applies to isolators in AC electrical systems operating at less than 300 volts, and frequencies of 50 or 60 hertz.*

## ACC (American Chemistry Council)

ANSI Z129.1-2006, Hazardous Industrial Chemicals – Precautionary Labeling

*This Standard establishes sound principles and guidelines for the preparation of precautionary labeling for hazardous industrial chemicals.*

ANSI Z400.1-2004, Hazardous Industrial Chemicals – Material Safety Data Sheets – Preparation

*This Standard applies to the preparation of MSDSs for chemicals and materials used under occupational conditions. It presents basic information on how to develop and write MSDSs that are complete, clear and consistent. It also identifies information that must be included to comply with the HCS. Additional information is provided to help comply with state and federal environmental and safety laws and regulations. With the addition of certain data elements, this Standard is also acceptable for international use.*

## ACCA (Air Conditioning Contractors of America)

ANSI Man "D"/ ACCA 1-2002, Residential Duct Design

*Technical manual outlining the proper methods and procedures for the design of residential HVAC duct systems.*

ANSI/ACCA 3 Manual S-2004, Residential Equipment Selection

*Technical manual outlining the proper methods and procedures used to select and size residential cooling, furnaces and heat pump equipment.*

ANSI/ACCA 8 Man J 2-2006 Section 28 2006, Moisture Migration Load for Summer Cooling

*Moisture migration can have a significant affect on the latent cooling load to residential structures that are not properly protected by vapor retarding (barrier) membrane. Manual J-8, Version 2.00 includes a section (28), "Moisture Migration Load" with calculations and tables that considers the summer cooling latent load of residential structure ceilings, walls and exposed floors not protected by vapor retarding membrane.*

ANSI/ACCA Man J 2-2004 Addendum B, AED Protocol Revisions to MJ8

*This addendum revises the adequate exposure diversity (AED) approach on windows/glass exposures by implementing software support. The procedure utilizes hourly fenestration gain (HFG) for midsummer unless southerly-facing fenestration causes a peak gain in the fall.*

ANSI/ACCA Man J 2-2004, Addendum C, Duct Gain/Loss Revisions to MJ8

*This addendum revises the duct gain/loss procedure through a computer based approach that expands the capability and sensitivity of the procedure.*

ANSI/ACCA Man J 2-2004, Addendum D, Infiltration Gain/Loss Revisions to MJ8

*This addendum enhances the standard by utilizing recent research in the area of infiltration and air change values that are conditionally dependent on the size of a dwelling and the details of the sealing effort.*

ANSI/ACCA Man J 2-2004, Standard for Residential Heating and Cooling Load Calculations

*Technical Manual (With Tables and electronic spreadsheet) outlining the proper methods and procedures for accurately calculating the heat loss and heat gain of conventional residential structures.*

## ACCT (Association for Challenge Course Technology)

## ACDE (Association of Commercial Diving Educators)

ANSI/ACDE 01-1998, Commercial Diver Training – Minimum Standards

*Establishes the minimum parameters for curriculum, hours of training, facilities and equipment requirements, safety standards, and instructor qualifications for training entry-level commercial divers.*

## ACMI (Art & Creative Materials Institute)

ANSI Z356.5-1998, Art and Craft Materials – Paints and Inks

*Provides minimum requirements for materials, toxicity, coarse partial content, characteristics, working qualities, preservative effectiveness, size, and packaging of paints and inks for art education.*

## ADA (American Dental Association)

ANSI/ADA 1-2003, Alloy for Amalgam and Dental Mercury

*This specification is for alloys, composed mainly of silver, tin and/or copper, used in the preparation of dental amalgam. Only capsulated alloy is covered under this specification.*

ANSI/ADA 100-2004, Orthodontic Brackets and Tubes

*This specification pertains to brackets and tubes as components of the orthodontic appliance.*

ANSI/ADA 1000-2001 (R2006), Standard Clinical Data Architecture for the Structure and Content of an Electronic Health Record

*This specification provides the structure and content of an Electronic Health Record. The content of this specification has broad utility to a wide range of health and health care information systems. It is targeted for application at the data level of tiered system architectures.*

ANSI/ADA 1001-2002 (R2006), Guidelines for the Design of Educational Software

*This specification provides guidelines for the Design of Educational Software to promote quality, provide tools for evaluation and comparison.*

ANSI/ADA 101-2001, Root Canal Instruments - General Requirements

*Specifies requirements and test methods for hand or mechanically operated instruments for root canal shaping and cleaning having designs or materials which are not included within the provisions of ANSI/ADA Specification Nos. 28 and 58. Generally this specification includes root-canal instruments having 2% tapers with diameter sizes not included within Specifications Nos. 28 and 58; root-canal instruments having tapers other than 2%; and root-canal instruments having other shapes. The purpose of this specification is to provide a document to identify methods for size and product designation, safety considerations, for example, minimum requirements for fracture forces, flexibility, and instructions/labeling. Areas such as effects of sterilization processes on the instrument will be investigated for inclusion.*

ANSI/ADA 102-1998, Non-Sterile Nitrile Gloves for Dentistry

*This specification covers non-sterile nitrile gloves suitable for dentistry that do not contain any natural rubber latex. It contains test methods and requirements as well as labeling and marking requirements.*

ANSI/ADA 103-2001, Non-Sterile Polyvinyl Chloride Gloves for Dentistry

*Covers non-sterile poly vinyl chloride gloves suitable for dentistry.*

ANSI/ADA 1039-2006, Standard Clinical Conceptual Data Model

*This document views clinical information from the perspective of how standardized data structure and content can best support healthcare delivery independent of technology, healthcare profession or specialty, or care delivery environment. It develops this understanding through a high level structured analysis of the fundamental activities shared throughout the delivery of healthcare services and the principal types of data needed to support these activities.*

ANSI/ADA 1047-2006, Standard Content Of An Electronic Periodontal Attachment

*The purpose of this standard is to develop uniform content requirements for documentation to be included in an electronic periodontal attachment. An attachment is separate from the original claim submission transaction. Attachment documentation specified in this standard will enable claims adjudication for various periodontal procedures.*

ANSI/ADA 109-2006, Procedures for Storing Dental Amalgam Waste and Requirements for Amalgam Waste Storage/Shipment Containers

*This standard describes procedures for storing, and preparing amalgam waste for delivery to recyclers or their agents for recycling. In addition, it gives requirements for the containers for storing and/or shipping amalgam waste.*

ANSI/ADA 11-1997, Agar Impression Materials

*Enumerates requirements for essential physical properties and other characteristics of impression material having reversible agar hydrocolloid as a gel forming ingredient, along with tests specified for determining compliance with those requirements. It also specifies requirements with respect to the manufacturer's instructions, and the essentials for packaging, labeling, and marking.*

ANSI/ADA 12-2002, Denture Base Polymers

*ISO 1567:1999 classifies denture base polymers and copolymers and specifies their requirements. It also specifies the test methods to be used in determining compliance with these requirements. It further specifies requirements with respect to packaging and marking the products and to the instructions to be supplied for use of these materials.*

ANSI/ADA 13-1981 (R2006), Denture Cold-Curing Repair Resin

*This specification is for pink and clear denture repair resins, of powder-liquid type which are used primarily for the repair of acrylic resin denture bases. It is restricted to materials which contain monomers and comonomers usually of the acrylic type of mixtures thereof which are capable of auto-initiated polymerization and which bond to denture base polymers of composition outlined in ANSI/ADA Specification No. 12 for Denture Base Polymers.*

ANSI/ADA 14-1982 (R1998), Casting Alloy, Dental Chromium-Cobalt

*Covers dental base metal casting alloys used in the fabrication of removable dental prostheses.*

ANSI/ADA 15-1999 (R2005), Synthetic Polymer Teeth

*This specification specifies a classification, requirements and test methods for teeth that are composed of synthetic polymers such as polymethyl methacrylate and its copolymers, and that are manufactured for use in prostheses used in dentistry.*

ANSI/ADA 16-1962 (R1999), Impression Paste, Dental-Zinc Oxide Eugenol Type

*Provides specifications for dental impression paste, the reactive ingredients of which are zinc oxide and eugenol.*

ANSI/ADA 17-1983 (R2006), Denture Base Temporary Relining Resins

*This specification is for pink and clear powder/liquid auto-polymerizing (self-initiating cure) type hard-setting resins used as temporary relining materials for denture bases.1 The soft relining materials are not covered by this specification.*

ANSI/ADA 19-2004, Dentistry - Elastomeric impression materials

*This specification specifies requirements and tests for evaluating elastomeric dental impression materials.*

ANSI/ADA 2-2002, Gypsum-Bonded Casting Investment for Dental Gold Alloy

*Establishes a classification of and specifies requirements for, gypsum-bonded casting investments. It also specifies test methods to be used to determine compliance with these requirements.*

ANSI/ADA 23-1982 (R1999), Dental Excavating Burs

*Establishes the requirements for burs suitable for use with straight and angle dental handpieces.*

ANSI/ADA 24 and 24a-1991 (R2003), Dental Baseplate Wax

*This specification is for wax used in the construction of artificial dentures. The wax consists essentially of natural and synthetic waxes, resins, and hydrocarbon waxes of the paraffin series.*

ANSI/ADA 25-2000 (R2005), Dental Gypsum Products

*This specification provides a classification of, and specifies requirements for, dental gypsum products used for dental purposes, such as making oral impressions, moulds, casts, or dies. It specifies the test methods to be employed to determine compliance with these requirements.*

ANSI/ADA 26-1991 (R2006), Dental X-Ray Equipment & Accessory Devices

*This specification applies to diagnostic x-ray equipment used for intraoral radiography.*

ANSI/ADA 28-2002, Root Canal Files and Reamers, Type K for Hand Use

*Pertains to endodontic files and reamers for hand use only having a working part taper of 2% (0.02 millimeter per millimeter of length) as in endodontic preparation or shaping operations.*

ANSI/ADA 30-2000 (R2005), Zinc Oxide-Eugenol and Non-Eugenol Cements

*This standard specifies the requirements and test methods for zinc oxide - eugenol or zinc oxide - non-eugenol cements supplied as two separate components that may be either powder/liquid or paste/paste and are suitable for use in the oral cavity.*

ANSI/ADA 32-2006, Orthodontic Wires

*This specification specifies requirements and test methods for wires to be used in fixed and removable orthodontic appliances. It includes preformed orthodontic archwires but excludes springs and other preformed components.*

ANSI/ADA 33-2003, Dental Terminology

*This standard defines terms used in dentistry, particularly those relating to dental materials, instruments and equipment, and terms associated with the testing of such products.*

ANSI/ADA 34-1978 (R2000), Dental Aspirating Syringes

*Covers the requirements for devices that are capable of aspiration and are used for parenteral injections in dentistry.*

ANSI/ADA 34a-1981 (R2000), Dental Aspirating Syringes

*Covers the requirements for devices that are capable of aspiration and are used for parenteral injections in dentistry.*

ANSI/ADA 37-2001 (R2005), Dental Abrasive Powders

*This specification is for powdered abrasive materials used in dentistry for removing stains and gross scratches from natural tooth structures and prostheses but not including materials used in laboratory blasting processes. These materials are divided into types depending on the intended manner of use and further sub-divided into classes based upon the predominant abrasive agent present in the product.*

ANSI/ADA 38-2000, Metal-Ceramic Systems

*Specifies requirements and test methods for dental metallic materials processed by casting or machining, and ceramics suitable for use in the fabrication of metal-ceramic dental restorations together with requirements and test methods for the composite structure. (Revises current ANS by adopting international standard, ISO 9693.) This standard was listed for Public Review in the August 27, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/ADA 39-1992 (R1999), Dental Resin-Based Pit and Fissure Sealants

*Covers requirements and test methods for resin-based materials suitable for sealing pits and fissures in teeth.*

ANSI/ADA 39-2006, Pit and Fissure Sealants

*This Specification specifies requirements and test methods for polymer-based materials intended for sealing pits and fissures in teeth. This Specification covers both self-cured and external-energyactivated materials.*

ANSI/ADA 4-1983 (R2003), Dental Inlay Casting Wax

*This specification is for the inlay casting wax used in making patterns in the production of inlays and crowns. The wax consists essentially of natural and synthetic waxes, resins, and hydrocarbons of the paraffin series.*

ANSI/ADA 42-2002, Dental Phosphate-Bonded Casting Investments

*Classifies dental phosphate-bonded casting investments into two types according to the intended use. It specifies requirements for the essential physical properties of the investment and the test methods to be used to determine these properties. It also includes a requirement for adequate instructions to accompany each package.*

ANSI/ADA 43-1986 (R2005), Electrically Powered Dental Amalgamators

*This specification is for mechanical dental amalgamators used for the mixing of alloy and mercury to make dental amalgam. It includes multipurpose devices but is restricted to their function of triturating alloy and mercury to produce dental amalgam.*

ANSI/ADA 44-1979 (R2006), Dental Electrosurgical Equipment

*This standard covers the minimal requirements for dental electrosurgical devices that operate in the 1.5 to 4 MHz frequency range and have a maximum power output capability of 100 watts or less, but not less than a maximum capability of 50 watts, and are used principally in the oral cavity for performing clinical dental electrosurgery procedures by biterminal technique.*

ANSI/ADA 46-2004, Dental Chairs

*Applies to all dental patient chairs, regardless of their construction and also regardless of whether they are operated manually or electrically or by other means, or as a combination of these. It specifies requirements, test methods, manufacturer's information, marking and packaging.*

ANSI/ADA 47-2006, Dental Units

*ANSI/ADA Specification No. 47 specifies requirements and test methods for dental units, regardless of whether or not they are electrically powered. Requirements and test methods for the materials, design and construction of the water and air supply within dental units are also included in order to ensure that the pressurized water and air supplied via the dental unit are of appropriate quality. Provisions for the prevention of retraction of oral fluids into the water supply of the dental unit are included as well.*

ANSI/ADA 48-2004, Visible Light Curing Units

*Gives requirements and test methods for polymerization activators with powered tungsten-halogen lamps in the blue wavelength region intended for chairside use in*

*polymerization of dental resin-based materials. This specification is also applicable to rechargeable battery-powered polymerization activators. It does not cover powered polymerization activators used in laboratory fabrication of indirect restorations, veneers, dentures or other oral dental appliances.*

ANSI/ADA 5-1997, Dental Casting Alloys

*Provides a classification and specifies requirements and test methods for dental casting alloys.*

ANSI/ADA 53-1999 (R2005), Polymer-Based Crown and Bridge Materials

*This specification covers polymer-based crown and bridge materials for laboratory-fabricated permanent facings or anterior crowns which may or may not be attached to a metal substructure. This specification also applies to polymer-based crown and bridge materials for which the manufacturer claims adhesion to the metal sib-frame without macromechanical retention, such as beads or wires. This specification further classifies polymer-based crown and bridge materials and specifies the requirements; it also specifies the test methods to be used to determine compliance with these requirements.*

ANSI/ADA 54-1986 (R2000), Double-Pointed, Parenteral, Single-Use Needles for Dentistry

*Covers sterile, single-use, individually-packaged, double-pointed needles with a means of secure attachment to cartridge-type syringes used for dental, regional, anesthetic injections.*

ANSI/ADA 57-2000 (R2006), Endodontic Sealing Materials

*This specification is for materials used in endodontics within the tooth to seal the root canal space.*

ANSI/ADA 58-2004, Root Canal Files, Type H (Hedstrom)

*This specification is for endodontic Hedstrom files for hand use only having a working part taper of 2% (0.02 millimeter per millmeter of length) as used in endodontic preparation or shaping operations.*

ANSI/ADA 6-1987 (R2005), Dental Mercury

*This standard specifies the requirements and test methods for mercury suitable for the preparation of dental amalgam, and the requirements for packaging and marking.*

ANSI/ADA 62-2005, Dental Abrasive Pastes

*This specification is for in-office abrasive pastes used in dentistry for removing stains and other exogenous materials from natural tooth structures and prostheses.*

ANSI/ADA 63-2006, Root Canal Barbed Broaches and Rasps

*This specification is for root canal instruments for hand use utilized in endodontic preparation.*

ANSI/ADA 69-1999, Dental Ceramic (same as ISO 6872)

*Specifies the requirements and the corresponding test methods for dental ceramic materials for all fixed ceramic restorations. Revises current ANS by adopting ISO 6872.*

ANSI/ADA 70-1999 (R2005), Dental X-Ray Protective Aprons and Accessory Devices

*This specification applies to dental x-ray protective aprons and accessory devices, such as thyroid collars and thyroid shields used in dentistry that protect the patient, as much as feasible, from the harmful effects of dental diagnostic X-radiation. It specifies the requirements for X-radiation absorption and the areas of anatomy that the aprons and thyroid collars protect.*

ANSI/ADA 71-2001, Root Canal Filling Condensers (Pluggers and Spreaders)

*Pertains to root canal instruments for finger or hand-used to compact root canal filling materials.*

ANSI/ADA 73-2001, Dental Absorbent Points

*Specifies requirements and test methods for nonmedicated dental absorbent points used in endodontic procedures.*

ANSI/ADA 74-2002, Dental Operator’s Stools

*Specifies requirements, recommendations and methods of test for dental operator's stools as well as requirements for manufacturer's instructions, marking and packaging. It covers also recommendations to manufacturers on the design of tools.*

ANSI/ADA 75-1997 (R2003), Resilient Lining Materials for Removable Dentures - Part 1: Short-Term Materials

*This standard specifies requirements for the physical properties, test methods, packaging, marking and manufacturer's instructions for denture lining materials suitable for short-term use.*

## ANSI/ADA 76-2005, Non-Sterile Natural Rubber Latex Gloves for Dentistry

*This specification covers non-sterile natural rubber latex gloves suitable for dentistry.*

## ANSI/ADA 78-2006, Endodontic Obturating Points

*This regional/national standard specifies the dimensions and requirements for prefabricated metallic or polymeric-based cones suitable for use in the obturation of a root canal system restoration. It also specifies numerical systems and color-coding system for designating sizes.*

## ANSI/ADA 80-2001, Color Stability Test Procedure

*Specifies a method for the determination of the color stability of dental materials after exposure to light and water.*

## ANSI/ADA 82-1998 (R2003), Dental Reversible/Irreversible Hydrocolloid Impression Material

*This ANSI/ADA specification enumerates requirements for essential physical properties and other characteristics of impression material having reversible agar hydrocolloid as a gel forming ingredient, along with tests specified for determining compliance with those requirements. It also specifies requirements with respect to the manufacturer's instructions, and the essenttials for packaging, labeling, and marking.*

## ANSI/ADA 85-Part 1-2004, Disposable Prophy Angles: Part 1

Second public review:
ADA Specification No. 85: Part 1 Disposable Prophy Angles

The following section was deleted from the specification that underwent ANSI Public Review in August 2003:

~~4.2 Microbial Limits~~
~~Disposable angles shall be free from designated microbial species. Test per the United States Pharmacopoeia 25 (USP25), Chapter 61, or current USP, for the following: E coli, Salmonella species, Pseudomonas, Staphylococcus~~.

Scope of first public review:
This specification covers disposable prophy angles suitable for a dental hygienist or a dentist to use in conjunction with a doriot style handpiece during the final stages of a dental

## ANSI/ADA 87-1995 (R2003), Dental Impression Trays

*This specification applies to reusable and disposable impression trays used in dentistry for delivering impression materials into the oral cavity for the purpose of making impressions (negative copies) of teeth and oral tissues. It applies to trays made of plastic, aluminum, stainless steel and nickel or chrome plated brass for the purposes of full arch dentulous or edentulous, partially edentulous, partial arch and water cooled impressions.*

## ANSI/ADA 88-2000 (R2006), Dental Brazing Alloys

*This standard specifies requirements and test methods for brazing filler alloys suitable for use in brazing cast dental restorations.*

## ANSI/ADA 89-1999 (R2005), Dental Operating Lights

*This standard applies to dental operating lights, however constructed, used for illuminating the oral cavity. It specifies requirements and test methods. It also contains specifications on manufacturer's instruction, marking and packaging.*

## ANSI/ADA 91-1999 (R2005), Ethyl Silicate Investments

*This standard specifies a method for ethyl silicate bonded casting investments to be assessed for their efficacy for casting dental base metal alloy restorations. This standard applies to ethyl silicate bonded investments used in the fabrication of dental base metal casting alloy restorations. This standard also specifies requirements for the essential physical properties o the investment and methods for heir determination. It further includes requirements for adequate instructions to accompany each container.*

## ANSI/ADA 92-2002, Dental Phosphate-Bonded Refractory Die Materials

*Applies to phosphate bonded refractory die materials used in the production of dental restorations by a sintering technique.*

## ANSI/ADA 93-2000 (R2005), Soldering Investments

*This specification establishes a classification of and specifies requirements for dental brazing investments. It specifies test methods to be used to determine compliance with these requirements. It also lists information which shall be included in the manufacturer's instructions and gives requirements for labeling.*

## ANSI/ADA 94-1996 (R2003), Dental Compressed Air Quality

*This Standard applies to all compressed air used in the dental office to power dental equipment and laboratory equipment and to dry oral structures. It does not apply to compressed air use to supply breathable air and should never be used to support life.*

## ANSI/ADA 95-2003, Root Canal Enlargers

*This specification is for root canal instruments used mechanically to access and enlarge canals.*

## ANSI/ADA 96-2000 (R2005), Dental Water-Based Cements

*This standard specifies requirements for certain types of dental cements, including both hand-mixed and capsulated cements for the mechanical mixing, that are intended for permanent cementation, lining and restoration, and that effect setting only by an aqueous acid-base reaction.*

ANSI/ADA 97-2002, Corrosion Test Methods

*Provides test methods and protocols to determine the corrosion behavior of all metallic materials used in restorative, prosthetic and orthodontic dentistry in the oral cavity, including cast, machined and prefabricated devices. This Standard is not applicable to instruments and appliances.*

ANSI/ADA 99-2001, Athletic Mouth Protectors and Materials

*Provides specifications for thermoplastic or thermosetting polymeric materials with or without a polymeric shell that are capable of being formed into an athletic mouth protector, either on a model of the teeth or in the mouth directly on the teeth. It list the types and classes of mouth protectors and lists requirements for physical properties along with tests specified for determining compliance with those requirements. It also specifies requirements for manufacturer's instructions and for packaging, labeling, and marking.*

ANSI/ADA Specifiation No. 41-2005, Recommended Standard Practices for Biological Evaluation of Dental Materials

*This document covers standard practices for the biological evaluation of the safety of medical devices used in dentistry, including those with pharmacological agents as an integral part of the device.*

ANSI/ADA Specification No. 27-2005, Polymer-based Filling, Restorative and Luting Materials

*This Standard specifies requirements for dental polymer-based filling and restorative materials and polymer-based luting materials supplied in a form suitable for mechanical mixing, hand-mixing, or intra-oral and extra-oral external energy activation, and intended for use primarily for the direct or indirect restoration of cavities in the teeth.*

ANSI/ADA Specification No. 27-2005, Polymer-based Filling, Restorative and Luting Materials

*This Standard specifies requirements for dental polymer-based filling and restorative materials and polymer-based luting materials supplied in a form suitable for mechanical mixing, hand-mixing, or intra-oral and extra-oral external energy activation, and intended for use primarily for the direct or indirect restoration of cavities in the teeth.*

ANSI/ADA/ISO 3950-1994, Dentistry - Designation System for Teeth and Areas of the Oral Cavity

*Provides a system for designating teeth or areas of the oral cavity using two digits. It also provides a system for designating surfaces of the teeth using letters of the alphabet.*

## AFPA (American Forest & Paper Association)

ANSI/AF&PA NDS-2005, National Design Specification for Wood Construction

*This specification provides guidelines and requirements for structural and fire design of wood products, and their connectors.*

ANSI/AF&PA SDPWS-2005, NDS Supplement: Special Design Provisions for Wind and Seismic

*Provide special design and construction requirements for wind and seismic design of wood frame structures. This adds supplemental information to NDS design procedures.*

## AGA (American Gas Association)

ANSI B109.1-2000, Diaphragm-Type Gas Displacement Meters (500 Cubic Feet per Hour Capacity and Under)

*Applies to diaphragm type gas meters, designed for revenue measurement of fuel gas, having a flow rating of less than 500 cubic feet per hour (14.1 m3/h) capacity at 0.5 inch water column (125 Pa) differential pressure at standard conditions. To obtain an electronic draft: e-mail aquraishi@aga.org*

ANSI B109.2-2000, Diaphragm-Type Gas Displacement Meters (Over 500 Cubic Feet per Hour Capacity)

*Applies to diaphragm type gas meters, designed for revenue measurement of fuel gas, having a flow rating of 500 cubic feet per hour (14.1 m3/h) capacity and over at 0.5 inch water column (125 Pa) differential pressure at standard conditions. To obtain an electronic draft: e-mail aquraishi@aga.org*

ANSI B109.3-2000, Rotary-Type Gas Displacement Meters

*Applies to rotary type positive gas displacement meters designed for revenue measurement of fuel gas. To obtain an electronic draft: e-mail aquraishi@aga.org*

ANSI B109.4-1998, Self-Operated Diaphragm-Type Natural Gas Service Regulators

*Provides the basic standard for safe and reliable operation, substantial and durable construction, of self-operated, diaphragm-type, natural gas service regulators, for nominal pipe size of 1-1/4 inch and smaller, with outlet pressure of 14-inch water column and less.*

ANSI Z223.1/NFPA 54-2005, National Fuel Gas Code (same as ANSI/NFPA 54)

*Second public review contains substantive revisions the committee accepted as a result of the first public review comments and additional committee actions. The code offers general criteria for the installation and operation of gas piping and gas equipment on consumers' premises. It is the cumulative result of years of experience of many individuals and many organizations acquainted with the installation of gas piping and equipment designed for utilization of gaseous fuels. It is intended to promote public safety by providing requirements for the safe and satisfactory utilization of gas.*

ANSI/GPTC Z380.1-1998-2003, Addendum No. 1, GPTC Guide for Gas Transmission and Distribution Piping Systems

*Addendum No. 1 updates the material in the Guide for Gas Transmission and Distribution Piping Systems (Guide). The Guide contains information and some “how to” methods to assist the operator in complying with the Code of Federal Regulations (CFR), Title 49, Part 191 & Part 192.*

ANSI/GPTC Z380.1-2003, Addendum No. 2-2005, Guide for Gas Transmission and Distribution Piping Systems

*Addendum No. 2 will update the Guide by revising existing material and adding new material. The Guide for Gas Transmission and Distribution Piping Systems (Guide) contains information to assist the operator in complying with the Code of Federal Regulations (CFR), Title 49, Part 191 and Part 192.*

ANSI/GPTC Z380.1-2003 Addendum No. 3-2005, GPTC Guide for Gas Transmission and Distribution Piping Systems

*These items received a public review and will be combined to form Addendum No. 3 to the 2003 Edition of ANSI Z380.1, Guide for Gas Transmission and Distribution Piping Systems.*
*BSR/GPTC Z380.1-2003 TR00-15*
*BSR/GPTC Z380.1-2003 TR02-25*
*BSR/GPTC Z380.1-2003 TR03-12*
*BSR/GPTC Z380.1-2003 TR03-41*
*BSR/GPTC Z380.1-2003 TR04-06*
*BSR/GPTC Z380.1-2003 TR04-07*
*BSR/GPTC Z380.1-2003 TR04-12*
*BSR/GPTC Z380.1-2003 TR04-53*
*BSR/GPTC Z380.1-2003 TR04-55*
*BSR/GPTC Z380.1-2003 TR04-57*

ANSI/GPTC Z380.1-2003, Addendum No. 4-2006, Guide for Gas Transmission and Distribution Piping Systems 2003 Edition - Addendum 4

*These items received a public review and will be combined to form Addendum No. 4 to the 2003 Edition of ANSI Z380.1, Guide for Gas Transmission and Distribution Piping Systems.*
*BSR/GPTC Z380.1-2003 TR01-24*
*BSR/GPTC Z380.1-2003 TR03-31*
*BSR/GPTC Z380.1-2003 TR03-38*
*BSR/GPTC Z380.1-2003 TR03-43*
*BSR/GPTC Z380.1-2003 TR04-14*
*BSR/GPTC Z380.1-2003 TR04-24*
*BSR/GPTC Z380.1-2003 TR04-28*

ANSI/GPTC Z380.1-2003 Addendum No. 5-2006, Guide for Gas Transmission and Distribution Piping Systems

*1. Revision to the guide material on plastic pipe repair under 192.311. The standard provides information to assist the gas pipeline operator in complying with the Code of Federal Regulations, Title 49, Part 192.*
*2. Revision to the guide material on MAOP cross-reference under 192.741. The standard provides information to assist the gas pipeline operator in complying with the Code of Federal Regulations, Title 49, Part 192.*
*3. Revision to the guide material on pressure limiting and regulating under 192.739. The standard provides information to assist the gas pipeline operator in complying with the Code of Federal Regulations, Title 49, Part 192.*
*4. Revision to guide material under 192.745, and 192.747. The Standard provides information to assist the gas pipeline operator in complying with the Code of Federal*

ANSI/GPTC Z380.1-2003, Addendum No. 6-2006, Guide for Gas Transmission and Distribution Piping Systems

*Revisions to the guide material on remedial action under 192.465. The standard provides infromation to assist the gas pipeline operator in complying with the Code of Federal Regualtions, Title 49, Part 192.*
*Revisions to the guide material on persons qualified in pipeline corrosion methods under 192.453. The standard provides infromation to assist the gas pipeline operator in complying with the Code of Federal Regualtions, Title 49, Part 192.*
*Revisions to the guide material on plastic pipe design under 192.3 & 192.121. The standard provides infromation to assist the gas pipeline operator in complying with the Code of Federal Regualtions, Title 49, Part 192.*
*Revision to guide material under 192.145 and GMA G-192-1. The Standard provides information to assist the gas pipeline operator in complying with the Code of Federal*

## AGMA (American Gear Manufacturers Association)

ANSI/AGMA 1003-G93 (R99), Tooth Proportions for Fine-Pitch Spur and Helical Gearing

*Provides requirements that are similar to those of coarse pitch gearing except in the matter of clearance. For 20-degree profile angle fine pitch gearing, this standard provides a system of enlarged pinions, which use the involute form above 5 degrees of roll. Data on 14-1/2- and 25-degree profile angle systems are included in the annexes.*

ANSI/AGMA 1006-A97 (R2003), Tooth Proportions for Plastic Gears

*Presents a new basic rack, AGMA PT, which, with its full round fillet, may be preferred in many applications of gears made from plastic materials. Contains a description, with equations and sample calculations, of how the proportions of a spur or helical gear may be derived from the design tooth thickness and the basic rack data. In annexes, there are discussions of possible variations from the basic rack and also a procedure for defining tooth proportions without using the basic rack concept.*

ANSI/AGMA 1010-E95 (R2000), Appearance of Gear Teeth – Terminology of Wear and Failure

*Provides nomenclature for general modes of gear tooth wear and failure. It classifies, identifies and describes the most common types of failure and provides information which will, in many cases, enable the user to identify failure modes and evaluate the degree of progression of wear.*

ANSI/AGMA 1012-2005, Gear Nomenclature, Definitions of Terms with Symbols

*This standard establishes the definitions of terms, symbols and abbreviations which may be used to communicate the technology and specifications of external and internal gear teeth. It provides definitive meanings by the use of words and illustrations, for commonly used gearing terms.*

ANSI/AGMA 1102-2003, Tolerance Specification of Gear Hobs

*Provides specifications for nomenclature, dimensions, tolerances, and inspection for gear hobs. It establishes a basis for understanding the use and manufacture of these tools.*

ANSI/AGMA 1106-A97 (R2003), Tooth Proportions for Plastic Gears (Metric Version of ANSI/AGMA 1006-A97)

*Presents a new basic rack, AGMA PT, which, with its full round fillet, may be preferred in many applications of gears made from plastic materials. Contains a description, with equations and sample calculations, of how the proportions of a spur or helical gear may be derived from the design tooth thickness and the basic rack data. In annexes, there are discussions of possible variations from the basic rack and also a procedure for defining tooth proportions without using the basic rack concept.*

ANSI/AGMA 2001-D04, Fundamental Rating Factors and Calculation Methods for Involute Spur and Helical Gear Teeth

*This standard specified a method for rating the pitting*
*resistance and bending strength of spur and helical involute gear pairs. A detailed discussion of factors influencing gear survival and calculation methods are provided.*

ANSI/AGMA 2002-B88 (R2006), Tooth Thickness Specification and Measurement

*Presents procedures for determining tooth thickness measurements of external and internal cylindrical involute gearing. Includes equations and calculation procedures for commonly used measuring methods.*

ANSI/AGMA 2003-B97 (R2003), Rating the Pitting Resistance and Bending Strength of Generated Straight Bevel, Zerol Bevel and Spiral Bevel Gear Teeth

*Presents a method for rating the pitting resistance and bending strength of generated straight bevel, zerol bevel, and spiral bevel gear teeth. It includes a detailed*
*discussion of factors influencing gear survival and a calculation method.*

ANSI/AGMA 2004-B89 (R2006), Gear Materials and Heat Treatment Manual

*Provides information pertaining to engineering materials and material treatments used in gear manufacture. Topics included are definitions, selection guidelines, heat treatment, quality control and life considerations. Materials include ferrous, nonferrous and nonmetallic. Heat treatment includes through hardened, flame and induction hardened, carburized, and nitrided gears.*

ANSI/AGMA 2005-D03, Design Manual for Bevel Gears

*Provides the standards for designing straight bevel, zerol*
*bevel, spiral bevel and hypoid gears with information on*
*fabricatio n, inspection and mounting. Covers preliminary gear design parameters, blank design including standard taper, uniform depth, duplex taper and tilted root. Also includes drawing format, inspection, materials, lubrication, mountings and assembly.*

ANSI/AGMA 2007-C00/ISO 14104-1995, IDT (R2006), Gears - Surface Temper Etch Inspection After Grinding

*Explains the materials and procedures necessary to determine, evaluate, and describe localized overheating on ground surfaces. A system to describe and classify the indications produced during the inspection is included. However, specific acceptance or rejection criteria are not contained.*

ANSI/AGMA 2008-C01, Assembling Bevel Gears

*Pertains to the assembly man in the factory and the service man in the field. Each definition, explanation and instruction is directed toward the physical appearance of the gears as they are inspected and assembled by these personnel.*

ANSI/AGMA 2009-B01, Bevel Gear Classification, Tolerances and Measuring Methods

*Revises subclauses 7.2.3 and 7.2.8 only. This standard, for bevel gearing, correlates gear accuracy grades with gear tooth tolerances. It provides information on manufacturing practices as well as gear measuring methods and practices. Annex material provides guidance on specifying an accuracy grade and information on additional methods of gear inspection. This project revises clauses 7.2.3 and 7.2.8 only.*

ANSI/AGMA 2011-A98 (R2004), Cylindrical Wormgearing Tolerance and Inspection Methods

*Establishes a classification system for the geometrical accuracy specification of wormgearing. It also provides uniform measurement procedures including discussions on single and double flank composite testing and tooth thickness measurements. The standard establishes ten accuracy grades based on the relative effect of geometrical errors on conjugate action for wormgear sets.*

ANSI/AGMA 2015-1-A02, Accuracy Classification System – Tangential Measurements for Cylindrical Gears

*Correlates gear accuracy grades with gear tooth tolerances. It provides information on manufacturing practices as well as gear measuring methods and practices. Annex material provides guidance on specifying an accuracy grade and information on additional methods of gear inspection.*

ANSI/AGMA 2015-2-2006, Accuracy Classification System for Cylindrical Gears - Radial Measurements

*This accuracy classification system for cylindrical gears establishes a system of accuracy relevant to radial (double flank) composite deviations of individual cylindrical involute gears.It specifies the appropriate definitions of gear tooth accuracy terms, the structure of the gear accuracy system, and the tolerances (allowable values of the deviations). An annex provides information on runout, including an equation that may be used for determining tolerance values.*

ANSI/AGMA 2101-D04, Fundamental Rating Factors and Calculation Methods for Involute Spur and Helical Gear Teeth

*This standard specifie s a method for rating the pitting resistance and bending strength of spur and helical involute gear pairs. A detailed discussion of factors influencing gear survival and calculation methods are provided. Metric version of AGMA 2001-DXX.*

ANSI/AGMA 2111-A98 (R2004), Cylindrical Wormgearing Tolerance and Inspection Methods (Metric)

*Establishes a classification system for the geometrical accuracy specification of wormgearing. It also provides uniform measurement procedures including discussions on single and double flank composite testing and tooth thickness measurements. The standard establishes ten accuracy grades based on the relative effect of geometrical errors on conjugate action for wormgear sets. (Metric edition of ANSI/AGMA 2011-A98.*

ANSI/AGMA 2116-A05, Evaluation of Double Flank Testers for Radial Composite Measurement of Gears

*This standard provides the evaluation criteria for double flank testers. Recommended artifact sizes and geometry are provided along with the measurement system conditions. Annexes are provided for methods of estimating calibration uncertainty and artifact calibration certificates.*

ANSI/AGMA 6000-B96 (R2002), Specification for Measurement of Linear Vibration on Gear Units

*Presents a method for measuring linear vibration on a gear unit. Recommends instrumentation, measuring methods, test procedures and discrete frequency vibration limits for acceptance testing. Annexes list system effects on gear unit vibration and system responsibility. The ISO vibration rating curves from ISO 8579-2, Acceptance code for gears – Part 2: Determination of mechanical vibrations of gear units during acceptance testing, are introduced.*

ANSI/AGMA 6001-D97 (R2003), Design and Selection of Components for Enclosed Gear Drives

*Outlines the basic practices for the design and selection of components (other than gearing) which are used in commercial and industrial enclosed gear drives. It discusses bearings, bolting, keys, and the most recent theories on shafting among other components.*

ANSI/AGMA 6002-B93 (R2001), Design Guide for Vehicle Spur and Helical Gears

*Provides a guide to the design, fabrication, and inspection of spur and helical gears for vehicles and for power transmission on vehicles.*

ANSI/AGMA 6006-2004, Design and Specification of Gearboxes for Wind Turbines

*Applies to wind turbine gearboxes. It provides information for specifying, selecting, designing, manufacturing, procuring, operating and maintaining reliable speed increasing gearboxes for wind turbine generator system service. Annex information is supplied on: wind turbine architecture, wind turbine load description, quality assurance, operation and maintenance, minimum purchaser gearbox manufacturer ordering data, lubrication selection and condition monitoring, and gear and bearing design.*

ANSI/AGMA 6008-A98 (R2004), Specifications for Powder Metallurgy Gears

*Defines the minimum detailed information to be included in the powder metallurgy gear specifications submitted by the gear purchaser to the gear producer. Specifications on gear tooth geometry are described in detail for external spur and helical gears and for straight bevel gears. The standard applies to gears made by the conventional P/M process consisting of compaction followed by sintering and, in some cases, by post sintering treatments.*

ANSI/AGMA 6011-2003, Specification for High-Speed Helical Gear Units

*This standard includes information on design, lubrication, bearings, testing and rating of single and double helical external tooth, parallel shaft gear reducers or increasers. Units covered include those operating with at least one stage having a pitch line velocity equal to or greater than 35 meters per second or rotational speeds greater than 4500 rpm, and other stages having pitch line velocities equal to or greater than 8 meters per second.*

ANSI/AGMA 6013-A-2006, Industrial Enclosed Gear Drives

*Includes design, rating, lubrication, testing and selection information for enclosed gear drives, including foot mounted, shaft mounted, screw conveyor drives and gearmotors. These drives may include spur, helical, herringbone or double helical, or bevel gearing in single or multistage drives, and may include worm gearing in multistage drives as either parallel, concentric or right angle configurations. This standard combines ANSI/AGMA 6009-A00 and ANSI/AGMA 6010-F97.*

ANSI/AGMA 6014-A-2006, Gear Power Rating for Cylindrical Shell and Trunnion Supported Equipment

*Specifies a method for rating the pitting resistance and bending strength of open or semi-enclosed spur, single helical, double helical and herringbone gears made from steel and spheroidal graphitic iron for use on cylindrical shell and trunnion supported equipment such as grinding mills, kilns, coolers and dryers.*

ANSI/AGMA 6022-C93 (R2000), Design Manual for Cylindrical Wormgearing

*This Design Manual provides information pertaining to selection of geometric parameters which will constitute good design of fine and coarse pitch cylindrical wormgearing. The power rating for fine and coarse pitch wormgearing is not included in this design manual, but can be found in ANSI/AGMA 6034-B92, Practice for Enclosed Cylindrical Wormgear Speed Reducers and Gearmotors.*

ANSI/AGMA 6025-A98 (R2004), Sound for Enclosed Helical, Herringbone, and Spiral Bevel Gear Drives

*Describes a recommended method of acceptance testing and reporting of the sound pressure levels generated by a gear speed reducer or increaser when tested at the manufacturer's facility. Annexes to the standard present sound power measurement methods for use when required by specific contract provisions between the manufacturer and purchaser.*

ANSI/AGMA 6032-A94 (R2006), Standard for Marine Gear Units: Rating

*Considers rating practices for marine propulsion, pump, and ship generator set service. Practical suggestions are included for various factors. The formulas evaluate gear tooth capacity as influenced by the major factors which affect gear tooth pitting and gear tooth fracture.*

ANSI/AGMA 6033-B1998 (R2004), Marine Propulsion Gear Units, Part 1 – Materials

*This document identifies commonly used alloy steels, heat treatments and inspection requirements for through hardened, case hardened and surface hardened gearing for main propulsion marine gear service over 1500 hp. Mechanical, metallurgical and nondestructive test requirements are provided for various heat treatment processes and metallurgical quality grades of gearing.*

ANSI/AGMA 6034-B92 (R2005), Practice for Enclosed Cylindrical Wormgear Speed Reducers and Gearmotors

*This standard gives a method for rating and design of specific enclosed cylindrical wormgear reducers and gearmotors. It contains power, torque and efficiency equations with guidance on component design, thermal capacity, service factor selection, lubrication and self-locking features.*

ANSI/AGMA 6035-2002, Design, Rating and Application of Industrial Globoidal Wormgearing

ANSI/AGMA 6113-2006, Industrial Enclosed Gear Drives (Metric Edition)

*Includes design, rating, lubrication, testing and selection information for enclosed gear drives, including foot mounted, shaft mounted, screw conveyor drives and gearmotors. These drives may include spur, helical, herringbone or double helical, or bevel gearing in single or multistage drives, and may include worm gearing in multistage drives as either parallel, concentric or right angle configurations. This standard combines ANSI/AGMA 6109-A00 and ANSI/AGMA 6110-F97.*

ANSI/AGMA 6114-A-2006, Gear Power Rating for Cylindrical Grinding Mills, Kilns, Coolers, and Dryers

*This standard specifies a method for rating the pitting resistance and bending strength of open or semi-enclosed spur, helical, double helical and herringbone gears, made from steel or spheroidal graphitic iron, for use in cylindrical shell and trunnion supported equipment. Metric version of AGMA 6014-AXX.*

ANSI/AGMA 6123-B2006, Design Manual for Enclosed Epicyclic Gear Drives

*This design manual is for drives employing epicyclic gear arrangements. It includes descriptions of epicyclic drives, nomenclature, application information and design guidelines with reference to other AGMA standards.*

ANSI/AGMA 6133-B1998- (R2004), Materials for Marine Propulsion Gearing

*This document identifies commonly used alloy steels, heat treatments and inspection requirements for through hardened, case hardened and surface hardened gearing for main propulsion marine gear service over 1500 hp. Mechanical, metallurgical and nondestructive test requirements are provided for various heat treatment processes and metallurgical quality grades of gearing.*

ANSI/AGMA 6135-2002, Design, Rating and Application of Industrial Globoidal Wormgearing (Metric Edition)

ANSI/AGMA 9000-C90 (R2001), Flexible Couplings – Potential Unbalance Classification

*Describes potential coupling unbalance and identifies its sources. The standard breaks down the requirements into usable groups and outlines how to calculate the potential unbalance of the coupling.*

ANSI/AGMA 9001-B97 (R2003), Flexible Couplings - Lubrication

*This standard provides information on lubrication of gear couplings, chain couplings and metallic grid couplings. Types of lubricants and lubrication methods and practices are included. In addition, selection guides for grease and oil lubrication are provided.*

ANSI/AGMA 9002-B2004, Bores and Keyways for Flexible Couplings (Inch Series)

*Describes and provides tolerances for straight and tapered bores and the associated keys and keyways as furnished in flexible couplings. The data in the standard considers commercially standard coupling bores and keyways, not special coupling bores and keyways that may require special tolerances. Annexes are provided to discuss inspection methods for keyways and tapered bores, and design practices for tapered shafts.*

ANSI/AGMA 9003-A91 (R2005), Flexible Couplings – Keyless Fits

*Presents information on design, dimensions, tolerances, inspection, mounting, removal and equipment that is in common use with keyless tapered and keyless straight (cylindrical) bore hubs for flexible couplings.*

ANSI/AGMA 9004-A99 (R2005), Flexible Couplings - Mass Elastic Properties and Other Characteristics

*Provides information and calculation methods to system designers for the selection of system components and natural frequency calculations. Properties discussed include weight, inertia, center of gravity, and axial, lateral and torsional stiffness.*

ANSI/AGMA 9005-E-2002, Industrial Gear Lubrication

*This standard provides lubrication guidelines for enclosed and open gearing which is installed in general industrial power transmission applications. It is not intended to supplant specific instructions from the gear manufacturer.*

ANSI/AGMA 9008-B99 (R2006), Flexible Couplings - Gear Type, Flange Dimensions - Inch Series

*Covers the dimensions for gear sleeve and rigid hub flange outside diameter, bolt circle, flange width, hole size, number of holes, hole length, and counterbore diameter or groove width for exposed and shrouded bolt gear couplings.*

ANSI/AGMA 9009-D02, Flexible Couplings – Nomenclature of Flexible Couplings

*This standard sets forth nomenclature common to flexible couplings that are used in mechanical power transmission drives. This standard is for designers, manufacturers and users when designating various types of flexible couplings, their flexible elements and component parts. It provides definitions, nomenclature, system terms and the addition of terms used in coupling selection, balancing, and other characteristics.*

ANSI/AGMA 9104-2006, Flexible Couplings - Mass Elastic Properties and Other Characteristics (Metric Edition

*This standard provides information and calculation methods related to mass elastic properties of flexible couplings. Properties discussed are coupling weight, mk^2, center of gravity, axial stiffness, axial natural frequency, lateral stiffness, laternal natural frequency and torsional stiffness. Metric version of ANSI/AGMA 9004-A99.*

ANSI/AGMA 9112-A2004, Bores and Keyways for Flexible Couplings (Metric Series)

*Describes and provides tolerances for straight and tapered bores and the associated keys and keyways as furnished in flexible couplings. The data in the standard considers commercially standard coupling bores and keyways, not special coupling bores and keyways that may require special tolerances. Annexes are provided to discuss inspection methods for keyways and tapered bores, and design practices for tapered shafts. (Metric version of AGMA 9002-BXX.*

ANSI/AGMA ISO 18653-2006, Gears - Evaluation of Instruments for the Measurement of Individual Gears

*This standard describes methods for the determination of instrument suitability for use in making gear measurements of involute, helix, pitch and runout. Includes instruments that measure runout directly, or compute it from index measurements. Of necessity, it contains the estimation of measurement uncertainty with the use of calibrated gear artifacts.*

## AGRSS (Automotive Glass Replacement Safety Standards

ANSI/AGRSS 002-2002, Automotive Glass Replacement Safety

*Presents procedures, education and product perfomance requirements for auto glass replacement shops and personnel.*

## AHAM (Association of Home Appliance Manufacturers)

ANSI/AHAM AC-1-2006, Method for Measuring Performance of Portable Household Electric Room Air Cleaners

*This stanard method establishes uniform, repeatable procedures and standard methods for measuring specified product characteristics of portable household electric room air cleaners. The standard method measures the relative reduction by the air cleaner of particulate matter suspended in the air in a specified test chamber, and the energy consumption and standby power of the air cleaner. The standard method provides a means to compare and evaluate different brands of portable household electric room air cleaners regarding characteristics significant to product use.*

ANSI/AHAM AC-2-2006, Method for Sound Testing of Portable Household Electric Room Air Cleaners

*Establishes a method to determine the sound rating of portable household electric room air cleaners. The sound rating is comprised of a set of sound levels that includes: (1) A-weighted sound power level and (2) loundness.*

ANSI/AHAM CHA-1-2003, Connected Home Appliances - Object Modeling

*The purpose of this standard is to promote new appliance services and features enabled through networking by describing generic appliance models, objects, and high-level messages. The models define standardized elements of appliances that are accessible and controllable remotely by users, service providers, and other devices, independent of the underlying network. The document assumes that each appliance and device contains a communications interface module linked to a home systems network.*

ANSI/AHAM CM-1-2005, Method for Measuring Performance of Household Electric Coffee Makers

*This standard establishes uniform methods for measuring specified product characteristics of household electric coffee makers.*

ANSI/AHAM DH-1-1986 (R2003), Dehumidifiers

*Establishes a uniform, repeatable procedure for measuring the capacity and energy input of self-contained, encased, electrically operated, mechanically-refrigerated dehumidifiers under specified test conditions. The procedure and the recommended levels of performance, where they appear, are intended to provide a means to compare and evaluate different brands and models of dehumidifiers regarding characteristics significant to product use.*

ANSI/AHAM DW-1-2005, Household Electric Dishwashers

*This standard establishes uniform, repeatable procedures or standard methods for measuring specified product characteristics of household electric dishwashers. The standard includes definitions, methods for testing and evaluating dishwasher cleaning performance.*

ANSI/AHAM HLW-1-2002, Performance Evaluation Procedure for Household Washers

*Establishes a uniform, repeatable procedure or standard method for evaluating the performance of home laundry equipment. Methods provide a means to compare and evaluate different brands and models of household washers regarding characteristics significant to product use. Standard methods are not intended to inhibit improvement and innovation in product testing, design, or performance.*

ANSI/AHAM HRF-1-2004, Household Refrigerators/Household Freezers

*Applies to household refrigerators,*

*refrigerator-freezers, freezers and wine chillers. This standard covers definitions, methods for computing volumes and shelf areas, methods for determining volumes of special features, performance test procedures, durability test procedures, methods for determining energy consumption and energy factor, and safety recommendations.*

ANSI/AHAM HU-1-2006, Portable Household Humidifiers

*This standard establishes a uniform, repeatable procedure and standard methods for measuring specified product characteristics of humidifiers. The standard methods provide a means to compare and evaluate different brands, models and types of household portable humidifiers regarding characteristics significant to product use.*

ANSI/AHAM I-1-2005, Household Electric Irons

*Establishes a uniform, repeatable procedure or standard method for measuring specified performance characteristics of household electric irons.*

ANSI/AHAM OV-1-2006, Procedures for the Determination and Expression of the Volume of Household Microwave and Conventional Ovens

*Establishes a uniform, repeatable procedure or standard method for determining and expressing the overall volume, and usable oven space, of the cooking cavity of individual household microwave ovens and conventional ovens fuelled by electricity and gas.*

ANSI/AHAM RAC-1-1982 (R2003), Room Air Conditioners

*Establishes standard methods for measuring performance and includes sections on definitions, test conditions, tests for standard measurements, performance tests, and safety which apply to room air conditioners as defined in 3.1.Performance tests for Heating-Cooling Units (Section 7) apply to units designed as air-to- air source heat pumps with or without supplementary electric resistance heat. The tests apply to units with electric resistance as the only heat source.*

## AIAA (American Institute of Aeronautics and Astronautics)

ANSI/AIAA G-003B-2004, Guide to Reference and Standard Atmosphere Models

*Provides guidelines for selected reference and standard atmospheric models for use in engineering design or scientific research. The guide describes the content of the model, uncertainties and limitations, technical basis, data bases from which the model is formed, publication references, and sources of computer code for thirty-seven (37) Earth and planetary atmospheric models, for altitudes from surface to 3500 kilometers, which are generally recognized in the aerospace sciences.*

ANSI/AIAA G-034-1999, Guide to Reference and Standard Ionosphere Models

*Provides guidelines for selecting ionospheric models for engineering design or scientific research. The Guide describes the content of the models, uncertainties and limitations, technical basis, databases from which the models are formed, publication references, and sources of computer codes for approximately 30 ionospheric models. The models cover the altitude range from the Earth's surface to approximately 10,000 kilometers. This Guide is intended to assist communication (C 3 I) and space system designers and developers, geophysicists, space physicists, and climatologists in understanding available models and comparing sources of data and interpreting engineering and scientific results based on different ionospheric models.*

ANSI/AIAA G-035A-2000, Human Performance Measurements

*Provides methods for measuring human performance for the purpose of scientific research and system evaluation. The guidelines are intended to assist scientists and systems specialists in selecting human performance measurement methods appropriate to the situation being studied or the system being evaluated.*

ANSI/AIAA G-095-2004, Guide for Safety of Hydrogen and Hydrogen Systems

*This Guide presents information that designers, builders, and users of hydrogen systems can use to avoid or resolve hydrogen hazards. Guidelines are presented for system design, materials selection, operations, storage, and transportation. Pertinent research is summarized, and the data are presented in a quick reference form. Further information can be found in the extensive bibliography.*

ANSI/AIAA R-020A-1999, Guide for Estimating and Budgeting Weight and Power Contingencies for Spacecraft Systems

*This Recommended Practice provides a methodology for the management of the growth of mass properties during the development of aerospace flight vehicles. It is particularly applicable to missiles, satellites, and launch vehicles. The standardized methodology is consistent with former Mil-Std 1811 and is based on planning, controlling, and reporting at each stage of product or system development.*

ANSI/AIAA R-023A-1995, Recommended Practice for Human Computer Interfaces for Space System Operations

*Establishes a standardized set of HCI requirements that will be used in the design of next-generation satellite control systems to simplify them and make them more user friendly, operationally efficient, and cost effective. There are 36 generic requirements for the HCI, grouped into: data entry, data display, sequence control, operator guidance, data transmission, and data protection. The requirements are layered as core enhancements, and secure systems.*

ANSI/AIAA R-100A-2001, Recommended Practice for Parts Management

*Establishes a parts management approach that is consistent with today's business environment. This Recommended Practice, as viewed by industry and government, is a shift in business philosophy from a controlled approach to a performance-based process. The dynamic growth of the commercial market for electronic parts as well as corresponding decrease in aerospace and defense have caused the government and industry to seek alternative methods of managing parts. To develop a solution to this complex problem, industry and government teamed to develop this Recommended Practice for mitigating potential problems/risks. The result of this team effort is a nongovernment standard (NGS) on Parts Management. The basic strategy employed by this document is to understand and manage risk as early as possible in program life cycle.*

ANSI/AIAA S-017A-2000, Aerodynamic Decelerator and Parachute Drawings

*Establishes terminology for 260 terms critical to communication about the design and function of parachutes. It further sets requirements for the graphic description of materials, stitching, seams, view, and projections, with related dimensions and tolerances, all of which are consistent with current procurement practice. Many figures are included to illustrate the requirements. Additional illustrations of several types of parachutes are provided in an annex.*

ANSI/AIAA S-061-1998, Commercial Launch Safety

*Establishes criteria for the establishment of the safety roles and responsibilities and relationships between the various operators who may conduct simultaneous aerospace vehicle operations at a launch or landing site. Risk management processes for ensuring the safety of the public, its property and the safety of the personnel involved in the preparatory and launch operations are addressed. The training and qualifications of the personnel involved in operations at the launch and landing sites are addressed. The appendices to this standard provide guidelines for the design, testing and safe operation of aerospace vehicles and their support equipment.*

ANSI/AIAA S-080-1998, Space Systems - Metallic Pressure Vessels, Pressurized Structures, and Pressure Components

*Provides requirements for the analysis, design, manufacture, qualification, and acceptance for flight of metallic pressure vessels, pressurized structures, and pressure components for use in space systems. The document includes specific requirements addressing pressure vessels with hazardous and non-hazardous failure modes and special pressurized equipment such as batteries, heat pipes, cryostats, and pressure components. This is the second public review for this standard. It was previously listed in the September 12, 1997 edition of Standards Action and is being resubmitted due to substantive changes to the text.*

ANSI/AIAA S-081A-2006, Space Systems - Composite Overwrapped Pressure Vessels (COPV)

*This Standard establishes baseline requirements for the design, fabrication, test, inspection, operation, and maintenance of composite overwrapped pressure vessels (COPV) used for pressurized, hazardous or non-hazardous, liquid or gas storage in space systems such as spacecraft and launch vehicles. These requirements when implemented on a particular system will assure a high level of confidence in achieving safe and reliable operation.*

ANSI/AIAA S-096-2004, Space Systems - Flywheel Rotor Assemblies

*This standard establishes baseline requirements for the design, fabrication, test, inspection, storage, and transportation of a flywheel rotor assembly used in a spaceflight flywheel system for energy storage and/or attitude control. These requirements when implemented on a particular system will assure a high level of confidence in achieving safe and reliable operation*

## AIHA (American Industrial Hygiene Association)

ANSI AIHA Z9.1-2006, Ventilation and Control of Airborne Contaminants During Open-Surface Tank Operations

*Establishes minimum control requirements and ventilation system design criteria for controlling and removing air contaminants to protect the health of personnel engaged in open-surface tank operations. It is not intended to cover fire protection.*

ANSI Z88.10-2001, Respirator Fit Testing Methods

*Provides guidance on how to perform fit testing on tight fitting respirators and appropriate methods to be used. Fit testing is only one element of a complete respirator protection program. A complete respiratory protection program is defined in ANSI Z88.2, American National Standard for Respiratory Protection.*

ANSI Z88.7-2001, Color-Coding of Air-Purifying Respirator Canisters, Cartridges and Filters

*Establishes a system of marking air-purifying respirator canisters, cartridges, and filers by means of colors in order to: 1) Facilitate rapid identification of the canisters, cartridges, and filters by users; and 2) Ensure color consistency among respirator manufacturers. This standard was listed for public review in the 5/21/1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/AIHA Z10-2005, Occupational Health and Safety Management Systems

*Defines minimum performance requirements for occupational health and safety management systems (OHSMS.*

ANSI/AIHA Z88.6-2006, Respirator Use - Physical Qualifications for Personnel

*This standard provides information that is useful for the medical evaluation of respirator users. This standard does not deal with medical surveillance or biological exposure monitoring. It is understood that local circumstances vary, that no set of guidelines can cover all situations, and that specific programs and procedures should be modified for each individual workplace. Medical evaluation is only one element of a complete respiratory protection program. A complete respiratory protection program is defined in ANSI Z88.2, 1992.*

ANSI/AIHA Z9.2-2001 (R2006), Fundamentals Governing the Design and Operation of Local Exhaust Systems

*This Standard establishes minimum requirements for the commissioning, design, specification, construction, and installation of fixed industrial local exhaust ventilation (LEV) systems used for the reduction and prevention of employee exposure to harmful airborne substances in the industrial environment.*

ANSI/AIHA Z9.4-1997, Exhaust Systems - Abrasive Blasting Operations - Ventilation and Safe Practices for Fixed Location Enclosures

*Provides rules and principles to protect employees engaged in or working in the vicinity of abrasive blasting in fixed location enclosures from (1) significant risk of health impairment and (2) physical injury due to explosions, high velocity jets of abrasive blasting particles, or moving equipment. This standard applies to all operations in fixed-location abrasive blast enclosures in which forcibly comes in contact with a surface by pneumatic or hydraulic pressure or by centrifugal force.*

ANSI/AIHA Z9.5-2002, Laboratory Ventilation

*Describes practices for the design and operation of laboratory ventilation systems used for control of exposure to airborne contaminants. It is intended for use by employers, architects, industrial hygienists, safety engineers, ventilation system designers, facilities engineers, maintenance personnel and testing and balancing personnel. It is compatible with the ACGIH Industrial Ventilation Manual, ASHRAE ventilation standards and other recognized standards of good practice.*

ANSI/AIHA Z9.6-1999, Exhaust Systems for Grinding, Polishing and Buffing

*Describes rules and engineering principles that represent the minimum criteria intended (1) to protect the health of personnel engaged in and working in the vicinity of grinding, polishing and buffing operations and (2) to control contaminants generated by those operations.*

ANSI/AIHA Z9.7-2007, Recirculation of Air

*This standard established minimum criteria for the design and operation of a re-circulating industrial process exhaust ventilation system used for containment control.*

## AIIM (Association for Information and Image Management)

ANSI/AIIM MS11-1987 (R1999), Information and Image Management – Microfilm Jackets

*Defines the dimensions, operational constraints and other basic characteristics of the microfilm jacket. It is addressed primarily to user requirements rather than production requirements. It does not cover formats or channel configurations.*

ANSI/AIIM MS15-2000, Dimensions and Operational Constraints for Single-Core Cartridge for 16-mm Processed Microfilm

*This standard specifies the physical and performance characteristics of cartridges used for storing and viewing processed 16mm microfilm. The intent of the standard is to achieve compatibility between the cartridge and automatic threading readers and reader-printers. Accordingly, the standard addresses those physical features that interface with readers required to assure multi-reader usage. Also the winding of the processed microfilm on the reel and the physical characteristics of the leading end of the film are standardized to ensure proper interfacing of the cartridge with all readers of this type. To obtain an electronic draft: document posted at http://www.aiim.org/aiimstd/MS15-2000.pdf. or e-mail at bfanning@aiim.org.*

ANSI/AIIM MS17-2001, Test Chart for Rotary Microfilm Cameras

*Describes specifications for creating a test chart and a test target for rotary (flow) microfilm cameras, and a method for evaluating the photographic quality and mechanical performance of rotary microfilm cameras. Available at www.aiim.org/aiimstd/ANSI MS17-2000.pdf*

ANSI/AIIM MS18-1992 (R1998), Micrographics – Splices for Imaged Film – Dimensions and Operational Constraints

*Covers the requirements for splicing processed microfilm and leaders and trailers, independant of film width or type of base support. It includes both tape and ultrasonic splices.*

ANSI/AIIM MS23-2004, Recommended Practice - Production, Inspection, and Quality Assurance of First-Generation, Silver Microforms of Documents

*This document identifies and discusses the qualitative characteristics of first-generation silver gelatin microforms and the methods to attain, maintain, and measure levels of quality. The scope of this document excludes COM, updateable, color, and thermally processed microforms.*

ANSI/AIIM MS26A-1999, 35-mm Planetary Cameras (Top-Light) - Procedures for Determining Illumination Uniformity of Microfilming Engineering Drawings

*Provides updated information for ANSI/AIIM MS26-1990 which specifies the minimum test target elements and their criteria to be used in determining the uniformity of illumination on the copyboard of a 35-mm planetary camera. This standard deals exclusively with top-light and does not address the use of back-light.*

ANSI/AIIM MS40-1987 (R1999), Microfilm – Computer Assisted Retrieval (CAR) Interface Commands

*Applies to computer assisted retrieval (CAR) software commands necessary to drive 16-mm microfilm retrieval systems. The minimum 16-mm CAR command set is defined by this standard. This standard addresses two of the upper three layers of the ISO Open System Interconnect (OSI) architecture model.*

ANSI/AIIM MS43-1998, Recommended Practice for Operational Procedures/Inspection and Quality Control of Duplicate Microforms of Documents and from COM

*Provides guidelines for the production of duplicate microforms.*

ANSI/AIIM MS48-1999, Recommended Practice for Microfilming Public Records on Silver-Halide Film

*Covers original first-generation microforms, including raster COM, encompassing roll film, microfiche, aperture cards, and jacket film. The practice applies to the microfilming of records of federal, state, local, and other public agencies. This practice is compatible with government regulations for the microfilming of permanently valuable records and may be used by private industry to comply with public record requirements.*

ANSI/AIIM MS5-1992 (R1998), Micrographic Microfiche

*Applies to microfiche produced as a result of source document and computer-output microfilming. This standard does not preclude the use of other standards for unitized microforms.*

ANSI/AIIM MS54-1993 (R1999), Graphic Symbols for Controls on Document Imaging Equipment

*Provides graphic symbols for micrographics and other document management equipment to be used for identifying equipment functions.*

ANSI/AIIM MS6-1993 (R1999), Microfilm Packaging Labeling

*Outlines the required and optional information that should be placed on unexposed photographic material packaging, either on a label or printed surface, to identify the contents of the package. The standard applies to microfilm in roll, sheet, and card formats, but does not attempt to specify the type of storage container or protection needed for specific products.*

ANSI/AIIM MS62-1999, Recommended Practice for COM Recording Systems Having an Internal Electronic Forms Generating System - Operational Practices for Inspection and Quality Control

*Provides a description of software forms used for the image quality evaluation of Computer Output Microfilm (COM) recorder systems. Also provided is a description of a preferred method for using the test forms for initial COM recorder testing to establish a quality reference baseline, and for periodic testing of COM image quality that may signal the need for adjustment or maintenance.*

ANSI/AIIM MS66-1999, Metadata for Interchange of Files on Sequential Storage Media between File Storage Management Systems (FSMS)

*Describes a standard for specifying metadata that describes how a File Storage Management System (FSMS) has stored files on sequential media. This metadata description is independent on any particular proprietary metadata format, but it may be used to describe the proprietary format that an FSMS uses to write files to sequential media.*

ANSI/AIIM MS8-1998, Document Mark (Blip) Used in Image Mark Retrieval Systems

*Contains the specifications for the location, size, and density of single and multisize image marks recorded on 16mm roll film used in image mark retrieval systems. This standard is limited to the 16mm film used in the retrieval device, regardless of the method and equipment used to generate the original or duplicate film.*

ANSI/AIIM TR1-1993, Guidelines for Metrics (NOT AN AMERICAN NATIONAL STANDARD)

*This technical report provides information to individuals considering the reasons for and benefits of converting from the U.S. customary units (inch and pound) to the metric system in business practices.*

ANSI/AIIM/ISO 10197-2000, Reader-Printers

*Specifies the essential performance characteristics of reader-printers designed to view and make hard copies from roll microfilm and microfilm strips that have a maximum width of 35mm, microfiche, jackets, and image cards with a magnificiation no greater than 50:1.*

ANSI/AIIM/ISO 10198-1999, Rotary Cameras for 16mm Microfilm – Mechanical and Optical Characteristics

*Defines the mechanical and optical characteristics of rotary cameras used for recording documents onto 16 mm microfilms as specified in ANSI/AIIM MS14-1988.*

ANSI/AIIM/ISO 10198-1999, Rotary Cameras for 16mm Microfilm – Mechanical and Optical Characteristics

*Defines the mechanical and optical characteristics of rotary cameras used for recording documents onto 16 mm microfilms as specified in ANSI/AIIM MS14-1988.*

ANSI/AIIM/ISO 6198-1999, Readers for Transparent Microforms – Performance Characteristics

*Specifies the essential performance characteristics of readers with magnification less than or equal to 50:1 designed for use with black-and-white roll microfilm and strips that have a maximum width of 35 mm.*

ANSI/AIIM/ISO 6198-1999, Readers for Transparent Microforms – Performance Characteristics

*Specifies the essential performance characteristics of readers with magnification less than or equal to 50:1 designed for use with black-and-white roll microfilm and strips that have a maximum width of 35 mm.*

ANSI/ISO/AIIM 7565-1993, Micrographics - Readers for transparent microforms -

Measurement of characteristics

*Specifies the method for measuring screen luminance, image contrast,and screen reflectance of microform readers that have translucent or built-in opague screens up to 46 x 61 cm. The standard describes the type of instrumentation required and units of measurement. This partial international adoption of ISO 7565:1993 revises ANSI/AIIM MS12-1990.*

## AIM (Automatic Identification Manufacturers, Inc.)

ANSI/AIM BC-10-1997, AIM International Technical Specification - International Symbology Specification - MaxiCode

*This standard provides a description of the MaxiCode bar code symbology. Includes complete information on how to encode data into a symbol and how to decode MaxiCode symbols.*

ANSI/AIM BC-11-1997, AIM International Technical Specification - International Symbology Specification - Data Matrix

*Provides a description of the Data Matrix bar code symbology. Includes complete information on how to encode data into a symbol and how to decode Data Matrix symbols.*

ANSI/AIM BC-12-1998, Uniform Symbology Specification - Channel Code

*Describes "Channel Code," which is a family of linear (one dimensional) bar code symbols designed for enumerating a countable number of items in the least symbol length possible while providing reasonable decoding ease and security.*

ANSI/AIM BC-13-1998, International Symbology Specification - Aztec Code

*Describes submission of a bar code symbology specification for SuperCode.*

## AISC (American Institute of Steel Construction)

ANSI/AISC 341-2005, Seismic Provisions for Structural Steel Buildings

*These provisions are for the design and construction of structural steel members and connections in the Seismic Load Resisting Systems in buildings and other structures. The design forces in these structures shall result from earthquake motions determined on the basis of various levels of energy dissipation in the inelastic range of response.*

ANSI/AISC 341s1-2005, Supplement No. 1 to the Seismic Provisions for Structural Steel Buildings

*These provisions are for the design and construction of structural steel members and connections in the Seismic Load Resisting Systems in buildings and other structures. The design forces in these structures shall result from earthquake motions detemined on the basis of various levels of energy dissipation in the inelastic range of response. The supplement will add new provisions for OCBF over base isolation and for determining brace design forces.*

ANSI/AISC 358-2005, Prequalified Connections for Special and Intermediate Steel Moment Frames for Seismic Applications

*Provides design, detailing, quality, and inspection requirements for prequalified beam-to-column connections in Special Moment Frames (SMFs) and Intermediate Moment Frames (IMFs). Will eliminate the need for project-specific qualification testing to substantiate connection designs for steel moment frames when connections are designed within the range of prequalification.*

ANSI/AISC 360-2005, Specification for Structural Steel Buildings

*This Specification governs the design, fabrication and erection of structural steel-framed buildings and other structures. Structural steel includes hot-rolled W-, S-, and HP-shapes, channels and angles listed in ASTM A6/A6M; structural tees split from the hot-rolled W-, S- and M- shapes listed in ASTM A6/A6M; hollow structural sections produced to ASTM A500, A501, A618 or A847, and steel pipe produced to ASTM A53/A53M. This specification is intended for the common building design in routine office practice.*

ANSI/AISC N690-2006, Specification for Safety-Related Steel Structures for Nuclear Facilities

*This standard applies to the design, fabrication, and erection of steel safety-related structures and structural elements for nuclear facilities using the load and resistance factor design and allowable stress design methods. The structures or structural elements subject to this Specification are those steel structures which are parts of the nuclear safety-related system or which support, house, or protect nuclear safety-related systems or components, the failure of which would impair the safety-related functions of these systems or components.*

## AISI (American Iron and Steel Institute)

ANSI/AISI COFS/GP-2007, North American Standard for Cold-Formed Steel Framing - General Provisions

*Design, construction and installation of structural and non-structural cold-formed steel*

*framing members where the specified minimum base steel thickness is between 18 mils (0.0179 inches) (0.457mm) and 118 mils (0.1180 inches) (3.00mm.*

ANSI/AISI COFS/L99-1-2001, Cold-Formed Steel Framing - Header Design

*Provides technical information and specifications for designing headers made from cold-formed steel. The design and installation of cold-formed steel box and back-to-back headers, and double L-headers used in single-span conditions for load carrying purposes in buildings shall be in accordance with the Specification for the Design of Cold-Formed Steel Structural Members [Specification] and the Standard for Cold-Formed Steel Framing - General Provisions [General Provisions], except as modified by the provisions of this Header Standard. This Header Standard shall not preclude the use of other materials, assemblies, structures or designs not meeting the criteria herein, when the other materials, assemblies, structures or designs demonstrate equivalent performance for the intended use to those specified in this standard. Where there*

ANSI/AISI COFS/LATERAL-2004, Cold-Formed Steel Framing - Lateral Design

*This standard provides state-of-the-art technical information and specifications for cold-formed steel framing lateral design. The provisions apply to shear walls, diagonal strap bracing that is part of a structural wall and diaphragms..*

ANSI/AISI COFS/PM Supplement-2004, Cold-Formed Steel Framing - Prescriptive Method for One and Two Family Dwellings, 2001 Edition (Supplement)

*Provides revisions and updates to the Standard for Cold-Formed Steel Framing - Prescriptive Method for One and Two Family Dwellings, 2001 Edition.*

ANSI/AISI COFS/PM-2006, Standard for Cold-Formed Steel Framing - Prescriptive Method for One and Two Family Dwellings, 2001 Edition with Supplement 2

*Construction of cold-formed steel framed detached one- and two-family dwellings, townhouses, and other attached single-family dwellings not more than three stories in height using repetitive in-line framing practices.*

ANSI/AISI COFS/PRODUCT-2007, North American Standard for Cold-Formed Steel Framing - Product Data

*This standard provides criteria, including material and product requirements for structural and non-structural cold-formed steel framing members where the specified minimum base steel thickness is between 18 mils (0.0179 inches) (0.455mm) and 118 mils (0.1180 inches) (2.997mm). The components covered include C-shape studs, joists, track, U-channels, furring channels and angles.*

ANSI/AISI COFS/TRUSS-2007, North American Standard for Cold-Formed Steel Framing - Truss Design

*Design of cold-formed steel trusses for load carrying purposes in buildings, including manufacturing, quality criteria, installation and testing as they relate the design of cold-formed steel trusses.*

ANSI/AISI COFS/WSD-2004, Cold-Formed Steel Framing - Wall Stud Design

*This standard provides state-of-the-art technical information and specifications for cold-formed steel wall stud design. The provisions apply to wall studs designed on the basis of an all steel design or sheathing braced design, stud-to-track connections and deflection track connections.*

ANSI/AISI/COFS/HEADER-2007, North American Standard for Cold-Formed Steel Framing - Header Design

*Design and installation of cold-formed steel box and back-to-back headers, and double and single L-headers for load carrying purposes in buildings.*

ANSI/AISI/COS TS-1-2002, Rotational-Lateral Stiffness Test Method for Beam-to-Panel Assemblies

*This is a test procedure to determine the rotational-lateral stiffness of beam-to-panel assemblies. The test method is used primarily in determining the strength of beams connected to panels as part of a structural assembly.*

ANSI/AISI/COS TS-2-2002, Stub-Column Test Method for Effective Area of Cold-Formed Steel Columns

*This test method covers the determination of the effective cross-sectional area of cold-formed steel columns. It primarily considers the effects of local buckling and residual stresses and applied to solid or perforated columns that have holes (or hole patterns) in the flat and/or curved elements of the cross section.*

ANSI/AISI/COS TS-3-2002, Standard Methods for Determination of Uniform and Local Ductility

*This method covers the determination of uniform and local ductility from a tension test. Its primary use is as an alternative method of determining if a steel has adequate ductility as defined in the North American Cold-Formed Steel Specification. It is based on the method suggested by Dhalla and Winter.*

ANSI/AISI/COS TS-4-2002, Standard Test Methods for Determining the Tensile and Shear Strength of Screws

*The performance test methods included in this standard establish procedures for conducting tests to determine the tensile and shear strength of carbon steel screws The screws may be thread-forming or thread-cutting, with or without a self-drilling point, and with or without washers. The intended application for these screws is to connect cold-formed sheet steel material.*

ANSI/AISI/COS TS-5-2002, Test Method for Mechanically Fastened Cold-Formed Steel Connections

*These performance test methods cover the determination of the strength and deformation of mechanically fastened connections for cold-formed steel building components, and are based extensively on test methods used successfully in the past. Connections in which the fasteners are stressed in shear (loads applied perpendicular to the shank of the fastener) and those in which the fasteners are stressed in tension (loads applied parallel to the shank of the fastener) are included. The objective is to evaluate actual field connections using standard test specimens and fixtures.*

ANSI/AISI/COS TS-6-2004, Standard Procedures for Panel and Anchor Structural Tests

*This test procedure extends and provides methodology for interpretation of results of tests performed according to ASTM E1592.*

ANSI/AISI/COS TS-7-2002, Cantilever Test Method for Cold-Formed Steel Diaphragms

*This test method is used to determine the nominal diaphragm shear strength and the shear stiffness for steel diaphragms used in framed wall, or floor construction.*

ANSI/AISI/COS TS-8-2004, Base Test Method for Purlins Supporting a Standing Seam Roof System

*This test is to obtain the reduction factor to be used in determining the nominal flexural strength of a purlin supporting a standing seam roof system.*

ANSI/AISI/COS/TS 10-2005, Test Method For Distortional Buckling Of Cold-formed Steel Hat Shaped Columns

*This test method establishes procedures for determining the distortional buckling strength of cold-formed steel hat shaped columns with an open cross section.*

ANSI/AISI/COS/TS 11-2005, Method For Flexural Testing Cold-formed Steel Hat Shaped Beams

*This test method establishes procedures for determining the nominal flexural strength of an open hat shaped cross section subject to negative bending moment.*

ANSI/AISI/COS/TS 12-2005, Test Procedure For Determining A Strength Value For A Roof Panel-to-purlin-to-anchorage Device Connection

*The purpose of this test is to obtain lower bound strength values for the roof panel-to-purlin-to-anchorage device connections in through-fastened and standing seam, multi-span, multi-purlin line roof systems. The test is not intended to determine the ultimate strength of the connections.*

ANSI/AISI/COS/TS 9-2005, Standard Test Method For Determining The Web Crippling Strength Of Cold-formed Steel Beams

*This performance test method establishes procedures for conducting tests to determine the web crippling strength of cold-formed steel flexural members.*

ANSI/COS/NASPEC SUPPLEMENT 2004, Supplement 2004 to the North American Specification for the Design of Cold-Formed Steel Structural Members, 2001 Edition

*The Supplement provides updates to the 2001 North American Specification for the Design of Cold-Formed Steel Structural Members. This Supplement includes the updates to the Specification and the Commentary; and a new addition of Appendix 1, Design of Cold-Formed Steel Structural Members Using the Direct Strength Method.*

ANSI/COS/NASPEC-2001, 2001 North American Specification for the Design of Cold-Formed Steel Structural Members

*The North American Specification for the Design of Cold-Formed Steel Structural Members is a standard for determining member and connection strengths of cold-formed carbon and low alloy steels. It also provides methodology for determining resistance factors of cold-formed carbon and low alloy steel members and connections via tests.*

## AITC (American Institute of Timber Construction)

ANSI/AITC A190.1-2002, Wood Products – Structural Glued Laminated Timber

*This Standard covers minimum requirements for the production of structural glued laminated timber, including sizes and tolerances, grade combinations, lumber, adhesives, appearance grades, and manufacture. It also covers the quality control system for the laminator, plant qualification, daily quality control, and the functions of an accredited inspection and testing agency, and marking. Definitions of words used in the trade are included, as well as guides for specifying and for field reinspection. These requirements are intended to permit the use of any suitable method of manufacture which will produce a product equal to or superior in quality and performance to that specified, provided such method is approved in accordance with the requirements of this Standard.*

*Annexes are a part of this Standard. Appendices are not a part of this Standard but*

## ALI (American Ladder Institute)

ANSI A14.1-2000, Ladders – Portable Wood, Safety Requirements for

*Prescribes rules and establishes minimum requirements for the construction, testing, care, and use of the common types of portable wood ladders described herein in order to ensure safety under normal conditions of usage.*

*This standard also prescribes rules and minimum requirements for labeling of the common types of portable stepladders, extension ladders, and single ladders, in order to ensure safety under normal conditions of usage. I*

ANSI A14.10-2000, Special Duty Ladders

*Prescribes rules governing the safe construction, design, testing, care and use of special-duty (duty ratings of 350 lbs. or more) portable metal and reinforced plastic ladders of various types including, but not limited to,*

*portable extension, single, sectional, step and platform ladders. It does not cover special-purpose ladders that do not meet the general requirements of this standard, nor does it cover ladder accessories that may be installed on or used in conjunction with ladders. These requirements are also intended to prescribe rules and criteria for labeling/marking of the kinds of portable ladders cited in this standard. These labeling/marking requirements do not apply to those situations where training, supervision, or documented safety procedures would be in conflict, or serve in lieu of, these labeling/marking requirements.*

ANSI A14.2-2000, Portable Metal Ladders, Safety Requirements for

*Prescribes rules governing the safe construction, design, testing, care, and use of portable metal ladders of various types including, but not limited to, step stools, portable extension, step, trestle, sectional, combination, single, and platform ladders, but not excluding ladders in and on mines, the fire services, mobile equipment, hoisting equipment, work platforms, antenna communication towers, transmission towers, utility poles, and chimneys. It does not cover special-purpose ladders that do not meet the general requirements of this standard, nor does is cover ladder accessories, including, but not limited to, ladder levelers, ladder stabilizers of stand-off devices, ladder jacks, or ladder straps or hooks, that may be installed on or used in conjunction with ladders. This standard also prescribes rules and minimum requirements for labeling of the common types of portable*

ANSI A14.3-2002, Ladders – Fixed – Safety Requirements

*This standard prescribes minimum requirements for design, construction, and use of fixed ladders, and sets forth requirements for cages, wells, and ladder safety systems used with fixed ladders, in order to minimize personal injuries. All parts and appurtenances necessary for a safe and efficient ladder shall be considered integral parts of the design.*

ANSI A14.4-2002, Job-Made Wooden Ladders, Safety Requirements for

*This safety standard is intended to prescribe minimum requirements for the construction, design, installation and use of job-made wood ladders in order to minimize personal injuries. This standard does not cover portable manufactured ladders, permanent fixed ladders and or mobile equipment ladders. This standard provides reasonable safety for life and limb during the construction or demolition operation where conditions do not permit the erection of temporary stairs or ramps.*

ANSI A14.5-2000, Ladders – Portable Reinforced Plastic – Safety Requirements

*Prescribes rules governing the safe construction, design, testing, care, and use of portable reinforced plastic ladders of various types including, but not limited to, step stools, portable extension, step, trestle, sectional combination, single, and platform ladders but excluding ladders in and on mines, the fire services, mobile equipment, hoisting equipment, work platforms, antenna communications towers, transmission towers, utility poles, and chimneys. It does not cover special-purpose ladders that do not meet the general requirements of this standard, nor does it cover ladder accessories including, but not limited to, ladder levelers, ladder stabilizers or stand-off devices, ladder jacks, or ladder straps or hooks, that may be installed on or used in conjunction with ladders. This standard also prescribes rules and minimum requirements for labeling of the common types of portable*

ANSI A14.7-2006, Mobile Ladder Stands and Mobile Ladder Stand Platforms

*This standard prescribes rules and requirements governing the proper design, construction, testing, care, use, and maintenance of mobile ladder stands and mobile ladder stand platforms including labeling /marking of these units. It excludes special purpose units that do not meet the general requirements of this standard.*

ANSI A14.9-2004, Safety Requirements for Ceiling Mounted Disappearing Climbing Systems

*This standard prescribes rules concerning the safe design, construction, testing, care, installation and use of permanently installed metal or wood, ceiling mounted disappearing climbing systems of various types designed to be used for access to upper levels such as attics. Household units with duty ratings of 200, 250, 300 and 350 lbs., or commercial units with a rating of 500 lbs. are the only units covered in this standard. This standard is not intended to apply to any climbing systems covered in any other ANSI A14 standards, or disappearing climbing systems intended for use with ceiling heights in excess of 12 feet. This standard also prescribes rules and minimum requirements for installation instructions and labeling of climbing systems in order to promote safety under normal conditions of usage.*

## ALI (Automotive Lift Institute)

ANSI/ALI ALCTV-2006, Standard for Automotive Lifts - Safety Requirements for Construction, Testing and Validation

*This submittal represents a second public review of this standard covering the safety requirements for the construction, testing and validation of automotive lifts of the following types: manually driven, power driven, stationary and mobile. Lifts that are movable or are designed to tilt the superstructure, or are not "automotive vehicle service lifts" are outside the scope of this standard.*

ANSI/ALI ALIS-2001, Automotive Lifts - Safety Requirements for Installation and Service

*Provides guidance to the installer and servoce technician for the installation and service of automotive lifts including required installation and servide considerations and qualifications, training, reporting and documentaion for installers and service technicians. The standard also provides sample forms for installers or service technicians to use to comply with this standard.*

ANSI/ALI ALOIM-2000, Automotive Lifts – Safety Requirements for Operation, Inspection and Maintenance

*Covers the safety requirements for operation, inspection and maintenance of installed automotive lifts.*

## AMCA (Air Movement and Control Association)

ANSI/AMCA 204-2005, Balance Quality and Vibration Levels for Fans

*This standard defines appropriate fan balance quality and operating vibration levels to individuals who specify, manufacture, use and maintain fans.*

ANSI/AMCA 220-2005, Laboratory Methods of Testing Air Curtain Units for Aerodynamic Performance Rating

*The purpose of this standard is to establish uniform methods for laboratory testing of air curtain units to determine performance in terms of flow rate, outlet velocity, uniformity, power consumption and velocity profile for rating for guarantee purposes. The scope of this standard is limited to air curtain units with an average outlet velocity of more than 500 fpm. It is not the purpose of this standard to specify the testing procedures to be used for design, production, or field testing.*

ANSI/AMCA 230-1999, Laboratory Method of Testing Air Circulator Fans for Rating

*The purpose of this standard is to establish uniform methods for laboratory testing of fans and other air circulating devices to determine performance in terms of airflow rate for rating or guarantee proposes. This standard may be used as the basis for testing pedestal fans, ceiling fans, box fans, table fans, and portable personnel coolers, or other air circulating devices when air is used as the test gas. Blowers, exhausters, compressors, positive displacement machines, and positive pressure ventilators are not within the scope of this standard. The following change has been made: a the end of Section 7.2, a new sentence has been added, "In all cases, the test apparatus shall provide the means of isolating the load cell from torque loading."*

ANSI/AMCA 240-2006, Laboratory Method of Testing Positive Pressure Ventilators for Rating

*This standard establishes a uniform method of laboratory testing of positive pressure ventilators in order to determine performance in terms of airflow rate, pressure, air density, and speed of rotation for rating or guarantee purposes.*

ANSI/AMCA 250-2005, Laboratory Methods of Testing Jet Tunnel Fans for Performance

*Determination of those technical characteristics needed to describe all aspects of the performance of jet tunnel fans. Test procedures relate to laboratory conditions; measurement of performance under in-situ conditions is not included.*

ANSI/AMCA 301-2006, Methods for Calculating Fan Sound Ratings from Laboratory Test Data

*This document establishes standard methods for calculating consistent fan sound ratings from laboratory test data. It applies to fans, blowers, exhausters or other air moving devices.*

ANSI/AMCA 500-D-2007, Laboratory Methods for Testing Dampers for Ratings

*Establishes uniform laboratory test methods for dampers including air leakage, pressure drop, dynamic closure, operational torque and elevated temperature testing.*

ANSI/AMCA 500-L-2007, Laboratory Methods of Testing Louvers for Rating

*Establishes uniform test methods for louvers, including air leakage, pressure drop, water penetration, wind driven rain and operational torque.*

ANSI/AMCA 510-2004, Methods of Testing Heavy Duty Dampers for Rating

*Establishes methods used in measuring performance of dampers generally described as heavy duty or sever service, normally used in applications where elevated temperature, erosion and/or corrosion conditions exist, including dampers which are used to control the flow of gas, or to isolate one section of a duct system from another section of the system.*

ANSI/AMCA 520-2004, Laboratory Methods of Testing Actuators

*Establishes an industry standard for testing of actuators used on fire dampers. Requirements cover torque or force rating, long term holding, operational life, elevated temperature performance, periodic maintenance, production, and sound testing for both pneumatic and electric operators.*

ANSI/AMCA 610-2006, Methods of Testing Airflow Measurement Stations for Rating

*Establishes a laboratory test method under which a permanently installed airflow measurement station may be tested for rating. Includes descriptions of the test facility requirements, reference airflow sources and presentation of test results.*

ANSI/AMCA 99-0068-2003, The AMCA Vocabulary: Product Definitions

*Definitions of products within the air movement/air control industries.*

ANSI/AMCA 99-2404-2003, Drive Arrangements for Centrifugal Fans

*Describes the various possible drive ω'rangements for centrifugal fans and is in harmony with ISO 13499.*
*Single copy price: $5.00*
*Order from: Joseph Brooks, AMCA*
*Send comments (with copy to BSR) to: Same*

ANSI/AMCA 99-2405-2003, Inlet Box Positions for Centrifugal Fans

*Depicts and defines the various locations of a centrifugal fan inlet box.*
*Single copy price: $5.00*
*Order from: Joseph Brooks, AMCA*
*Send comments (with copy to BSR) to: Same*

ANSI/AMCA 99-2406-2003, Designation for Rotation and Discharge of Centrifugal Fans

*Depicts and defines the designations for rotation and discharge of centrifugal fans.*
*Single copy price: $5.00*
*Order from: Joseph Brooks, AMCA*
*Send comments (with copy to BSR) to: Same*

ANSI/AMCA 99-2407-2003, Motor Positions for Belt or Chain Drive Cetrifugal Fans

*Depicts and defines the designations for prime mover positions for belt for chain driven centrifugal fans.*
*Single copy price: $5.00*
*Order from: Joseph Brooks, AMCA*
*Send comments (with copy to BSR) to: Same*

ANSI/AMCA 99-2410-2003, Drive Arrangements for Tubular Centrifugal Fans

*Describes the various possible drive arrangements with designations for tubular centrifugal fans.*
*Single copy price: $5.00*
*Order from: Joseph Brooks, AMCA*
*Send comments (with copy to BSR) to: Same*

ANSI/AMCA 99-2412-2003, Impeller Diameters and Outlet Areas for Centrifugal Fans

*Provides maximum impeller diameter and outlet area for both SWSI and DWDI centrifugal fans.*

ANSI/AMCA 99-2413-2003, Impeller Diameters and Outlet Areas for Industrial Centrifugal Fans

*Defines the maximum inlet diameters and outlet area for nominal sizes of industrial centrifugal fans.*
*Single copy price: $5.00*
*Order from: Joseph Brooks, AMCA*
*Send comments (with copy to BSR) to: Same*

ANSI/AMCA 99-2414-2003, Impeller Diameters and Outlet Areas for Tubular Centrifugal Fans

*Provides maximum impeller diameters and outlet areas for tubular centrifugal fans.*

ANSI/AMCA 99-3001-2003, Dimensions for Axial Fans

*Delineates dimensions for axial fans conforming to the R20 series.*

ANSI/AMCA 99-3404-2003, Drive Arrangements for Axial Fans With or Without Evase and Inlet Box

*Depicts and designates the standard drive arrangements for axial fans with or without evase and inlet box.*
*Single copy price: $5.00*
*Order from: Joseph Brooks, AMCA*
*Send comments (with copy to BSR) to: Same*

## AMCi (AMCinstitute)

ANSI/IAAMC A100.1-2002, Standard of Good Practices for Association Management Companies

*Establishes requirements that provide a measurement for practices that can be utilized by all sizes and types of Association Management Companies (AMCs) in order to enhance the performance of the AMC and their staff. This Standard establishes requirements that each individual AMC will use to create their own measurables for compliance to this Standard. This Standard is intended to create a message that communicates to the AMC's present and*
*prospective clients and the marketplace that the AMC has demonstrated the commitment and the ability to deliver service to its clients through conformance to this Standard. Covers the following areas:*
*· Client Contract Review Procedures and Requirements*
*· Servicing the Client and Service Delivery Procedures*

## AMT (American Society of Mechanical Engineers)

ASME B15.1-2000, Safety Standard for Mechanical Power Transmission Apparatus,

*The requirements of this Standard apply to any source of hazard to people from the operation of mechanical power transmission apparatus on machines, equipment, or systems that are stationary in their use, other than the point of operation.*

## AMT (Association for Manufacturing Technology)

ANSI B11.1-2001, Machine Tools – Mechanical Power Presses – Safety Requirements for Construction, Care, and Use

*Pertains to the safety requirements for the design, construction, operation and maintenance of mechanical power presses as described in the standard. This standard is part of the ANSI B11 series of safety standards for machine tools.*

ANSI B11.10-2003, Metal Sawing Machines, Safety Requirements for Construction, Care, and Use of

*Covers the safety requirements as they relate to the design, installation, safeguarding, operation and maintenance of powered machines used to saw metals.*

ANSI B11.11-2001, Gear Cutting Machines, Safety Requirements for the Construction, Care, and Use of

*Pertains to the safety requirements for gear [spline] -cutting machines as described in the document. Part of the ANSI B11 series of machine tool safety standards.It is limited to the requirements of safeguarding of personnel, installation, verification, operation, maintenance, training, and documentation for individual machines.*

ANSI B11.12-2005, Machine Tools - Roll-Forming and Roll-Bending Machines - Safety Requirements for the Construction, Care, and Use

*The requirements of this standard apply to any power-driven metal-forming machine that changes the shape or the direction, or both, of materials by use of rolls, rotary forming dies, and associated tooling.*

ANSI B11.13-1992 (R1998), Machine Tools – Single- and Multiple-Spindle Automatic Bar and Chucking Machines – Safety Requirements for Construction, Care and Use

*Applies to single-and multiple-spindle automatic bar and chucking machines.*

ANSI B11.15-2001, Pipe, Tube, and Shape Bending Machines, Safety Requirements for Construction, Care, and Use

*Pertains to the safety requirements for pipe, tube, and shape bending machines as described in this standard. This standard is part of the ANSI B11 series of safety standards for machine tools. It is limited to the requirements of safeguarding of personnel, installation, verification, operation, maintenance, training, and documentation for individual machines.*

ANSI B11.16 (MPIF #47)-2003, Safety Requirements for Powder / Metal Compacting Presses

*This performance standard covers the safety performance requirements as they relate to the design, installation, operation and maintenance of powder/metal compacting presses.*

ANSI B11.17-2004, Machine Tools – Horizontal Hydraulic Extrusion Presses,– Safety Requirements for Construction, Care, and Use

*This standard specifies the safety requirements for the design, construction, set-up, operation and maintenance (including installation, dismantling and transport) of integrated manufacturing systems.*

ANSI B11.18-2006, Machine Tools - Safety Requirements for Machines Processing or Slitting Coiled or Non-Coiled Metal

*This standard applies to machines, and groups of machines arranged in production systems, for processing strip, sheet, or plate metal from a coiled or non-coiled configuration through machines that size or otherwise convert the metal into desired configurations. Upon approval of B11.18-200X, ANSI B11.14-1996 will be withdrawn.*

ANSI B11.19-2003, Performance Criteria for the Design, Construction, Care, and Operation of Safeguarding When Referenced by the Other B11 Machine Tool Safety Standards

*Covers the safety performance requirements as they relate to the design, installation, operation and maintenance of safeguarding devices, means and measures for machine tools.*

ANSI B11.2-1995 (R2005), Machine Tools – Hydraulic Power Presses, Safety Requirements for Construction, Care, and Use

*The requirements of this standard apply only to those machine tools, commonly referred to as hydraulic power presses, which transmit force hydraulically to cut, form, or assemble metal or other materials by means of tools or dies attached to or operated by slides.*

ANSI B11.20-2004, Machine Tools – Manufacturing Systems/Cells – Safety Requirements for Construction, Care, and Use

*Specifies the safety requirements for the design, construction, set-up, operation and maintenance (including installation, dismantling and transport) of integrated manufacturing systems.*

ANSI B11.21-2006, Machine Tools - Safety Requirements for Machine Tools Using Lasers for Processing Materials

*This standard applies to machine tools using laser radiation to process materials. It describes the hazards generated by such machines and states the protective measures to be incorporated into such machines. The standard also contains the description of information required to be provided by suppliers and users of such equipment.*

ANSI B11.22-2001, Safety Requirements for Turning Centers and Automatic Numerically Controlled Turning Machines

*This standard is part of the ANSI B11 series of machine tool safety standards and pertains to the safety requirements for turning centers and automatic numerically controlled turning machines as described in the document. It is limited to the requirements of safeguarding of personnel, installation, verification, operation, maintenance, training, and documentation for individual machines.*

ANSI B11.23-2001, Safety Requirements for Machining Centers and Automatic Numerically Controlled Milling, Drilling and Boring Machines

*This standard is part of the ANSI B11 series of machine tool safety standards and pertains to the safety requirements for machining centers and automatic numerically controlled milling, drilling and boring machines as described in the document. It is limited to the requirements of safeguarding of personnel, installation, verification, operation, maintenance, training, and documentation for individual machines.*

ANSI B11.24-2001, Safety Requirements for Transfer Machines

*This standard is part of the ANSI B11 series of machine tool safety standards and pertains to the safety requirements for transfer machines as described in the document. It is limited to the requirements of safeguarding of personnel, installation, verification, operation, maintenance, training, and documentation for individual machines.*

ANSI B11.3-2002, Power Press Brakes, Safety Requirements for the Construction, Care, and Use of

*Covers the safety requirements as they relate to the design, installation, operation and maintenance of power press brakes.*

ANSI B11.4-2003, Machine Tools – Safety Requirements for Shears

*Covers the safety requirements as they relate to the design, installation, operation and maintenance of powered shears.*

ANSI B11.5-1988 (R2002), Machine Tools – Iron Workers – Safety Requirements for Construction, Care, and Use

*Apply to those combination, multipurpose powered machines that punch, shear, notch, cope and form metals or other materials, commonly referred to as "ironworkers."*

ANSI B11.6-2001, Lathes, Safety Requirements for the Construction, Care, and Use of

*Pertains to the safety requirements for manual turning machines as described in the document. Part of the ANSI B11 series of machine tool safety standards. It is limited to the requirements of safeguarding of personnel, installation, verification, operation, maintenance, training, and documentation for individual machines.*

ANSI B11.7-1995 (R2005), Machine Tools – Cold Headers and Cold Formers, Safety Requirements for Construction, Care, and Use

*The requirements of this standard apply only to those mechanically-powered machines commonly referred to as cold headers and cold formers, which perform many operations such as shearing, heading, upsetting, extruding, trimming, forming, cold working, or warm forming material by means of tools and dies. This type of equipment generally has the ram in a horizontal position. Included are pointers and roll formers when they are mechanically an integral part of the basic machine.*

ANSI B11.8 2001, Drilling, Milling, and Boring Machines, Safety Requirements for the Construction, Care, and Use of

*Comprises part of the ANSI B11 series of machine tool safety standards and pertains to the safety requirements for manual milling, drilling and boring machines as described in the document. It is limited to the requirements of safeguarding of personnel, installation, verification, operation, maintenance, training, and documentation for individual machines.This standard is part of the ANSI B11 series of machine tool safety standards and pertains to the safety requirements for manual milling, drilling and boring machines as described in the document. It is limited to the requirements of safeguarding of personnel, installation, verification, operation, maintenance, training, and documentation for individual machines. This standard was listed for public review in the 4/20/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI B11.9-1975 (R2005), Safety Requirements for the Construction, Care, and Use of Grinding Machines

*This standard applies only to grinding machines, designed primarily for metal removal, that present grinding tools against workpieces, producing change in shape, size, and surface finish by grinding. This standard also applies to these machines when they are grinding materials other than metals such as glass, ceramics, plastics, and rubber.*

ANSI/ISO 12100-1-2007, Safety of Machinery - Basic Concepts, General Principles for Design. Part 1: Basic Terminology, Methodology

*This standard defines basic terminology and methodology used in achieving safety of machinery. The provisions stated in this standard are intended for the designer. This standard does not deal with damage to domestic animals, property or the environment.*

ANSI/ISO 12100-2-2007, Safety of Machinery - Basic Concepts, General Principles for Design. Part 2: Technical Principles

*This standard defines technical principles to help designers in achieving safety in the design of machinery. ISO 12100-2 is intended to be used together with ISO 12100-1 when considering the solution to a specific problem. The two parts of ISO 12100 can be used independently of other documents or as a basis for the preparation of other type-A standards or type-B or C standards. This standard does not deal with damage to domestic animals, property or the environment.*

## ANLA (American Nursery & Landscape Association)

ANSI Z60.1-2004, Nursery Stock

*Nursery crop growers, landscape architects, landscape contractors, and others trading in or specifying nursery plants have assisted in developing these standards for various kinds of nursery plants. The standards establish a common framework for sizing and describing plants. Illustrations, examples, and written descriptions have been combined to clarify the standards.*

## ANS (American Nuclear Society)

ANSI/ANS 1-2000, Nuclear Safety – Critical Experiments, Safety Guide for the Performance of

*Provides for the safe performance of critical experiments. Such experiments study neutron behavior in a fission device where the energy produced is insufficient to require auxiliary cooling, and the power history is such that the inventory of long-lived fission products is insignificant.*

ANSI/ANS 10.2-2000, Portability of Scientific Computer Programs, Recommended Programming Practices to Facilitate the

*Recommends programming practices to facilitate the portability of computer programs prepared for scientific and engineering computation on micro, mini, and mainframe computers.*

ANSI/ANS 10.4-1987 (R1998), Verification and Validation of Scientific and Engineering Computer Programs for the Nuclear Industry, Guidelines for

*Provides guidelines for the verification and validation (V&V) of scientific and engineering computer programs developed for use by the nuclear industry.*

ANSI/ANS 10.5-2006, Accommodating User Needs in Scientific and Engineering Computer Software Development

*Computer software should be developed so that the needs of the user are anticipated; specifically in the areas of proper application, ease of use, and implementation. This helps to avoid erroneous use, misapplication and in general, makes the software more user friendly.*

ANSI/ANS 14.1-2004, Fast Pulse Reactors, Operation of

*This standard is for those involved in the design, operation, and review of fast pulse reactors. It has been formulated in general terms to be applicable to all current fast pulse reactors. This standard does not apply to periodically pulsed reactors or booster assemblies.*

ANSI/ANS 15.1-1990 (R1999), Research Reactors, Development of Technical Specifications for

*Identifies and establishes the content of technical speciifcations for research reactors. Areas addressed are: Definitions, Safety Limits (SL), Limiting Safety System Settings (LSSS), Limiting conditions for Operation (LCO), Surveillance Requirements, Design Features, and Administrative Controls. Sufficient detail is incorporated so that applicable specifications can be derived or extracted.*

ANSI/ANS 15.11-1993 (R2004), Radiation Protection at Research Reactor Facilities

*This standard establishes the elements of a radiation protection program and the criteria necessary to provide an acceptable level of radiation protection for personnel at research reactor facilities and the public consistent with keeping exposures and releases as low as is reasonably achievable (ALARA).*

ANSI/ANS 15.16-1982 (R2000), Emergency Planning for Research Reactors

*Identifies the elements of an emergency plan which describes the approach to coping with emergencies and minimizing the consequences of accidents at research reactor facilities. The emphasis given each of these elements shall be commensurate with the potential risk invold. The emergency plan shall be implicated by emergency procedures.*

ANSI/ANS 15.17-1981 (R2000), Fire Protection Program Criteria for Research Reactors

*Provides the criteria for a fire protection program for reseearch reactor facilities and for the reactor safety-related systems included in those facilities. Stresses preservation of the capability to achieve and maintain safe shutdown of the reactor, and includes consideration of both direct fire hazards and indirect or consequential hazards.*

ANSI/ANS 15.2-1999, Quality Control for Plate-Type Uranium-Aluminum Fuel Elements

*Sets forth general requirements for the establishment and execution of a program designed to verify that the quality of plate-type uranium-aluminum fuel elements being purchased for research reactors conforms to the requirements of the contract and applicable technical documents, including specifications, standards, and drawings.*

ANSI/ANS 15.21-1996 (R2006), Format and Content for Safety Analysis Reports for Research Reactors

*This standard identifies specific information and analyses for inclusion in the safety analysis report for research reactors and establishes a uniform format for the report. This standard provides the criteria for the format and content for safety analysis reports for research reactors.*

ANSI/ANS 15.4-1988 (R1999), Selection and Training of Personnel for Research Reactors

*Provides criteria for the selection and training of operating personnel for research reactors. Addresses qualifications, training, initial certification responsibilities, requalification, and recertification of such personnel.*

ANSI/ANS 15.8-1995 (R2005), Research Reactors, Assurance Program Requirements

*This standard provides criteria for quality assurance in the design, construction, operation, and decommissioning of research reactors.*

ANSI/ANS 16.1-2003, Measurement of the Leachability of Solidified Low-Level Radioactive Wastes by a Short-Term Test Procedure

*This standard provides a uniform procedure to measure and index the release of radionuclides from waste forms as a result of leaching in demineralized water for five days (seven data points). The results cannot be interpreted to apply to any specific environmental situation except through correlative studies of actual disposal site conditions.*

ANSI/ANS 18.1-1999, Nuclear Power Plants – Source Term Specification

*Establishes typical long-term concentrations of principal radionuclides in fluid streams of light-water-cooled nuclear power plants for use in estimating the expected release of radioactivity from various effluent streams. These fluid streams are: Boiling Water Reactor (BWR) and Pressurized Water Reactor (PWR) reactor coolant and PWR stream generator fluids. The concentrations in fluid streams of BWRs and PWRs are treated in a similar manner, but have different numerical values because of the differences in design. This is the second public review for this standard. It was originally listed in the November 11, 1994 issue of Standards Action. It is being resubmitted due to substantive changes in the text.*

ANSI/ANS 19.1-2002, Nuclear Data Sets for Reactor Design Calculations

*Identifies and describes the specifications for developing, preparing, and documenting nuclear data sets to be used in reactor design calculations. The specifications include (a) criteria for acceptance of evaluated nuclear data sets, (b) criteria for processing evaluated data and preparation of processed continuous data and averaged data sets, and (c) identification of specific evaluated, processed continuous, and averaged data sets that meet these criteria for specific reactor types.*

ANSI/ANS 19.11-1997 (R2002), Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Water Moderated Power Reactors

*This standard provides guidance and specifies criteria for determining the MTC in water moderated power reactors. Measurement of the isothermal temperature coefficient of reactivity (ITC) at hot zero power (HZP) conditions is covered in American National Standard Reload Startup Physics Tests for Pressurized Water Reactors, ANSI/ANS-19.6.1-1997 [1]. This standard therefore addresses the calculation of the ITC at HZP and the calculation and measurement of the MTC at power. At present, this standard addresses the calculation and measurement of the MTC only in PWRs, because that is the only type of power reactor currently sited in the United States for which measurement of the MTC is required.*

ANSI/ANS 19.3-2005, Neutron Reaction Rate Distributions and Reactivity of Nuclear Reactors, Determination of

*The standard provides criteria for the selection of computational methods used by reactor-core analysts to predict reactivity, reaction rates, and changes in fuel composition in calculations for commercial types of nuclear reactors. It gives criteria for verification and validation of calculational methods, criteria for evaluation of accuracy and range of applicability of data and methods, and requirements for documentation of these activities.*

ANSI/ANS 19.3.4-2002, Determination of Thermal Energy Deposition Rates in Nuclear Reactors

*Provides criteria for: (1) determination of the energy allocation among the principal particles and photons produced in fission, both prompt and delayed; (2) adoption of appropriate treatment of heavy charged particle and electron slowing down in matter; (3) determination of the spatial energy deposition rates resulting from the interactions of neutrons; (4) calculation of the spatial energy deposition rates resulting from the various interactions of photons with matter; and (5) presentation of the results of such computations, including verification of accuracy and specification of uncertainty. This standard addresses the energy generation and deposition rates for all types of nuclear reactors where the neutron reaction rate distribution and photon and beta emitter distributions are known. Its scope is limited to the reactor core and the thermal and biological shielding.*

ANSI/ANS 19.4-1976 (R2000), Acquisition and Documentation of Reference Power Reactor Physics Measurements for Nuclear Analysis Verification, Guide for

*Applies to measurements of reactor paramaters in light water power reactors that are intended to serve as reference measurements to be used in evaluating reactor physics computational procedures. This standard includes: identification of the types of parameters of interest as reference measurements; a brief description of test conditions and experimental data required for such reference measurements; identification of problems and concerns that may affect the accuracy or interpretation of the data; and criteria to be used on documenting the results of reference measurements.*

ANSI/ANS 19.6.1-2005, Reload Startup Physics Tests for Pressurized Water Reactors

*This standard provides criteria for verifying the nuclear characteristics of pressurized water reactor cores. It addresses the physics tests that are performed following a refueling or other alteration of the reactor core for which nuclear design calculations are required.*

## ANSI/ANS 2.10-2003, Criteria for the Handling and Initial Evaluation of Records from Nuclear Power Plant Seismic Instrumentation

*This standard provides criteria for the timely retrieval and the subsequent processing, handling and storage of data obtained from seismic instrumentation specified in ANS-2.2. Also included are initial evaluation criteria to determine whether earthquake motion at the site has exceeded the plant's operating basis earthquake ground motion (OBE).*

## ANSI/ANS 2.23-2002, Nuclear Plant Response to an Earthquake

Specifies actions that the owner of a of nuclear power plant should take in the event of an earthquake. By using this standard and its companion document, proposed *American National Standard for Handling and Initial Evaluation of Records Obtained from Nuclear Power Plant Seismic Instrumentation*, BSR/ANS 2.10, the owner can evaluate the need for post-earthquake plant shutdown in a timely manner. Also provides guidelines for determining the condition of components, systems, and structures needed for shutdown and criteria for restart when a nuclear power plant is required to shut down following an earthquake.

## ANSI/ANS 2.26-2004, Categorization of Nuclear Facility Structures Systems and Components for Seismic Design

*A.This standard provides:(i)criteria and guidelines for selecting an SSC Limit State based on its safety and performance requirements and (ii)criteria for selecting the Seismic Design Category (SDC) for nuclear facility structures, systems, and components (SSCs) for the purpose of designing SSCs to withstand earthquakes using methods specified in ASCE XX. B. The standard outlines the essential facility data and safety analyses necessary to support the seismic design categorization process.*

## ANSI/ANS 3.1-1993 (R1999), Selection, Qualification, and Training of Personnel for Nuclear Power Plants

*Provides criteria for the selection, training, and qualification of personnel for stationary nuclear power plants. The qualifications of personnel in the operating organizations appropriate to safe and efficient operation of a nuclear power plant are addressed in terms of the minimum education, experience, and training requirements.*

## ANSI/ANS 3.11-2005, Determining Meteorological Information at Nuclear Facilities

*The standard includes the identification of which meteorological parameters should be measured, parameter accuracies, meteorological tower siting considerations, data monitoring methodologies, data reduction techniques and quality assurance requirements.*

## ANSI/ANS 3.2-2006, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants

*This standard defines quality assurance program requirements for operating commercial nuclear power plants. This revision expands requirements to provide criteria for risk-informing quality assurance programs.*

## ANSI/ANS 3.4-1996 (R2002), Medical Certification and Monitoring of Personnel Requiring Operating Licenses for Nuclear Power Plants

*Defines the medical and phychological requirements for licensing of nuclear power plant reactor operators and senior operators. It also addresses the content, extent, and methods of examination.*

## ANSI/ANS 3.5-1998, Nuclear Power Plant Simulators for Use in Operator Training and Examination

*This standard establishes the functional requirements for full-scope nuclear power plant control room simulators used for operator training and examination. Criteria are established for the degree of simulation, performance, and functional capability of the simulated control room instrumentation and controls. This standard does not address simulators for test, mobile and research reactors, or reactors not subject to U.S. NRC licensing. This standard does not establish criteria for application of simulators in training programs.*

## ANSI/ANS 3.8.7-1998, Criteria for Planning, Development, Conduct, and Evaluation of Drills and Exercises for Emergency Preparedness

*This standard establishes requirements for the administration of a program of radiological emergency response drills and excercises in support of emergency preparedness. This standard addresses:*
*(1) Types of emergency drills and excercises, and the reasons for each.*
*(2) Planning activities associated with drills and excercises.*
*(3) Development of scenarios for drills and excercises.*
*(4) Conduct of drills and excercises*
*(5) Evaluation of drills and excercises*
*The topic discussed in this standard are applicable t both excercises and drills unless specifically identified otherwise. The general principles and activities for developing, conducting, and evaluating an excercise as described here should be applied to drills on a level commensurate with the scope of the drills.*

## ANSI/ANS 5.1-2005, Light Water Reactors, Decay Heat Power in

*This standard sets forth values for the decay heat power from fission products and 239U and 239Np following shutdown of light water reactors (LWRs) containing 235U, 238U, and plutonium. The decay heat power from fission products is presented in tables and equivalent analytical representations. Methods are described which account for the reactor operating history, for the effect of neutron capture in fission products, and for assessing the uncertainty in the resultant decay heat power.*

ANSI/ANS 5.10-1998 (R2006), Airborne Release Fractions at Non-Reactor Nuclear Facilities

*This standard provides criteria for defining Airborne Release Fractions (ARFs) for radioactive materials under accident conditions (excluding nuclear criticalities) at non-reactor nuclear facilities. The criteria in this standard provide requirements for selecting ARFs based on the calculated or assumed forms of radioactive material released. This standard may be applied to determine the ARFs for certain applicable reactor plant events for which alternative methodologies are not mandated by regulatory requirements. Because the predominant physical forms of radioactive materials in non-reactor facilities are solids and liquids, the standard focuses on these forms.*

ANSI/ANS 51.10-1991(R2002, Auxiliary Feedwater System for Pressurized Water Reactors

*Sets forth the nuclear safety-related functional requirements, performance requirements, design criteria, design requirements for testing and maintenance, and interfaces for the nuclear safety-related portion of the auxiliary feedwater system of pressurized water reactor plants.*

ANSI/ANS 55.1-1992 (R2000), Solid Radioactive Waste Processing System for Light-Water-Cooled Reactor Plants

*This standard sets forth the design, construction, and performance requirements for a solid radioactive waste procesing system for light-water-cooled reactor plants. For the purposes of this standard, the solid radioactive waste processing system begins at the interface with the liquid radioactive waste processing system boundary and at the inlets to the spent resin, filter sludge, evaporator concentrate, and phase separator tanks. In addition, this standard pertains to dry active waste, mixed waste, and other solid radioactive waste forms that are generated as part of the operation and maintenance of light-water-cooled reactor plants. The system includes facilities for temporary (up to 30 days of anticipated normal waste generation) on-site storage of packaged waste but terminates at the point of loading the filled drums and other containers on a vehicle for shipping off-site to a*

ANSI/ANS 55.4-1993 (R1999), Gaseous Radioactive Waste Processing Systems for Light Water Reactor Plants

*Sets forth minimum design, construction, and performance requirements, with due consideration for operation, for gaseous radioactive waste processing systems (GRWPS) for light water reactor (LWR) plants. It is applicable for routine operation, designa basis fuel leakage, and other design basis occurrences.*

ANSI/ANS 55.6-1993 (R1999), Liquid Radioactive Waste Processing Systems for Light Water Reactor Plants

*Sets forth minimum design, construction, and performance requirements, with due consideration for operation, for Liquid Radioactive Waste Processing Systems (LRWPS) for light water reactor (LWR) plants for design basis inputs. It is applicable to routine operation including design basis fuel leakage and other design basis occurrences.*

ANSI/ANS 56.8-2002, Nuclear Reactors – Containment System Leakage Testing Requirements

*Specifies acceptable primary containment leakage rate test requirements to assure valid testing. The scope includes:*
*(1) Leakage test requirements*
*(2) Test instrumentation*
*(3) Test procedures*
*(4) Test methods*
*(5) Acceptable criteria*
*(6) Data analysis*
*(7) Inspection and reporting of test results*

ANSI/ANS 57.1-1992 (R2005), Design Requirements for Light Water Reactor Fuel Handling Systems

*This standard sets forth the required functions of fuel handling systems at light water reactor nuclear power plants.It provides minimum design requirements for equipment and tools to handle nuclear fuel and control components safely.*

ANSI/ANS 57.10-1996 (R2006), Design Criteria for Consolidation of LWR Spent Fuel

*This standard provides design criteria for the process of consolidating LWR spent nuclear fuel in either a wet or a dry environment. It addresses processes for consolidating fuel either horizontally or vertically. The standard sets forth requirements for utilizing equipment and systems to perform consolidation, handle fuel rods and nonfuel-bearing components, and handle broken fuel rods. This standard also contains requirements for facility or installation interfaces, nuclear safety, structural design, thermal design, accountability, safeguards, decommissioning, and quality assurance.*

ANSI/ANS 57.5-1996 (R2006), Light Water Reactors Fuel Assembly Mechanical Design and Evaluation

*This standard sets forth a series of design conditions and functional requirements for the design of fuel assemblies for light water cooled commercial power reactors. It includes specific requirements for design, as well as design criteria to ensure adequate fuel assembly performance. The standard establishes a procedure for performing an evaluation of the mechanical design of fuel assemblies. It does not address the various aspects of neutronic or thermal-hydraulic performance except where these factors impose loads or constraints on the mechanical design of the fuel assemblies.*

ANSI/ANS 57.7-1988 (R1997), Design Criteria for an Independent Spent Fuel Storage Installation (Water Pool Type)

*Provides design criteria for systems and equipment of a facility for the receipt and storage of spent fuel from light water reactors. Contains requirements for the design of major buildings and structures including the shipping cask decontamination, unloading and loading areas, and the surrounding buildings which contain radwaste treatment, heating, ventilation and air conditioning, and other auxiliary systems. Also contains requirements and recommendations for spent fuel storage racks, special equipment and area layout configurations, the pool structure and its integrity, pool water cleanup, ventilation, residual heat removal, radiation monitoring, fuel handling equipment, cask handling equipment, cask handling equipment, prevention of criticality, radwaste control and monitoring systems, quality assurance requirements, materials accountability, and physical security.*

ANSI/ANS 57.8-1995 (R2005), Nuclear Fuel Assembly Identification

*This standard describes requirements for the unique identification of fuel assemblies utilized in nuclear power plants. It defines the characters and proposed sequence to be used in assigning identification to fuel assemblies.*

ANSI/ANS 57.9-1992 (R2000), Design Criteria for an Independent Spent Fuel Storage Installation (Dry Type)

*This standard is intended to be used by the owner and operator of a dry storage-type independent spent fuel storage installation (ISFSI) in specifying the design requirements and by the designer in meeting the minimum requirements of such installations.*

*This standard includes requirements for the following: the design of major buildings and structures, shipping cask unloading and handling facilities, cask decontamination, loading and unloading areas, spent fuel storage areas and racks, fuel handling equipment, radiation shielding, special equipment and area layout configurations, air or gas quality, storage area integrity, air or gas cleanup, fuel inspection, ventilation, residual heat removal, radiation monitoring, prevention of criticality, radwaste control, and monitoring systems, provisions to facilitate decommissioning, quality*

ANSI/ANS 58.11-1995 (R2002), Cooldown Criteria for Light Water Reactors

*Provides design criteria for systems that perform the safety-related function necessary to shut down a reactor and maintain it in a safe shutdown condition for selected design basis events: any design basis events that do not require operation of engineered safety features. For design basis events that require operation of engineered safety features, this standard can be selectively applied because of plant features specifically designed for these conditions. For systems that serve multiple function, the dicing criteria associated with the most limiting function shall be applied.*
*The following safety-related functions are required for safe shutdown and are addressed in this standard:*
*1-Reactor core relativity control*
*2-Reactor core heat removal*
*3-Reactor coolant pressure boundary integrity provided by:*

ANSI/ANS 58.21-2007, External Events PRA Methodology

*This standard provides requirements for analyzing accident sequences initiated by external events that might occur while a nuclear power plant is at nominal full power.*

*External events covered include natural external events (e.g., earthquakes, high winds, and external flooding) and human-made external events (e.g., airplane crashes, explosions at nearby industrial facilities, and impacts from nearby transportation activities.*

ANSI/ANS 58.3-1992 (R1998), Physical Protection for Nuclear Safety-Related Systems and Components

*Sets forth physical protection criteria for nuclear safety-related systems and components in stations using light water reactors (LWRs). This standard includes an identification of potential hazards to nuclear safety-related systems and components and acceptable means of ensuring the protection of this equipment from these hazards.*

ANSI/ANS 58.6-1996 (R2001), Remote Shutdown for Light Water Reactors, Criteria for

*Provides design criteria for controls and monitoring instrumentation necessary to shut down a reactor and maintain it in a safe shutdown condition from outside the control room. The design criteria require that: (a) specific controls and monitoring instrumentation be provided; (b) these controls be installed at a location (or locations) that is physically separate from the control room and cable spreading areas; (c) simultaneous control from both locations be prevented by devices for transfer of control from the control room to the remote location(s); and (d) the remote controls be used as a defense-in-depth measure in addition to the control room shutdown controls and as a minimum provide for one complete channel of shutdown equipment.*

ANSI/ANS 58.8-1994 (R2001), Nuclear Power Plants – Time Response Design Criteria for Safety Related Operator Actions

*Sets forth criteria intended to provide guidance to the designer for determining the time response requirements that are acceptable for relying on operator actions to mitigate the consequences of design basis events in nuclear power plants.*
*Single copy price: $40.00*
*Order from: Shawn Coyne-Nalbach, ANS*
*Send comments (with copy to BSR) to: Same*

ANSI/ANS 58.9-2002, Application of the Single Failure Criterion for Light Water Reactor Safety-Related Fluid Systems

*Provides criteria for the designer which interpret the requirements of Title 10, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," Appendix A, "General Design Criteria for Nuclear Power Plants," with respect to design against single failures in safety-related Light Water Reactor (LWR) fluid systems [1]. Means of treating both active and passive failures are addressed for safety-related fluid systems following various initiating events. Current acceptable practice is used as a basis for these criteria. Failure criteria for the electric power systems and the protection systems are provided in IEEE Std 308-1980 "IEEE Standard Criteria for Class 1E Power Systems for Nuclear Power Generating Stations", IEEE Std 279-1971 "IEEE Standard Criteria for Protection Systems for Nuclear Power Generating Stations" (N42.7-1971), IEEE Std 379-1977 "IEEE*

ANSI/ANS 59.3-1992 (R2002), Nuclear Safety Criteria for Control Air Systems

*Provides criteria for the control air system that furnishes compressed air to nuclear safety-related components and other equipment that could affect any nuclear safety-related function in nuclear power plants. This standard provides*
*(1) the system nuclear safety design requirements and the non-nuclear safety design recommendations for equipment, piping, instruments, and controls that constitute the control air system; and*
*(2) the nuclear safety design requirements and the non-nuclear safety design recommendations to accommodate the testing and maintenance necessary to ensure adequate performance of the control air system.*
*This standard applies only to the control air system and does not apply to air-operated devices or the emergency diesel generator*

ANSI/ANS 59.51-1997, Fuel-Oil Systems for Emergency Diesel Generators

ANSI/ANS 59.52-1998, Lubricating Oil Systems for Safety Related Emergency Diesel Generators

*I his standard provides functional, performance and design requirements for the lube oil system for diesel generators that provide emergency on site power for light water reactor nuclear power plants. This standard addresses all mechanical equipment associated with the lube oil system with the exception of the engine mounted components. These components, which are mounted directly to the engine structure itself, are excluded, except to define interface requirements. This standard also includes the lube oil system instrumentation and control functional requirements. It excludes motors, motor control centers, switchgear, cables, and other electrical equipment used in the operation of the lube oil system, except to define interface requirements.*

ANSI/ANS 6.1.2-1999, Neutron and Gamma-Ray Cross Sections for Nuclear Radiation Protection Calculations for Nuclear Power Plants

*Details neutron and gamma-ray cross sections and related group-averaged or derived data for the energy range and materials of importance in nuclear radiation protection and shielding calculations for nuclear power plants.*

ANSI/ANS 6.3.1-1987 (R1998), Program for Testing Radiation Shields in Lightwater Reactors

*Describes a test program to be used in evaluating biological radition shielding in nuclear reactor facilities under normal operating conditions including anticipated operational occurrences. The program encompasses examining and testing to be performed before startup, during startup, and testing subsequent to the startup phase. Post-startup tests are required for the shielded components that do not contain sufficient radioactivity during the startup phase to allow valid testing. Shielding of these components is to be tested when radiation sources develop or are introduced in sufficient strength to allow meaningful measurements. Post-startup shield tests are also required whenever radioactive or potentially radioactive equipment that could affect the adequacy of the installed shielding is introduced into the plant or relocated within the plant, or when previously tested shielding has*

ANSI/ANS 6.4-2006, Concrete Radiation Shielding for Nuclear Power Plants, Guidelines on the Nuclear Analysis and Design of

*The standard contains methods and data needed in design of concrete shielding required for protection of personnel and equipment against the effects of gamma rays and neutrons. Specific guidance is given regarding attenuation calculations, shielding design, and standards of documentation.*

ANSI/ANS 6.4.2-2006, Radiation Shielding Materials, Specification for

*This standard sets forth physical and nuclear properties that shall be reported by the supplier as appropriate for a particular application in order to form the basis for the selection of radiation shielding materials.*

ANSI/ANS 6.6.1-1987 (R1998), Calculation and Measurement of Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants,

*This standard defines calculational requirements and discusses measurement techniques for estimates of dose rates near lightwater reactor (LWR) nuclear power plants due to direct and scattered gamma-rays from contained sources on site. On site locations in the off site unrestricted area are considered. All sources that contribute significantly to dose rates are identified and methods for calculating the source strength of each is discussed. particular emphasis is placed on 16N sources as they are significant sources of direct and scattered radiation for boiling water reactors (BWR). The standard specifically excludes radiation from gaseous and liquid effluents. The standard describes the consideration necessary to compute dose rates, including component self-shielding, shielding afforded by walls and structuctures, and scattered radiation. The requirements for measurements*

ANSI/ANS 8.1-1998, Operations with Fissionable Materials Outside Reactors, Nuclear Criticality Safety in

Applies to operations with fissionable materials outside nuclear reactors in which there exists a potential for criticality accidents, except the assembly of these materials under controlled conditions, such as in critical experiments. Generalized basic criteria are presented and limits are specified for some single fissionable units of simple shape containing $^{235}U$, $^{235}U$, or $^{239}Pu$, but not for multi-nit arrays. Requirements are stated for establishing the validity and areas of applicability of any calculational method used in assessing nuclear criticality safety. This standard was originally listed in the April 26, 1996 issue of Standards Action. It is being resubmitted due to substantive changes to the text.

ANSI/ANS 8.10-1983 (R2005), Criteria for Nuclear Criticality Safety Controls in Operations With Shielding and Confinement

*This standard is applicable to operations outside of nuclear reactors with 235U, 233U, 239Pu, and other fissile and fissionable materials in which shielding and confinement are provided for protection of personnel and the public, except the assembly of these materials under controlled conditions, such as in critical experiments. Criteria are provided that may be used for criticality control under these conditions. The standard does not include the details of administrative procedures for control (which are considered to be management prerogatives) nor details regarding the design of processes and equipment or descriptions of instrumentation for process control.*

ANSI/ANS 8.12-1987 (R2002), Plutonium-Uranium Fuel Mixtures Outside Reactors, Nuclear Criticality Control and Safety of

*Applies to operations with plutonium-uranium oxide fuel mixtures outside nuclear reactors, except the assembly of these materials under controlled conditions, such as critical experiments. Basic criteria are presented for plutonium-uranium fuel mixtures in single units of simple shape containing no more than 30 wt% plutonium combined with uranium containing no more than 0.71 wt% 235U. The limits for uniform aqueous mixtures (solution) are applicable to homogeneous mixtures and slurries in which the particles constituting the mixture are uniformly distributed and have a diameter no larger than 127 µm (0.005 in.), i.e., are capable of being passed though 120 mesh screen.*

ANSI/ANS 8.14-2004, Use of Soluble Neutron Absorbers in Nuclear Facilities Outside Reactors

*Provides guidance for the use of soluble neutron absorbers for criticality accident control. The standard addresses neutron absorber selection, system design and modifications, safety evaluations, and quality control programs.*

ANSI/ANS 8.15-1981 (R2005), Nuclear Criticality Control of Special Actinide Elements

*Applicable to operations with the following: 237/93 Np, 238/94 Pu, 240/94 Pu, 241/94 Pu, 242/94 Pu, 241/95 Am, 242m/95 Am, 243/95 Am, 243/96 Cm,244/96 Cm, 245/96 Cm, 247/96 Cm, 249/98 Cf and 251/98 Cf. Subcritical mass limits are presented for isolated fissionable units. The limits are not applicable to interacting units.*

ANSI/ANS 8.17-2004, Handling, Storage, and Transportation of LWR Fuel Outside Reactors, Criteria for

*This standard provides nuclear criticality safety criteria for the handling, storage, and transportation of LWR fuel rods and units outside reactor cores.*

ANSI/ANS 8.19-2005, Nuclear Criticality Safety – Administrative Practices

*This standard provides criteria for the administration of a nuclear criticality safety program for outside-of-reactor operations in which there exists a potential for nuclear criticality accidents. Responsibilities of management, supervision, and the nuclear criticality safety staff are addressed. Objectives and characteristics of operating and emergency procedures are included.*

ANSI/ANS 8.20-1991 (R2005), Nuclear Criticality Safety Training

*This standard provides criteria for nuclear criticality safety training for personnel associated with operations outside reactors where a potential exists for criticality accidents. It is not sufficient for the training of nuclear criticality staff.*

ANSI/ANS 8.21-1995 (R2001), Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors

*Provides guidance for the use of fixed neutron absorbers as an integral part of nuclear facilities and fissionable material process equipment outside reactors where such absorbers provide criticality safety control.*
*Single copy price: $24.00*
*Order from: Shawn Coyne-Nalbach, ANS*
*Send comments (with copy to BSR) to: Same*

ANSI/ANS 8.22-1997 (R2006), Nuclear Criticality Safety Based on Limiting and Controlling Moderators

*This standard applies to limiting and controlling moderators to achieve criticality safety in operations with fissile materials in a moderator control area. This standard does not apply to concentration control of fissile materials.*

ANSI/ANS 8.23-1997, Nuclear Criticality Accident Emergency Planning and Response

*Provides guidance for minimizing risks to personnel during emergency response to a nuclear criticality accident outside reactors. Applies to those facilities for which a criticality accident alarm system, as specified in American National Standard ANSI/ANS 3.8-1986, is in use.*

ANSI/ANS 8.3-1997 (R2003), Criticality Accident Alarm System

*Applicable to all operations involving fissionable materials in which inadvertent criticality can occur and cause personnel to receive unacceptable exposure to radiation.This standard is not applicable to detection of criticality events where no excessive exposure to personnel is credible, nor to nuclear reactors or critical experiments. This standard does not include details of administrative actions or of emergency response actions that occur after alarm activation.*

ANSI/ANS 8.5-1996 (R2002), Use of Borosilicate-Glass Raschig Rings as a Neutron Absorber in Solutions of Fissile Material

*This standard provides guidance for the use of borosilicate-glass Raschig rings as a neutron absorber for criticality control in ring-packed vessels containing solutions of 235U, 239Pu, or 233U. The chemical and physical environment, properties of the rings and packed vessels, maintenance inspection procedures, and operating guidelines are specified.*

ANSI/ANS 8.6-1983 (R2001), Safety in Conducting Subcritical Neutron-Multiplication Measurements in situ

*Provides safety guidance for conducting subcritical neutron multiplication measurements where physical protection of personnel against the consequences of a criticality accident is not provided. The objectives of in situ measurements are either to confirm an adequate safety margin or to improve an estimate of such a margin. The first objective may constitute a test of the criticality safety of a design that is based on calculations. The second may effect improved operating conditions by reducing the uncertainty of safety margins and providing guidance to new designs.*

ANSI/ANS 8.7-1998, Nuclear Criticality Safety in the Storage of Fissile Materials, Guide for

*Applies to the storage of fissile materials. Mass and spacing limits are tabulated for uranium containing greater than 30 wt % 235U, for 233U and for plutonium as metals and oxides. Criteria range of application of these limits are provided.*

## APCO (Association of Public-Safety Communications

## API (American Petroleum Institute)

ANSI/API 10A/ISO 10426-1-2001, Specification for Cements and Materials for Well Cementing (Twenty Third Edition)

*Covers requirements for manufacturing eight classes of well cements. This includes chemical and physical requirements and physical testing procedures.*

ANSI/API 10B-2/ISO 10426-2-2005, Recommended Practice for Testing Well Cements

*This recommended practice specifies requirements and gives recommendations for the testing of cement slurries and related materials under simulated well conditions.*

ANSI/API 10B-3/ISO 10426-3-2004, Recommended Practice on Testing of Deepwater Well Cement Formulations

*This recommended practice takes into account the specialized sampling/testing requirements and unique downhole temperature profiles found in deepwater wells.*

ANSI/API 10D/ISO 10427-1-2001, Specification for Bow-Spring Casing Centralizers (Sixth Edition)

*Provides minimum performance standards, test procedures, and marking requirements for bow-spring casing centralizers.*

ANSI/API 10F/ISO 18165-2001, Recommended Practice for Performance Testing of Cementing Float Equipment

*Provides recommended testing practices to evaluate the performance of cementing float equipment.*

ANSI/API 1104-1999, Welding of Pipelines and Related Facilities

*Covers gas and arc welding for the production of high-quality welds in carbon and low-alloy steel piping used in the compression, pumping, and transmission of crude petroleum, petroleum products, and fuel gases, and where applicable, to distribution systems.*

ANSI/API 1160-2001, Managing System Integrity for Hazardous Liquid Pipeline

*Applies to pipeline systems used to transport hazardous liquids as defined in Title 49 CFR 195.2. The use of this Standard is not limited to pipelines regulated under Title 49 CFR 195.1 and the principles embodied in integrity management are applicable to all pipeline systems. This Standard is specifically designed to provide the operator with a description of industry proven practices in pipeline integrity management. The guidance is specific to the line pipe along the right-of-way, from scraper trap to scraper trap, but the process and approach can and should be applied to all pipeline facilities, including pipeline stations, terminals and delivery facilities associated with pipeline systems. Certain sections of this standard provide guidance specific to pipeline stations, terminals, and delivery facilities.*

ANSI/API 1163-2005, In-Line Inspection Systems Qualification Standard (first edition)

*Covers the use of in-line inspection systems for onshore and offshore gas and hazardous liquid pipelines. This includes, but is not limited to, tethered or free flowing systems for detecting metal loss, cracks, mechanical damage, pipeline geometries, and pipeline location or mapping. The Standard applies to both existing and developing technologies. This Standard is an umbrella document that provides performance-based requirements for in-line inspection systems, including procedures, personnel, equipment and associated software.*

ANSI/API 13M/ISO 13503-1-2004, Recommended Practice for Measurement of viscous properties of completion fluids

*This recommended practice provides consistent methodology for determining the viscosity of completion fluids used in the petroleum and natural gas industries. For certain cases, methods are also provided to determine the rheological properties of a fluid.*

ANSI/API 14A/ISO 10432, 11th Edition, Specification for Subsurface Safety Valve Equipment

*Provides the minimal acceptable requirements for subsurface safety valves (SSSVs). It covers subsurface safety valves including all components that establish tolerances and/or clearances which may affect performance or interchangeability of the SSSVs. It includes repair operations and the interface connections to the flow control or other equipment, but does not cover the connections to the well conduit.*

ANSI/API 14B/ISO 10417-2005, Recommended Practice Design, Installation, Repair and Operation of Subsurface Safety Valve Systems

*Establishes requirements and provides guidelines for configuration, installation, test, operation and documentation of subsurface safety valve (SSSV) systems. In addition, this standard establishes requirements and provides guidelines for selection, handling, redress and documentation of SSSV Downhole production equipment.*

ANSI/API 17F/ISO 13628-6-2006, Specification for Subsea Control Systems

*Applicable to design, fabrication, testing, installation and operation of subsea production control systems. This standards covers surface control system equipment, subsea-installed control system equipment and control fluids. This standard establishes design standards for systems, subsystems, components and operating fluids in order to provide for the safe and functional control of subsea production equipment.*

ANSI/API 2000-2000, Venting Atmospheric and Low-Pressure Storage Tanks: Nonrefrigerated and Refrigerated

*This standard covers the normal and emergency venting requirements for aboveground liquid petroleum storage tanks and aboveground and belowground refrigerated storage tanks designed for operation at pressures from 1/2 oz. per sq in. (22 millimeters water column) vacuum through 15 psig (1.034 bar gage), This standard does not apply to floating- or lifter-roof tanks.*

ANSI/API 2015-2001, Safe Entry and Cleaning of Petroleum Storage Tanks: Planning and Managing Tank Entry from Decommissioning Through Recommissioning

*Applies to cleaning stationary atmospheric and low pressure (up to 15 psig) above-ground petroleum storage tanks used in all sectors of the petroleum and petrochemical industry, including crude oil and gas production, refineries, petrochemical plants, bulk plants and terminals.*

ANSI/API 2016-2001, Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks

*Provides guidance and information on cleaning stationary atmospheric and low pressure (up to 15 psig) aboveground petroleum storage tanks used in all sectors of the petroleum and petrochemical industry, including crude oil and gas production, refineries, petrochemical plants, bulk plants and terminals. Addresses planning and tank preparation, and safe work practices to be used in accordance with the requirements of API Standard 2015.*

ANSI/API 510-2006, Pressure Vessel Inspection Code - Maintenance Inspection, Rating, Repair, and Alteration

*API 510 covers the maintenance inspection, repair, alteration, and re-rating procedures for pressure vessels used by the petroleum and chemical process industries. This inspection code is only applicable to vessels that have been placed in service and have been inspected by an authorized inspection agency or repaired by a repair organization. The use of this code is restricted to organizations that employ or have access to engineering and inspection personnel, or organizations that are technically qualified to meet the requirements of the code.*

ANSI/API 521-2006, Petroleum, Petrochemical, and Natural Gas Industries - Pressure Relieving and Depressuring Systems (ISO 23251)

*Applicable to pressure-relieving and vapor-depressuring systems. Although intended for use primarily in oil refineries, it is also applicable to petrochemical facilities, gas plants, liquefied natural gas (LNG) facilities and oil and gas production facilities. The information provided is designed to aid in the selection of the system that is most appropriate for the risks and circumstances involved in various installations.*

ANSI/API 530-5th edition-2003, Petroleum and natural gas industries - Calculation of heater-tube thickness in petroleum refineries

*This International Standard, ISO 13704-2001 specifies the requirements and gives recommendations for the procedures and design criteria used for calculating the required wall thickness of new tubes for petroleum refinery heaters.*

ANSI/API 541-2003, Form-Wound Squirrel-Cage Induction Motors 250 Horsepower and Larger

*Covers the minimum requirements for form-wound squirrel-cage induction motors 500 horsepower and larger for use in petroleum industry services. Standard is typically utilized for machines that have one or more of the following: (1)is in critical service, (2) is larger than 3000 hp for speeds 1800 rpm and below, (3) is rated 800 hp or greater for two-pole 3000 or 3600 rpm, (4) drives a high-inertia load, (5) uses an adjustable speed drive as a source of power, (6) is an induction generator, (7) is a vertical machine rated 500 hp or greater and (8) operates in abnormally hostile environments*

ANSI/API 547-2004, General Purpose Form-Wound Squirrel Cage Induction Motors-250 Horsepower and Larger

*Covers the requirements for form-wound induction motors for use in general-purpose petroleum, chemical and other industrial severe-duty applications. These motors are (a) rated 250hp (185kW) through 3000hp (2250kW) for 4, 6 and 8 pole speeds, (b) are rated less than 800hp (600kW) for two-pole (3000 or 3600rpm) motors of totally-enclosed construction, (c) are rated less than 1250hp (930kW) for two-pole motors of WP-II type enclosures, (d) drive centrifugal loads, (e) drive loads having inertia values within those listed in NEMA MG-1 Part 20, and (f) are not induction generators.*

ANSI/API 553-1999, Refinery Control Valve

*Provides criteria for the selection, specification, and application of piston- and diaphragm-actuated control valves. It also outlines control valve design considerations; discusses control valve sizing, noise, and fugitive emissions; and defines types of commonly used control valves and their actuators. Recommendations for specific refinery applications are also included.*

ANSI/API 570-2000, Piping Inspection Code – Inspection, Repair, Alteration, and Rerating of In-Service Piping Systems (Second Edition, Including Addendum 1)

*Covers inspection, repair, alteration, and rerating procedures for metallic piping systems that have been in-service. API 570 was developed for the petroleum refining and chemical process industries but may be used, where practical, for any piping system. It is intended for use by organizations that maintain or have access to an authorized inspection agency, a repair organization, and technically qualified piping engineers, inspectors, and examiners. Applies to piping systems for process fluids, hydrocarbons, and similar flammable or toxic fluid services, such as the following:*
*a. Raw, intermediate, and finished petroleum products.*
*b. Raw, intermediate, and finished chemical products.*
*c. Catalyst lines.*
*d. Hydrogen, natural gas, fuel gas, and*

ANSI/API 572-2001, Inspection of Pressure Vessels

*Covers the inspection of pressure vessels. It includes a description of the various types of pressure vessels and the standards for their construction and maintenance. The reasons for inspection, causes of deterioration, frequency, and methods of inspection, methods of repair, and preparation of records and reports are covered. This document also emphasizes safe operation.*

ANSI/API 573-2003, Inspection of Fired Boilers and Heaters

*Provides guidance on the inspection of fired boilers and heaters. This guidance is meant to promote proactive inspection procedures and to thereby prevent equipment failures and increase overall equipment reliability and plant safety.*

ANSI/API 574-1998, Inspection of Piping, Tubing, Valves, and Fittings

*Covers the inspection practices for piping, tubing, valves (other than control valves), and fittings used in petroleum refineries and chemical plants. Although this Publication is not specifically intended to cover speciality items, many of the inspection methods described in this recommended practice are applicable to specialty items such as: control valves, level gages, instrument controls columns, etc.*

ANSI/API 575-2004 (Second Edition), Guidelines and Methods for Inspection of Existing Atmospheric and Low Pressure Storage Tanks

*Covers the inspection of atmospheric and low-pressure storage tanks that have been in service. This recommended practice describes the various types of storage tanks and the standards for their construction and maintenance. The reasons for inspection, causes of deterioration, frequency and methods of inspection, methods of repair, and preparation of records and reports are covered. Safe and efficient operation is emphasized. This recommended practice is intended to supplement API Standard 653, which provides minimum requirements for maintaining the integrity of storage tanks after they have been placed in service.*

ANSI/API 576-2000, Inspection of Pressure-Relieving Devices

*Describes the inspection and repair practices for automatic pressure-relieving devices commonly used in the oil and petrochemical industries. As a guide to the inspection and repair of these devices in the user's plant, it is intended to ensure their proper performance. This publication covers such automatic devices as spring-loaded pressure-relief valves, pilot-operated valves, rupture disks, and weight loaded pressure vacuum vents.*
*The scope of this recommended practice includes the inspection and repair of automatic pressure-relieving devices commonly used in the oil and petrochemical industry.*

ANSI/API 580-2002, Risk-Based Inspection

*Provides users with a practical guide for implementing Risk Based Inspection. The methodology is presented in a systematic manner to the maximum extent practicable. RP580 provides the basic elements required to implement an RBI program. The expected outcome from the application of the RBI process should be the linkage of unacceptable risks with appropriate inspection or other risk mitigation activities to reduce risks to acceptable levels.*

ANSI/API 599-2002, Metal Plug Valves - Flanged and Welding Ends

*A purchase specification that covers requirements for steel, nickel based and other alloy plug valves with flanged, threaded, and welding end, and ductile iron plug valves with flanged ends, in sizes NPS ½ through NPS 24, which correspond to nominal pipe sizes in ASME B36.10M. Valve bodies conforming to ASME B16.34 may have flanged end and one butt-welding end. It also covers both lubricated and nonlubricated valves that have two-way coaxial ports, and includes requirements for valves fitted with internal body, plug, or port linings or applied hard facings on the body, body ports, plug, or plug port.*

ANSI/API 603-2001, Class 150, Cast, Corrosion-Resistant, Flanged-End Gate Valves

*Covers Class 150, cast, corrosion resistant, flanged-end gate valves in sizes NPS ½ through 12 for use in petroleum refinery piping systems. The valves are outside-screw-and-yoke (OS&Y) valves with rising stem, nonrising handwheel, bolted bonnet, integral seats in the body, raised-face end flanges, and various types of gates.*

ANSI/API 608-2002, Metal Ball Valves – Flanged and Butt-Welding Ends

*Covers Class 150 and Class 300 metal ball valves that have either butt-welding or flanged ends and are for use in on-off service.*

ANSI/API 610-2002, Centrifugal Pumps for General Refinery Services

*This International Standard specifies requirements for centrifugal pumps including pumps running in reverse as hydraulic power recovery turbines, for use in petroleum, petrochemical, and gas industry process services. This standard does not cover sealless pumps (see API 685). This International Standard is applicable to overhung pumps, between bearings pumps, and vertically suspended pumps (see Table 1). Clause 9 specifies requirements applicable to specific types of pumps. All other clauses of this International Standard apply to all pump types. The figures in clause 4.1 show the various specific pump types and the designations assigned to each specific type.*

ANSI/API 613-2002, Special-Purpose Gear Units for Refinery Service

*This standard covers the minimum requirements for special-purpose, enclosed, precision single- and double-helical one- and two-stage speed increasers and reducers of parallel-shaft design for petroleum, chemical and gas industry services. This standard is primarily intended for gear units that are in continuous service without installed spare equipment. Gear sets furnished to this standard shall be considered matched sets.*

ANSI/API 614-1999, Lubrication, Shaft-Sealing, and Control-Oil Systems for Special-Purpose Applications

*Covers the minimum requirements for lubrication systems, oil-type shaft-sealing systems, dry gas face-type shaft sealing systems and control-oil systems for general or special purpose applications. General purpose applications are limited to lubrication systems. These systems may serve equipment such as compressors, gears, pumps and drivers.*

ANSI/API 617-2002, Axial and Centrifugal Compressors and Expander-Compressors for Petroleum, Chemical and Gas Industry Services

*Covers the minimum requirements for centrifugal compressors used in petroleum, chemical, and gas industry services that handle air or gas. Does not apply to fans or blowers that develop less than 34 kPa (5 pounds per square inch) pressure rise above atmospheric pressure; these are covered by API Standard 673. This standard was listed for public review in the 9/16/1994 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/API 619-2004, Rotary Type Positive Displacement Compressors for Petroleum, Petrochemical and Natural Gas Industries

*This standard covers the minimum requirements for dry and flooded helical lobe rotary compressors (see Figure 1) used for vacuum or pressure or both in petroleum, chemical, and gas industry services. It is intended for compressors that are in special-purpose applications. It does not cover general purpose air compressors, liquid ring compressors, and vane-type compressors. Standard air compressors are covered in ISO 10440: Petroleum and natural gas industries - Rotary-Type Positive-Displacement Compressors - Part 2 - Packaged Air Compressors (oil free).*

ANSI/API 621-2001, Reconditioning of Metallic Gate, Globe, and Check Valves

*Provides guidelines for reconditioning flanged and butt weld cast or forged valves.*

ANSI/API 651-2006, Cathodic Protection of Aboveground Petroleum Storage Tanks

*This recommended practice describes the corrosion problems typical in aboveground steel storage tanks and associated piping systems. RP 651 provides a general description of the two methods currently used to provide cathodic protection against corrosion.*

ANSI/API 660-2003, Petroleum and natural gas industries - Shell and Tube Heat Exchangers (7th edition)

*Specifies requirements and gives recommendations for the mechanical design, material selection, fabrication, inspection, testing and preparation for shipment of shell-and-tube heat exchangers for the petroleum and natural gas industries.This standard is applicable to the following types of shell-and-tube heat exchangers: heaters, condensers, coolers and reboilers. This Standard is not applicable to vacuum-operated steam surface condensers and feed-water heaters.*

ANSI/API 661/ISO 13706-2001, Air Cooled Heat Exchangers for General Refinery Service

*Specifies requirements and gives recommendations for the design, materials, fabrication, inspection, testing and preparation for shipment of air-cooled heat exchangers for use in petroleum and natural gas industries. This International Standard is applicable to air cooled heat exchangers with horizontal bundles, but the basic concepts may also be applied to other configurations.*

ANSI/API 662/ISO 15547-2001, Plate Heat Exchangers for General Refinery Service

*Gives requirements and recommendations for the mechanical design, materials selection, fabrication, inspection, testing, and preparation for shipment of plate heat exchangers, sometimes referred to as plate-and-frame heat exchangers, for use in petroleum and natural gas industries. This International Standard covers gasketed, semi-welded and welded plate heat exchangers constrained within a frame. As used in this International Standard, the term heat exchangers, or exchangers, include coolers, heaters, condensers, evaporators and reboilers.*

ANSI/API 671-1999, Special-Purpose Couplings for Refinery Service

*Covers the minimum requirements for special-purpose couplings that transmit power between the rotating shafts of two pieces of equipment of the petroleum, chemical, and gas industries. These couplings are designed to be operated continuously and to accommodate misalignment and axial displacement.*

ANSI/API 682/ISO 21049-2004, Pumps - Shaft Sealing Systems for Centrifugal and Rotary Pumps

*Establishes the minimum electromechanical requirements for sealing systems for centrifugal and rotary pumps. It also provides a standard seal design that has been tested and qualified under the service conditions for which it is intended to operate. In addition, this standard encourages evolving technology through qualification testing, data sheet input, and for engineered seals.*

ANSI/API 685-1999, Sealless Centrifugal Pumps for Petroleum, Heavy Duty Chemical and Gas Industry Services

*Covers the minimum requirements for sealess centrifugal pumps for use in petroleum, heavy-duty chemical, and gas industry services. End suction pumps , single-stage pumps, overhung pumps of two classifications, magnetic drive pumps, and canned motor pumps are also covered.*

ANSI/API 6DSS/ISO 14723-2006, Specification on Subsea Pipeline Valves

*Specifies requirements and gives recommendations for the design, manufacturing, testing and documentation of ball, check and gate valves for subsea application in offshore pipeline systems meeting the requirements in ISO 13623 for petroleum and natural gas industries.*

ANSI/API 8B/ISO 13534-2000, Recommended Practice for Procedures for Inspections, Maintenance, Repair, and Remanufacture of Hoisting Equipment

*Provides owners and users of drilling and production hoisting equipment guidelines for inspection, maintenance, repair, and remanufacture procedures that may be utilized to maintain serviceability of this equipment.*

ANSI/API 8B/ISO 13534-2003, Addendum 1, Recommended Practice for Procedures for Inspections, Maintenance, Repair, and Remanufacture of Hoisting Equipment

*Make modifications as recommended by the committee.*

ANSI/API 8C/ISO 13535-2005, Specification for Drilling and Production Hoisting Equipment (PSL 1 and PSL 2)

*To revise section 9.8.3 Slip-type elevators and slip-type spiders by replacing the last line and editing a section on guide dollies.*

ANSI/API MPMS 14.3.1-2003, General Equations and Uncertainty Guidelines - Concentric, Square-edged Orifice Meters

*Provides the basic equations and uncertainty statements for computing the flow through orifice meters. Formally designated as ANSI/API 2530, Part 1, 1991.*

ANSI/API MPMS 14.3.3-2003, Natural Gas Applications

*API MPMS 14.3.3 is an application guide for the calculation of natural gas flow through a flange-tapped, concentric orifice meter, using the inch-pound system of units. It also provides practical guidelines for applying API MPMS 14.3.1 and 14.3.2 to the measurement of natural gas.. Formally designated as ANSI/API 2530, Part 3, 1991.*

ANSI/API MPMS 2.2C-2002, Calibration of Upright Cylindrical Tanks Using the Optical-Triangulation Method

*Describes the calibration of vertical cylindrical tanks by means of optical triangulation using theodolites. The circumference of the tank is determined at different levels by reference to a base line which may be either a reference circumference measured by strapping or a base line between two stations of a theodolite measured by means of a tape or by an optical method. External circumferences are corrected to five true internal circumferences.*

ANSI/API MPMS 2.2E-2004, Petroleum and Liquid Petroleum Products - Calibration of Horizontal Cylindrical Tanks - Part 1: Manual Methods

*Specifies manual methods for the calibration of nominally horizontal cylindrical tanks, installed at a fixed location. It is applicable to horizontal tanks up to 4 m (13 ft.) in diameter and 30 m (100 ft.) in length This is the US National Adoption of ISO 12917-1:2002(E) as a replacement in part for API Standard 2551 (First Edition, January, 1965; also issued as ANSI/ASTM D-1420).*

ANSI/API MPMS 2.2F-2004, Petroleum and Liquid Petroleum Products - Calibration of Horizontal Cylindrical Tanks - Part 2: Internal Electro-Optical Distance-Ranging Method

*Specifies a method for the calibration of horizontal cylindrical tanks having diameters greater than 2 m by means of internal measurements using an electro-optical distance-ranging instrument, and for the subsequent compilation of tank-capacity tables This is the US National Adoption of ISO 12917-2:2002(E) as a replacement in part for API Standard 2551 (First Edition, January, 1965; also issued as ANSI/ASTM D-1420).*

ANSI/API MPMS 5.6-2002, Measurement of Liquid Hydrocarbons by Coriolis Meters

*This standard is intended to describe methods to achieve custody transfer levels of accuracy when a Coriolis meter is used to measure liquid hydrocarbons.*

ANSI/API MPMS Chapter 14.3, Part 2-2000, Chapter 14 - Natural Gas Fluids Measurement, Section 3 - Concentric, Square-Edged Orifice Meters, Part 2 - Specification and Installation Requirements

*Outlines the various design parameters that must be considered when designing metering facilities using orifice meters. The mechanical tolerances found in this document encompass a wide range of orifice diameter ratios for which experimental results are available.*

ANSI/API RP 10B-4/ISO 10426-4-2004, Recommended Practice on Preparation and Testing of Foamed Cement Slurries at Atmospheric Pressure

*This standard defines the methods for the generation and testing of foamed cement slurries and their corresponding unfoamed base cement slurries at atmospheric pressure.*

ANSI/API RP 10D-2/ISO 10427-2-2004, Centralizer Placement and Stop Collar Testing

*Provides calculations for determining centralizer spacing, based on performance and desired standoff, in deviated and dogleg holes in wells. It also provides a procedure for testing stop collars and reporting test results.*

ANSI/API RP 1162-2003, Public Awareness Programs for Pipeline Operators

*This recommended practice will provide guidance to pipeline operators for developing strong and effective public awareness programs to communicate with the public adjacent to pipeline rights-of-way, local emergency officials, local governmental officials and excavators. The Recommended Practice will be applicable to hazardous liquid transmission pipelines, natural gas transmission pipelines and natural gas distribution pipelines, and will improve the consistency among such programs and foster public confidence.*

ANSI/API RP 13B-1/ISO 10414-1-2003, Recommended Practice for Field Testing Water-Based Drilling Fluids

*Nationally adopt ISO 10414-1 to replace the existing API Recommended Practice 13B-1. This standard will provide standard procedures for field testing water-based drilling fluids.*

ANSI/API RP 13I/ISO 10416-2003, Recommended Practice for Laboratory Testing of Drilling Fluids

*Nationally adopt ISO 10416 to replace the existing API Recommended Practice 13I. This standard provides standard procedures for laboratory testing drilling fluids.*

ANSI/API RP 13J/ISO 13503-3-2006, Testing of Heavy Brines

*Covers the physical properties, potential contaminants and test procedures for heavy brine fluids manufactured for use in oil and gas well drilling, completion and workover fluids. Provides methods for assessing the performance and physical characteristics of heavy brines for use in field operations. It includes procedures for evaluating the density or specific gravity, the clarity or amount of particulate matter carried in the brine, the crystallization point or the temperature (both ambient and under pressure) at which the brines make the transition between liquid and solid, the pH, and iron contamination. It also contains a discussion of gas hydrate formation and mitigation, brine viscosity, corrosion testing, buffering capacity and a standardized reporting form.*

ANSI/API RP 13M/ISO 13503-4-2006, Recommended Practice for Measuring Stimulation and Gravel-pack Fluid Leakoff Under Static Conditions

*Provides for consistent methodology to measure fluid loss of stimulation and gravel-pack fluid under static conditions. Excludes fluids that react with pourous media.*

ANSI/API RP 17A/ISO 13628-1-2005, Design and Operation of Subsea Production Systems- Part 1: General Requirements and Recommendations

*Provides guidelines for the design, installation, operation, repair, and decommissioning of subsea production systems. The elements of subsea production systems included are wellheads and trees; pipelines and end connections; controls, control lines and control fluids; templates and manifolds; and production riser. Other sections cover operations, quality assurance, materials, and corrosion.*

ANSI/API RP 17C/ISO 13628-3-2002 (R2005), TFL (Through Flowline) Systems

*Presents recommendations for designing, fabricating, and operating TFL equipment. Procedures and guidelines presented are for hydraulic servicing of downhole equipment, subsea tree and tubing hanger, and pipelines and equipment within the pipelines. This edition of API RP 17C is an identical adoption of ISO 13628-3*

ANSI/API RP 17G-2006, Design and Operation of Completion/Workover Riser Systems (2nd Edition)

*Gives requirements for the design, analysis, materials, fabrication, testing and operation of subsea completion/workover risers systems run from a floating vessel. It is applicable to all subsea completion/workover riser systems and may be applied to modifications, operation, of existing systems and reuse at different locations and with different floating vessels.*

ANSI/API RP 17H-2002, Remotely Operated Vehicle (ROV) interfaces on subsea production systems

*Gives functional requirements and guidelines for ROV interfaces on subsea production systems for the petroleum and natural gas industries. It is applicable to both the selection and use of ROV interfaces on subsea production equipment, and provides guidance on design as well as the operational requirements for maximising the potential of standard equipment and design principles. The auditable information for subsea systems it offers will allow interfacing and actuation by ROV-operated systems, while the issues it identifies are those that have to be considered when designing interfaces on subsea production.*

ANSI/API RP 17M/ISO 13628-9-2000, Recommended Practice for Remotely Operated Vehicle (ROV) Interfaces on Subsea Production Systems

*Applicable to design, fabrication, testing, installation and operation of subsea production control systems. Covers surface control system equipment, subsea-installed control system equipment and control fluids. This equipment is utilized for control of subsea production of oil and gas and for subsea water and gas injection services.*

ANSI/API RP 2RD-1998, Recommended Practice for the Design of Risers for Floating Production Systems (FPSs) and Tension-Leg Platforms (TLPs)

*This recommended practice addresses structural analysis procedures, design guidelines, component selection criteria and typical designs for all new riser systems used on FPSs. Guidance is also given for developing load information for the equipment attached to the ends of the risers.*

ANSI/API RP 2T-1997, Planning, Designing and Constructing Tension Leg Platforms

*Summarizes available information and guidance for the design, fabrication and installation of a tension leg platform.*

ANSI/API RP 555-2000, Process Analyzers

*Standard addresses the considerations in the application of process analyzers and associated systems, installation and maintenance. These systems measure and transmit information about chemical composition, physical properties or chemical properties. Process monitors are used in the refining industry for (a) monitoring and controlling product quality, (b) implementing advanced control strategies in improving process operations, (c) enhancing area safety and (d) continuous emission monitoring and environmental measurement of air and water quality.*

ANSI/API RP 578-1999, Material Verification Program for New and Existing Alloy Piping Systems

*Ensures that the normal composition of alloy components of a process piping system is consistent with those selected or specified in order to minimize the potential for catastrophic toxic or hazardous releases of liquids or vapors. This recommended practice covers the guidelines for positive material identification (PMI) programs on ferrous and nonferrous alloys during the construction,, installation, maintenance, and inspection when necessary, of new and existing process piping systems covered by the ASME B31.3 and API 570 piping codes (American National Standard for Process Piping, ANSI/ASME B31.3-1999, and American National Standard for Piping Inspection Code - Inspection, Repair, Alteration, and Rerating of In-Service Piping Systems, ANSI/API 570-1993).*

ANSI/API RP 579-2000, Fitness-for-Service

*This publication standardizes fitness-for-service (FFS) assessment techniques for pressurized equipment in the refining and chemical industries. FFS is defined as the ability to demonstrate the structural integrity of an in-serice component containing a flaw. These procedures can be used for FFS evaluations and rerating of pressure vessels designed and constructed to the ASME Boiler & Pressure Vessel Code; ASMME B31.3 designed piping systems; and aboveground storage tanks designed to API 650 and API 620.*

ANSI/API RP 5A5-2005, Field Inspection of New Casing, Tubing, and Plain-End Drill Pipe, 7th Edition

*This standard specifies requirements and gives recommendations for field inspection and testing of oil country tubular goods (OCTG). It covers the practices and technology commonly used in field inspection; however, certain practices may also be suitable for mill inspections. It also covers the qualification of inspection personnel, a description of inspection methods and apparatus calibration and standardization procedures for various inspection methods. The evaluation of imperfections and marking of inspected OCTG are included.*

ANSI/API RP 652-2005, Lining of Aboveground Petroleum Storage Tank Bottoms

*Provides guidance presents procedures and practices for achieving effective corrosion control in aboveground storage tanks by application of tank bottom linings. It contains information pertinent in the selection of lining materials, surface preparation, lining application, cure, and inspection provisions for the application of tank bottom linings to for both existing and new storage tanks.*

ANSI/API RP 8B/ISO 13534, Addendum 2-2005, Inspection, Maintenance, Repair, and Remanufacture of Hosting Equipment

*Provides guidelines & establishes requirements for inspection, maintenance, repair, and remanufacture of items of hoisting equipment used in drilling and product operations to maintain equipment serviceablity.*

ANSI/API RP-11S1-1998, Electrical Submersible Pump Teardown Report

*This recommended practice covers a recommended electric submersible pump teardown report form.*

ANSI/API RP-2Z-1998, Preproduction Qualification for Steel Plates for Offshore Structures

*Covers requirements for preproduction qualification, by special welding and mechanical testing of specific steelmaking processing procedures for the manufacture of steel by a specific producer. It was developed in conjunction with, and is intended primarily for use with API Spec 2W and 2Y. However, it may be used to supplement API Spec 2H.*

ANSI/API RP-500-1998 (R2003), Classification of Locations for Electrical Installations at Petroleum Facilities, Recommended Practice for

*Recommended practice provides guidelines for determining the degree and extent of Class I, Division 1 and Class I, Division 2 locations at petroleum facilities, for the selection and installation of electrical equipment. RP 500 is intended to be applied where there may be a risk of ignition due to the presence of flammable gas or vapor, mixed with air under normal atmospheric conditions.*

ANSI/API RP-505-1998 (R2002), Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class 1, Zone 0, Zone 1, and Zone 2

*Recommended practice provides guidelines for determining the degree and extent of Class I, Zone 0, Zone 1 and Zone 2 locations at petroleum facilities for the selection and installation of electrical equipment. RP 505 is intended to be applied where there may be a risk of ignition due to the presence of flammable gas or vapor, mixed with air under normal atmospheric conditions.*

ANSI/API Spec 13A/ISO 13500 -2006, Specification for Drilling-Fluid Materials

*Covers physical properties and test procedures for materials manufactured for use in oil- and gas-well drilling fluids. The materials covered are barite, haematite, bentonite, nontreated bentonite, OCMA grade bentonite, attapulgite, sepiolite, technical grade low-viscosity carboxmethylcellulose (CMC-LVT), and starch.*

ANSI/API Spec 16A/ISO 13533-2001, Specification for Drill Through Equipment

*Specifies requirements for performance, design, materials, testing and inspection, welding, marking, handling, storing and shipping of drill-through equipment used for drilling for oil and gas. It also defines service conditions in terms of pressure, temperature and wellbore fluids for which the equipment will be designed. It is applicable to and establishes requirements for the following specific equipment:a) ram blowout preventers; b) ram blocks, packers and top seals; c) annular blowout preventers; d) annular packing units; e) hydraulic connectors; f) drilling spools; g) adapters; h) loose connections; i) clamps.*

ANSI/API Spec 16C-1993 (R2001), Choke and Kill Systems

*Provides for safe and functionally interchangeable surface and subsea choke and kill systems equipment utilized for drilling oil and gas wells. Technical content of this document provides the minimum requirements for performance, design, materials, welding, testing, inspection, storing, and shipping of choke and kill system equipment.*

ANSI/API Spec 17E-2003, Specification for Subsea Umbilicals

*Specifies requirements and gives recommendations for the design, material selection,manufacture, design verification, testing, installation and operation of subsea control systems, chemical injection,gas lift, utility and service umbilicals and associated ancillary equipment for the petroleum and natural gasindustries.*

ANSI/API Spec 17K-2005, Specification for Bonded Flexible Pipe

*This Standard defines the technical requirements for safe, dimensionally and functionally interchangeable bonded flexible pipes that are designed and manufactured to uniform standards and criteria. Minimum requirements are specified for the design, material selection, manufacture, testing, marking and packaging of bonded flexible pipes, with reference to existing codes and standards where applicable. See API RP 17B for guidelines on the use of flexible pipes and ancillary components.*

ANSI/API Spec 2F-1997, Mooring Chain

*Covers flashwelded chain used for mooring of offshore floating vessels such as drilling vessels, pipe lay barges, derrick barges, and storage tankers.*

ANSI/API Spec 6A/ISO 10423-2004, Specification for Wellhead and Christmas Tree Equipment

*Covers equipment utilized for pressure control systems for production of oil and natural gas. Specific equipment covered includes end and outlet connections, ring gaskets, chokes, valves including surface and underwater safety valves, actuators and wellhead and Christmas tree equipment (casing and tubing head spools, hangars, connectors, fittings).*

ANSI/API Spec 7-1-2006, Specification for Rotary Drill Stem Elements

*To define the design and the mechanical properties of the material required for rotary drill stem elements.*

ANSI/API Spec 7K/ISO 14693-2006, Specification for Drilling and Well Servicing Equipment

*Provides general principles and standards for design, manufacture and testing of new drilling and well services equipment and replacement primary load carrying components manufactured subsequent to the publication of this specification.*

ANSI/API Spec 9A/ISO 10425-2004, Specification for Wire Rope

*Nationally adopt ISO 10425 to replace API Specification 9A. This specification provides standards for wire rope in the petroleum industry.*

ANSI/API Spec Q1-2003, Specification for Quality Programs for the Petroleum, Petrochemical and Gas Industry

*Defines the quality management system requirements for the design, development, production, installation and service of products for the petroleum, petrochemical and natural gas industries. Also sets forth the minimum quality management system requirements, which complied in conjunction with API industry standards, are necessary to obtain a licensee to use the API monogram.*

ANSI/API Specification 7-1-2007, Specification for Rotary Drill Stem Elements

*Provides minimal specification guidelines for heavy weight drill pipe.*

ANSI/API Standard 612-2005, (ISO 10437-2003), Petroleum, Petrochemical and Natural Gas Industries - Steam Turbines - Special-Purpose Applications

*Specifies requirements and gives recommendations for the design, materials, fabrication, inspection, testing and preparation for shipment of steam turbines for special-purpose applications. It also covers the related lube-oil systems, instrumentation, control systems and auxiliary equipment. It is not applicable to general-purpose steam turbines.*

ANSI/API Std. 600/ISO 10434 MOD-2001, Bolted Bonnet Steel Gate Valves for Petroleum and Natural Gas Industries

*Covers steel gate valves with flanged or butt-welding ends in sizes NPS 1 through 24. For purchasers and manufacturers who order, fabricate, or install steel gate valves.*

## APSP (Association of Pool and Spa Professionals)

ANSI/APSP 4-2006, Aboveground/Onground Residential Swimming Pools

*This standard describes certain criteria for the design, manufacturing, testing, care and use of aboveground/onground residential (Type-O) non-diving swimming pools and their components. Aboveground/onground residential (Type-O) non-diving swimming pools are defined as pools with a shallow area water depth of 36 inches (91.44 cm) minimum and a water depth of 48 inches maximum (121.92 cm.*

ANSI/APSP 7-2006, Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins

*This proposed standard addresses the 5 areas of suction entrapment as identified by the U.S. CPSC and provides performance guidelines as to how they can be protected against or eliminated.*

ANSI/NSPI 1-2003, Public Swimming Pools

*This standard is intended to cover public swimming pools, to be used for bathing and operated by an owner, licensee, or concessionaire, regardless of whether a fee is charged for use. Public swimming pools covered by this standard include conventional swimming pools, (Class B & C Pools) pools for competitive aquatic sports, (Class A Pools) and wading pools. Re-circulation of substantive changes only.*

ANSI/NSPI 2-1999, Public Spas

*Covers public spas that are used for bathing and are operated by an owner, licensee, or concessionaire, regardless of whether a fee is charged for use. This is the second public review for this standard. It was originally listed in the July 4, 1997 issue of Standards Action. It is being resubmitted now due to substantive changes.*

ANSI/NSPI 3-1999, Permanently Installed Spas

*Covers permanently installed residential spas that are used for bathing and are operated by an owner, licensee, or concessionaire, regardless of whether a fee is charged for use. This is the second public review for this standard. It was originally listed in the July 4, 1997 issue of Standards Action. It is being resubmitted now due to substantive changes.*

ANSI/NSPI 4a-2002, Standard for Aboveground/Onground Residential Swimming Pools

*Describes certain criteria for the design, manufacturing, testing, care and use of aboveground/onground residential (Type-O) non-diving swimming pools and their components. Aboveground/onground residential swimming pools are for swimming and wading only. No diving boards, slides or other equipment are to be added to an aboveground/onground pool that in any way indicates that an aboveground/onground pool may be used or intended for diving purposes. This standard does not apply to public/commercial pools, permanently-installed residential pools, competitive pools, hot tubs, and other pools or spas such as those operated for medical treatment, physical therapy, or other special purposes.*

ANSI/NSPI 5-2003, Residential Inground Swimming Pools

*Applies to permanently installed residential inground swimming pools intended for non commercial use as a swimming pool by not more than (3) three owner families and their guest and exceeds 24 inches (610) in water depth or has a volume over 3,250 gallons (12,303.L). This standard covers specifications for the design, equipment, operation, installation, new construction and rehabilitation of residential inground swimming pools.*

ANSI/NSPI 6-1999, Residential Portable Spas

*Covers residential portable spas that are used for bathing and are operated by an owner, licensee, or concessionaire, regardless of whether a fee is charged for use. This is the second public review for this standard. It was originally listed in the July 4, 1997 issue of Standards Action. It is being resubmitted now due to substantive changes.*

ANSI/NSPI 8-2004, Model Barrier Code for Residential Swimming Pools, Spas, and Hot Tubs

*This standard provides recommended minimum guidelines to assist local jurisdictions in the development of criteria for model barrier codes.*

ANSI/NSPI 9-2004, Aquatic Recreation Facilities

*The NSPI-9 standard provides specifications for the design, equipment, operation, signs, installation, sanitation, new construction and rehabilitation of public pools that are designed for free-form aquatic recreation and play. Pools covered by this standard include wave action pools; activity pools; catch pools; leisure rivers; and vortex pools.*

## ARI (Air-Conditioning and Refrigeration Institute)

ANSI/ARI 1060-2001, Rating Air-to-Air Energy Recovery Ventilation Heat Exchangers

*Establishes air-to-air heat exchangers intended for use in Energy Recovery Ventilation Equipment: definitions; test requirements; minimum data requirements for Published Ratings; marking and nameplate data; and conformance conditions.*

ANSI/ARI 110-2004, Air-Conditioning and Refrigerating Equipment Nameplate Voltages

*Establishes, for air-conditioning and refrigerating equipment: definitions; voltage rating requirements; equipment performance requirments; and conformance conditions.*

ANSI/ARI 1200-2006, Performance Rating of Commercial Refrigerated Display Merchandisers and Storage Cabinets

*This standard applies to the following manufacturers' standard catalog Commercial Refrigerated Display Merchandisers and Storage Cabinets, provided that the cases are equipped and designed to work with electrically driven, direct expansion type systems: a. Self-contained and Remote Commercial Refrigerated Display Merchandisers and Storage Cabinets b. Open and Closed Commercial Refrigerated Display Merchandisers c. Service and Self-service Commercial Refrigerated Display Merchandisers.*

ANSI/ARI 310/380-1993, Packaged Terminal Air-Conditioners and Heat Pumps

*Provides requirements for rating, performance, and tests of all sizes of factory-assembled packaged terminal air-conditioners and heat pumps for use in residential, commercial, and industrial heating and cooling systems.*

ANSI/ARI 330-1993, Ground Source Closed-Loop Heat Pumps

*Establishes definitions and classification; requirements for testing and rating; specification, literature and advertising requirements; performance requirements and conformance conditions for ground source closed-loop heat pumps*

ANSI/ARI 340-360-2004, Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment

*This standard applies to factory-made Commercial and Industrial Unitary Air-Conditionersing and Heat Pumps Equipment.*

### ANSI/ARI 340/360-2000, Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment

*The purpose of this standard is to establish for Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment: definitions; test requirements; rating requirements; minimum data requirements for Published Ratings; marking and nameplate data; and conformance conditions.*

### ANSI/ARI 365-1994, Commercial and Industrial Unitary Air-Conditioning Condensing Units

*Establishes definitions and classifications, requirements for testing and rating, performance requirements, and conformance conditions for commercial and industrial unitary air-conditioning condensing units. Applies to factory-made comercial and industrial unitary air-conditioning condensing units. Applies only to electrically driven, mechanical-compression-type condensing units.*

### ANSI/ARI 365-2002, Commercial and Industrial Unitary Air-Conditioning Condensing Units

*This standard applies to factory-made Commercial and Industrial Unitary Air-Conditioning Condensing Units greater than or equal to 135,000 Btu/h [39.6 kW.*

### ANSI/ARI 390-2003, Performance Rating of Single Package Vertical Air-Conditioners and Heat Pumps

*This standard applies to factory-assembled commercial or industrial Single Package Vertical Air-Conditioner and Heat Pump equipment.*

### ANSI/ARI 400-2001, Liquid to Liquid Heat Exchangers

*The purpose of this standard is to establish for Liquid to Liquid Heat Exchangers: definitions; test requirements; rating requirements; minimum data requirements for Published Ratings; marking and nameplate data; and conformance conditions.*

### ANSI/ARI 430-1999, Central Station Air-Handing Units

*Establishes definitions and classifications; specifications for standard equipment; requirements for testing and rating, and conformance conditions for central station air-handling units.*

### ANSI/ARI 460-2000, Remote Mechanical-Draft Air-Cooled Refrigerant Condensers

*The purpose of this standard is to establish for Remote Mechanical-Draft Air-Cooled Refrigerant Condensers: definitions; test requirements; rating requirements; minimum data requirements for Published Ratings; marking and nameplate data; and conformance conditions.*

### ANSI/ARI 495-1999, Refrigerant Liquid Receivers

*Establishes definitions, specifications for standard equipment, rating requirements and requirements for marking for refrigerant liquid receivers*

### ANSI/ARI 500-1990, Variable Capacity Positive Displacement Refrigerant Compressors and Compressor Units for Air-Conditioning and Heat Pump Applications

*Applies to electric motor driven variable capacity positive displacement refrigerant compressors and compressor units; for air-cooled, evaporatively-cooled, or water-cooled air conditioning and heat pump applications. Also, applies to compressors which are capable of variable capacity that is obtained by mechanical and/or electrical means. The rating points in this standard are based on commonly used refrigerants. This standard is intended to serve as a guide for use with other refrigerants.*

### ANSI/ARI 500-2001, Variable Capacity Positive Displacement Refrigerant Compressors and Compressor Units for Air-Conditioning and Heat Pump Applications

*The purpose of this standard is to establish for Variable Capacity Positive Displacement Refrigerant Compressors and Compressor Units for Air-Conditioning and Heat Pump Applications: definitions; test requirements; rating requirements; minimum data requirements for Published Ratings; marking and nameplate data; and conformance conditions.*

### ANSI/ARI 510-1993, Ammonia Compressor Units

*Applies to positive displacement ammonia compressor units for use in commercial and industrial refrigeration applications. Also, applies to compressors and units using ammonia (R717) as defined in ANSI/ASHRAE 34-92, Number Designation and Safety Classifications of Refrigerants (American Society of Heating, Refrigerating and Air-Conditionig Engineers, Inc.).*

### ANSI/ARI 530-2005, Rating of Sound and Vibration for Refrigerant Compressors

*This standard applies to External-drive, Hermetic and Semi-Hermetic Refrigerant Compressors. In the case of External-drive Refrigerant Compressors, the driving mechanism shall be excluded from the sound and vibration measurements. However, for Semi-Hermetic Refrigerant Compressors where the driving mechanism is an integral part of the compressor assembly, it shall be included in the measurements.*

### ANSI/ARI 540-1999, Positive Displacement Refrigerant Compressors and Compressor Units

*Applies to performance data presentation for all positive displacement refrigerant compressors and compressor units. This standard was listed for public review in the 5/8/1998 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/ARI 560-2000, Absorption Water Chilling and Water Heating Packages

*The purpose of this standard is to establish for Absorption Water Chilling and Water Heating Packages: definitions; test requirements; rating requirements; minimum data requirements for Published Ratings; marking and nameplate data; and conformance conditions.*

ANSI/ARI 580-1995, Performance of Non-Condensable Gas Purge Equipment for Use with Low Pressure Centrifugal Liquid Chillers

*Defines general equipment requirements, test methods and analysis techniques used to determine the performance rating of purge equipment that removes non-condensable gases from centrifugal liquid chillers. This purge equipment is typically used in conjunction with chillers which operate with at least a portion of the system below atmospheric pressure. Purge equipment is sometimes used on chillers with high pressure refrigerant but, since there is no way for non-condensable gases to enter these systems once they have been charged with refrigerant, this purge equipment does not operate for any significant amount of time.*

ANSI/ARI 580-2001, Non-Condensible Gas Purge Equipment for Use with Low Pressure Centrifugal Liquid Chillers

*Establishes Non Condensible Gas Purge Equipment for Use with Low Pressure Centrifugal Liquid Chillers: definitions; test requirements; rating requirements; minimum data requirements for Published Ratings; marking and nameplate data; and conformance conditions.*

ANSI/ARI 610-1996, Central System Humidifiers for Residential Applications

*Establishes definitions and classifications, requirements for testing and rating, minimum data requirements for published ratings, operating requirements, marking and nameplate data, and conformance conditions for central system humidifiers.*

ANSI/ARI 620-1996, Self-Contained Humidifiers for Residential Applications

*Establishes definitions and classifications, requirements for testing and rating, minimum data requirements for published ratings, operating requirements, marking and nameplate data, and conformance conditions for self-contained humidifiers.*

ANSI/ARI 640-1996, Commercial and Industrial Humidifiers

*Establishes definitions and classifications, requirements for testing and rating, minimum data requirements for published data, marking and nameplate data and conformance*

ANSI/ARI 680-2004, Performance Rating of Residential Air Filter Equipment

*This standard applies to factory-made Air Filter Equipment and Air Filter Media, as used in such equipment, for removing particulate matter, when used in environmental conditioning of inhabited spaces in residential facilities.*

ANSI/ARI 750-2001, Thermostatic Refrigerant Expansion Valves

*Establishes Thermostatic Refrigerant Expansion Valves: definitions; test requirements; rating requirements; minimum data requirements for Published Ratings; marking and nameplate data; and conformance conditions.*

ANSI/ARI 770-1994, Refrigerant Pressure Regulating Valves

*Covers pressure regulating valves controlling volatile refrigerant flow whose primary response is to pressure.*

ANSI/ARI 850-2004, Performance Rating of Commercial and Industrial Air Filter Equipment

*This standard applies to factory-made Air Filter Equipment and Air Filter Media as used in such equipment, for removing particulate matter, when used in environmental conditioning of inhabited spaces in commercial and industrial facilities.*

ANSI/ARI 870-2001, Direct GeoExchange Heat Pumps

*Establishes Direct GeoExchange Heat Pumps: definitions; test requirements; rating requirements; minimum data requirements for Published Ratings; marking and nameplate data; and conformance conditions.*

ANSI/ARI/ASHRAE/ISO 13256-1-1998, Water-Source Heat Pumps - Testing and Rating for Performance: Part 1 - Water-to-Air and Brine-to-Air Heat Pumps

*Establishes performance testing and rating criteia for factory-made water-to-air and brine-to-air heat pumps.*

ANSI/ARI/ASHRAE/ISO 13256-2-1998, Water-Source Heat Pumps - Testing and Rating for Performance: Part 2 - Water-to-Water and Brine-to-Water Heat Pumps

*Establishes performance testing and rating criteria for factory-made water-to-water and brine-to-water heat pumps.*

## ARMA (Association of Records Managers and Administrators)

ANSI/ARMA 10-1999, Glossary of Records Management Terms

*Defines and explains more than 300 terms representing common and specialized terminology used in the field of records and information management. It includes a section of abbreviations and acronyms. It does not include dictionary terms unless such terms also have a unique information management definition. Previous public review and comment period resulted in subsequent changes in Glossary; therefore, an additional review period is required. This is the second public review for this standard. It was previously listed in the August 28, 1998 issue of Standards Action.*

ANSI/ARMA 12-2005, Alphabetic Filing Rules

*This standard is intended to aid in the selection and application of a filing system that will enable users to retrieve information when needed. It describes three principal systems: alphabetic filing, subject filing, and numeric filing. It addition, it contains standard rules for indexing alphabetical data. Three informative appendices accompany this standard.*

ANSI/ARMA 16-2007, The Records Conversion Process: Program Planning, Requirements, and Procedures

*This proposed standard has been developed to identify conversion requirements that an organization can use to ensure that its electronic records remain authentic and trustworthy as they are converted from one recordkeeping system to another. These requirements focus on digital-to-digital conversion.*

ANSI/ARMA 5-2003, Vital Records Programs: Identifying, Managing, and Recovering Business-Critical Records

*Addresses the development and implementation of a vital records program within the context of a formal records management program. Vital records are defined as records containing information essential to the survival of an organization in the event of a disaster, since they document an organization's legal and financial position and preserve the rights of employees, customers and stockholders. Specific procedures addressed include: vital records analysis and selection, records protection methods, and the overall administration of a vital records program.*

ANSI/ARMA 8-2005, Developing and Operating a Records Retention Program

*This standard covers general principles in structuring an information retention and disposition program, including authority and responsibility, identifying and classifying records for retention purposes, and principles for determining retention periods.*

ANSI/ARMA 9-2004, Requirements for Managing Electronic Messages as Records

*Establishes standard records management practices to be addressed in the creation and maintenance of electronic mail (e-mail) messages. The publication addresses the creation, maintenance, and disposition of e-mail within the context of a formal records and information management program. Specific areas addressed include: appropriate use, ownership, liabilities, privacy/access, security, filing and classification, auditing trails, and applying retention. This is the second public review for this standard. It was originally listed in the August 28, 1998 issue of Standards Action. It is being resubmitted due to substantive changes in the text.*

## ASA (Acoustical Society of America)

ANSI S1.1-1994 (R2004), Acoustical Terminology

*This standard provides definitions for a wide variety of terms, abbreviations, and letter symbols used in acoustics and electroacoustics. Terms of general use in all branches of acoustics are defined, as well as many terms of special use for architectural acoustics, acoustical instruments, mechanical vibration and shock, physiological and psychological acoustics, underwater sound, sonics and ultrasonics, and music.*

ANSI S1.11-2004, Octave-Band and Fractional Octave-Band Analog and Digital Filters, Specifications for

*Provides performance requirements for analog, sampled-data, and digital implementations of bandpass filters that comprise a filter set or spectrum analyzer for acoustical measurements. It supersedes ANSI S1.11-1986 (R1998), and is a counterpart to International Standard IEC 61260:1995 Electroacoustics – Octave-Band and Fractional-Octave-Band Filters. Significant changes from ANSI S1.11-1986 have been adopted in order to conform to most of the specifications of IEC 61260:1995*

ANSI S1.13-2005, Measurement of Sound Pressure Levels in Air

*Specifies requirements and describes procedures for the measurement of sound pressure levels in air at a single point in space. These apply primarily to measurements performed indoors but may be utilized in outdoor measurements under specified conditions. This is a fundamental standard applicable to a wide range of measurements and to sounds that may differ widely in temporal and spectral characteristics; more specific ANS complement its requirements. A classification is given of the types of sound generally encountered, and the preferred descriptor for each type is identified.*

ANSI S1.14-1998 (R2003), Recommendations for Specifying and Testing the Susceptibility of Acoustical Instruments to Radiated Radio-Frequency Electromagnetic Fields, 25 MHz to 1GHz

*This standard provides recommendations for specifying and testing the susceptibility of acoustical instruments to radiated electromagnetic fields. The instruments may be powered by batteries or from a public supply of electric power. Recommendations related to testing an instrument's susceptibility to electromagnetic radiation are given in annex A. Annex B contains a bibliography of background information.*

ANSI S1.15, Part 1-1997 (R2006), Measurement Microphones – Part 1: Specifications for Laboratory Standard Microphones

*This Standard specifies mechanical dimensions and certain electroacoustical characteristics for capacitor (condenser) microphones used as laboratory standards for sound pressure measurements of the highest attainable accuracy. The specifications are intended to ensure that primary calibration by the reciprocity method can be readily carried out. This Standard establishes a system to classify laboratory standard microphones into a number of types according to their dimensions and properties.*

ANSI S1.15-2005/Part 2, Measurement Microphones - Part 2: Primary Method for Pressue Calibration of Laboratory Standard Microphones by the Reciprocity Technique

*This Standard specifies a primary method for the calibration of microphones by the reciprocity technique. The specifications are intended to ensure that primary calibration with the reciprocity technique can attain the highest accuracy. The technical requirement of this American National Standard is identical to International Standard IEC 61094-2: 1992, "Measurement microphones -- Part 2: Primary method for pressure calibration of laboratory standard microphones by the reciprocity technique". Various improvements have been made to include recent technical information.*

ANSI S1.16-2000 (R2005), Method for Measuring the Performance of Noise Discriminating and Noise Cancelling Microphones

*Describes procedures for measuring the performance of noise discriminating and noise canceling microphones. The signal-to-noise ratio is measured at 1/3 octave band intervals with the desired test source in a diffuse noise field. The noise canceling performance of the microphone is defined as the noise canceling index (NCI), a weighted summation of the signal-to-noise ratios. The NCI of the microphone under test can be compared to the required baseline NCI of a laboratory standard pressure microphone.*

ANSI S1.17/Part 1-2004, Microphone Windscreens - Part 1: Measurements and Specification of Insertion Loss in Still or Slightly Moving Air

*This standard specifies a test to use to determine the insertion loss of windscreens for measuring microphones over a defined frequency range. The insertion loss is determined in conditions that reflect performance in still or slightly moving air.*

ANSI S1.18-1999 (R2004), Template Method for Ground Impedance

*Describes procedures for obtaining the real and imaginary parts of the specific acoustic impedance of natural ground surfaces outdoors. The Standard uses templates to compare measured sound pressure level differences with a specific set of calculated level differences. The impedance values are obtained from a model based on best fit of measured and calculated level differences. The standard may also be used to obtain the impedance of porous sound absorbing material.*

ANSI S1.20-1988 (R2003), Procedures for Calibration of Underwater Electroacoustic Transducers

*This standard establishes measurement procdures for calibrating underwater electroacoustic transducers and describes forms for presenting the resultant data. It is a revision of American National Standard S1.20-1972 (R1977).*

ANSI S1.22-1992 (R2002), Scales and Sizes for Frequency Characteristics and Polar Diagrams in Acoustics

*For rectangular cartesian graphs in which a level (in decibels) of an acoustical quantity is plotted against frequency on a logarithmic scale, the scale proportions shall be those for which the length for a 10:1 frequency ratio on the abscissa is equal to the length for a level difference of 25, 50, or 10 decibels (dB) on the ordinate. For polar diagrams in which an absolute or relative level (in decibels) is shown increasing outward along a radius on a linear scale, a reference circle shall be identified whose radius is a difference in level of 50 dB (alternatively, 25 dB), and such that maximum level is preferably plotted within 5 dB (alternatively, 2.5 dB) of the reference circle. For polar diagrams of relative level, the level assigned to the reference circle is preferably 0 dB; the angle assigned to the reference direction is preferably zero degrees. The preferred size for one decibel is 2, 1, or 5 mm.*

ANSI S1.25-1991 (R2002), Personal Noise Dosimeters, Specification for

*Contains specifications for performance characteristics of personal noise dosimeters which measure the percentage criterion sound exposure. The Standard makes provision for three exchange rates: 3 dB, 4 dB, and 5 dB per doubling of exposure time. The Standard provides tolerances for the entire instrument including frequency response, exponential averaging (employing SLOW and FAST), threshold, dynamic range, and other characteristics. It specifies that these tolerances be attained by the instrument in a random incidence sound field without the presence of a person wearing the instrument.*

ANSI S1.26-1995 (R2004), Method for the Calculation of Absorption of Sound by the Atmosphere

*Provides the means to calculate atmospheric absorption losses of sound from any source for a wide range of meteorological conditions. The atmosphere is assumed to be still, homogeneous moist air of normal composition. Non-homogeneous atmospheres may be divided into horizontal layers within which homogeneous conditions may be assumed. Attenuation coefficients for pure-tone sounds are calculated by over ranges of frequency, and the humidity, pressure, and temperature of the atmosphere. For sounds analyzed by fractional-octave-band filters alternative methods are provided.*

ANSI S1.4-1983 (R2006), Specification for Sound Level Meters

*This standard specifies minimum requirements for three basic types of sound level meters, types 0, 1, and 2, with performance requirements that become progressively less stringent, proceeding from type 0 to type 2. For each type, the standard requires three frequency weightings, A, B, and C; and two exponential-time-averaging characteristics, slow and fast.*

ANSI S1.40-2006, Specifications for Acoustical Calibrators

*The standard specifies performance requirements for the sound pressure level, frequency, and total distortion generated by a sound calibrator. It also provides requirements for the influence of environmental conditions, for electromagnetic compatibility, and for instrument marking and documentation. It gives details of the tests necessary to verify that a model of sound calibrator conforms to all the requirements, as well as details of the method for periodic testing of a sound calibrator.*

ANSI S1.42-2001 (R2006), Design Response of Weighting Networks for Acoustical Measurements

*This Standard provides the design criteria for both the frequency-domain response (amplitude and phase) and time-domain of the A- and C-weighting networks used in acoustically related measurements. The poles and zeros for each weighting network are given, along with equations for computing the amplitude and phase responses as functions of frequency and impulse and step responses as functions of time. Other known weighting networks that had been standardized, such as the B-, D- and E-weightings, or weightings that were published in the past, are listed in the Annexes for reference.*

ANSI S1.43-1997 (R2002), Specifications for Integrating-Averaging Sound Level Meters

*Describes instruments for the measurement of frequency-weighted and time-average sound pressure levels. Optionally, sound exposure levels may be measured. This Standard is consistent with the relevant requirements of ANSI S1.4-1983 (R 1997) American National Standard Specification for Sound Level Meters, but specifies additional characteristics that are necessary to measure the time-average sound pressure level of steady, intermittent, fluctuating, and impulsive sounds.*

ANSI S1.4a-1985 (R2006), Sound Level Meters, Specification for (Amendment to ANSI S1.4-1983)

*The intent of this amendment is: (a) to specify the electrical design goal for the relative response characteristics of the A-weighted frequency response up to 100kHz and (b) to specify type 0 and type 1 tolerance limits on relative electrical response for frequencies between 16kHz and 100 kHz.*

ANSI S1.6-1984 (R2006), Preferred Frequencies, Frequency Levels, and Band Numbers for Acoustical Measurements

*This standard defines the preferred frequencies, or nominal band-center frequencies to be used for acoustical measurements. Frequency levels or band numbers are associated with these sets of frequencies and the preferred frequencies are rounded values obtained from those for which the corresponding frequency levels ore band numbers are integers.*

ANSI S1.8-1989 (R2006), Reference Quantities for Acoustical Levels

*This standard includes reference quantities for commonly used levels in acoustics, electro acoustics, and mechanical vibration. Acoustical levels of various kinds are commonly used to describe acoustical measurements in gases, liquids, and solids. A reference quantity, preferably independent of the medium, is needed for each kind of level. The preferred unit for an a acoustical level is the decibel.*

ANSI S1.9-1996 (R2006), Instruments for the Measurement of Sound Intensity

*Specifies the requirements for instruments to measure sound intensity employing the two-microphone technique and methods for performance verification to meet the requirements. Its primary application is to instruments used for the determination of sound power of sources according to the requirements of ANSIS12.12-1992. The requirements and methods of performance verification are specified for the complete instrument system and separately for the probes and processors forming the complete system.*

ANSI S12.1-1983 (R2006), Guidelines for the Preparation of Standard Procedures to Determine the Noise Emission from Sources

*Standard contains guidelines for preparation of procedures (standards, test codes, recommended practices, etc.) for determination of noise emission from sources. Included are general questions that need to be considered during development of a measurement procedure. Guidelines on the following subjects are included: prefatory material, measurement conditions, measurement operations, data reduction, preparation of a test report, and guidelines for selection of a descriptor for noise emission.*

ANSI S12.10-2002/ISO 7779:1999 (incl AMD1), Acoustics - Measurement of Airborne Noise Emitted by Information Technology and Telecommunications Equipment

*This International Standard adoption ISO 7779:1999 specifies methods for the measurement of airborne noise emitted by information technology and telecommunications equipment. It is the basis for the declaration of the noise emission levels of information technology and telecommunications equipment.This Standard is the National Adoption of ISO 7779: 1999 and its amendment ISO 7779: 1999/DAM 1.*

ANSI S12.11/1 ISO 10302-1996 (MOD)-2003, Acoustics - Measurement of Noise and Vibration of Small Air-Moving Devices, Part 1: Airborne noise Emission

*This Nationally Adopted International Standard specifies in detail a laboratory method for determining and reporting the airborne noise emissions of small air-moving devices used primarily for cooling electronic equipment, such as computer and business equipment. To provide compatibility with measurements of noise emitted by such equipment, this Nationally Adopted International Standard used the noise emission descriptors and sound power measurement methods of ISO 7779.*

ANSI S12.11/2-2003, Acoustics - Measurement of noise and vibration of small air-moving devices - Part 2: Structure-borne vibration

*Contains the recommended methods for testing, determining, and reporting the vibration levels induced by small air moving devices (AMDs) that are found in cooling equipment used for information technology and telecommunications. The use of this Standard is encouraged to promote uniformity in the measurement and reporting of the vibration levels induced by AMDs for use in information technology and telecommunications equipment.*

ANSI S12.12-1992 (R2002), Engineering Method for the Determination of Sound Power Levels of Noise Sources Using Sound Intensity

*Describes a method for in situ determination of the sound power level of noise sources in indoor or outdoor environments using sound intensity measurements. The standard contains information on instrumentation, installation and operation of the source, procedures for the selection of a measurement surface, methods for the sampling of sound intensity on the measurement surface, procedures for the calculation of sound power level, and techniques that can be used to qualify the measurement environment.*

ANSI S12.14-1992 (R2002) , Field Measurement of the Sound Output of Audible Public Warning Devices Installed at Fixed Locations Outdoors, Methods for the

*This standard specifies methods for measuring and reporting the sound produced by sound-making devices installed at fixed locations outdoors for the purpose of warning people of emergencies. The sound-making devices to which this standard is applicable include mechanical, electronic, and mechanical/ electronic sirens that produces steady, tonal sounds with a nominal fundamental frequency in the range from 300 to 1000 Hz; when installed at a fixed location outdoors in accordance with the manufacturer's recommendations.*

ANSI S12.15-1992 (R2002), Acoustics – Portable Electric Power Tools, Stationary and Fixed Electric Power Tools, and Gardening Appliances – Measurement of Sound Emitted

*The purpose of this standard is to provide test procedures for the measurement of airborne sound from portable electric power tools, stationary and fixed electric power tools, and gardening appliances. This standard provides for the measurement of sound pressure levels and for the calculation of sound power levels.*

ANSI S12.16-1992 (R2002), Guidelines for the Specification of Noise of New Machinery

*This standard provides guidelines for obtaining sound level data from manufacturers of stationary equipment to allow the user to make appropriate decisions.*

ANSI S12.17-1996 (R2006), Impulse Sound Propagation for Environmental Noise Assessment

*Describes engineering methods to calculate propagation of high-energy impulsive sounds through the atmosphere for purposes of assessment of environmental noise. The methods yield estimates for the mean C-weighted sound exposure level of impulsive sound at distances between source and receiver ranging from 1 to 30 km. Equations to estimate standard deviation about the mean C-weighted sound exposure levels are provided. The methods apply for explosive masses between 50 g and 1000 kg.*

ANSI S12.18-1994 (R2004), Procedures for Outdoor Measurement of Sound Pressure Level

*Describes procedures for the measurement of sound pressure levels in the outdoor environment, considering the effects of the ground, of refraction due to wind and temperature gradients, and of turbulence. The measured sound pressure levels can be used to calculate sound pressure levels at other distances from the source or to extrapolate to other environmental conditions or to assess compliance with regulation. Describes two methods: 1: general method, outlines conditions for routine measurements; 2: precision method, describes strict conditions for more accurate measurements.*

ANSI S12.19-1996 (R2006), Measurement of Occupational Noise Exposure

*The standard presents methods that can be used to measure a person's noise exposure received in a work place. The methods have been developed to provide uniform procedures and repeatable results for the measurement of occupational noise exposure.*

ANSI S12.2-1995 (R1999), Criteria for Evaluating Room Noise

*Defines four sets of criteria for evaluating room noise: (1). Balanced noise-criterion (NCB) curves, (2). Room-criterion (RC) curves, (3). Criteria for acoustically-induced vibrations, and (4). One-third octave band hearing threshold curves. Guidance is given for determining whether a set of octave band sound pressure levels satisfies a specified NCB or RC curve. Guidance is given for using the NCB or RC curves to evaluate a set of octave band sound pressure levels as room noise. Guidance is given for using a set of octave band sound pressure levels to determine the likelihood of audible acoustically-induced vibrations. Guidance is given for using the one-third octave band hearing threshold curves to evaluate a low-noise situation.*

ANSI S12.23-1989 (R2006), Method for the Designation of Sound Power Emitted by Machinery and Equipment

*Standard describes a method for expressing the noise emission of machinery and equipment in a convenient manner. Standard applies to all machinery and equipment that is essentially stationary in nature and for which overall A-weighted sound power is a meaningful descriptor of noise emission. Standard is intended to facilitate preparation of equipment specifications, labels or other documentation that expresses in quantitative terms the noise emission of machinery or equipment.*

ANSI S12.3-1985 (R2006), Statistical Methods for Determining and Verifying Stated Noise Emission Values of Machinery and Equipment

*This standard defines the preferred methods for determining and verifying noise emission values for machinery and equipment which are stated in product literature or labeled by other means.*

ANSI S12.30-1990 (R2002), Sound Power Standards and the Preparation of Noise Test Codes, Guidelines for the Use of

*Introduces a series of six standards specifying various methods for determining the sound power levels of machines and equipment. When applying these six standards to sound measurements on specific machines, it is necessary to decide which one or more of these standards is most appropriate for the required precision for the particular class of machine or equipment and for the purpose of the test. It is also necessary to decide on specific details for mounting and operating the machine to be tested within the general principles stated in the standards. Guidelines for making these decisions are provided in this standard.*

ANSI S12.42-1995 (R2004), Microphone-In-Real-Ear and Acoustic Test Fixture Methods for the Measurement of Insertion Loss of Circumaural Hearing Protection Devices

*This standard describes the microphone-in-real-ear and the acoustic test fixture methods for the measurement of the insertion loss of circumaural earmuffs, helmets, and communications headsets. The standard contains information on instrumentation, calibration, and electroacoustic requirements, as well as procedures for determining sound pressure levels at he ear with and without the hearing protection devices in place and for calculating and reporting the insertion loss values.*

ANSI S12.43-1997 (R2002), Methods for Calculation of Sound Emitted by Machinery and Equipment at Workstations and Other Specified Positions

*This standard specifies three methods for measuring sound pressure levels from machinery and equipment, at a workstation and at other specified positions nearby.*

ANSI S12.44-1997 (R2002), Methods for Measurement Calculation of Sound Emitted by Machinery and Equipment at Work Stations and other Specified Positions from Sound Power Levels

*This standard specifies two methods for determining the emission sound pressure levels of machinery and equipment, at workstations and at other specified positions nearby, by calculation from the sound power level. The principal purpose of this determination to permit comparison of the performance of different units of a given family of machinery or equipment, under defined environmental conditions and standardized mounting and operating conditions.*

ANSI S12.5-2006/ ISO 6926:1999, Acoustics - Requirements for the Performance and Calibration of Reference Sound Sources Used for the Determination of Sound Power Levels

*Reference sound sources are used extensively in "comparison methods" for determining the noise emissions of physically stationary sound sources. A reference sound source, of known sound power output, is used to establish the numerical relationship between the sound power level of a source, in a given location in a given acoustical environment and the space- and time-averaged sound pressure level at a set of microphone positions. This is an identical national adoption of ISO 6926:1999.*

ANSI S12.50-2002/ISO 3704-2000, Acoustics - Determination of sound power levels of noise sources - Guidelines for the use of basic standards

*Gives guidance for the use of a series of nine International Standards describing various methods for determining the sound power levels from all types of machinery and equipment.*

ANSI S12.51-2002/Part 1/ISO 3741:1999, Acoustics - Determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms

*Specifies a direct method and a comparison method for determining the sound power level that would be produced by a source operating in an environment at standard meteorological conditions corresponding to a characteristic impedance of pc = 400 N s/m3 (where p is the density of air and c is the speed of sound). It specifies test room requirements, source location and general rules for operating conditions, instrumentation and techniques for obtaining an estimate of mean-square sound pressure levels from which the sound power levels of the source in octave or one-third-octave bands are calculated with a grade 1 accuracy.*

ANSI S12.53 /Part 2-1999/ISO 3743-2-1994 (R2004), Acoustics - Determination of Sound Power Levels of Noise Sources - Engineering Methods for Small, Movable Sources in Reverberant Fields - Part 2: Methods for Special Reverberation Test Rooms

*Specifies a relatively simple engineering method for determining the sound power levels of small, movable noise sources. The measurements are carried out when the source is installed in a specially designed room having a specified reverberation time over the frequency range of interest. The A-weighted sound power level of the source under test is determined from a single A-weighted sound pressure level measurement at each microphone position, rather than a summation of octave-band levels.*

ANSI S12.53/Part 1-1999 ISO 3743-1-1994 (R2004), Acoustics - Determination of Sound Power Levels of Noise Sources - Engineering Methods for Small, Movable Sources in Reverberant Fields - Part 1: Comparison Method for Hard-Walled Test Rooms

*Specifies an engineering method for determining the sound power levels of small, movable noise sources. The measurements are carried out when the source is installed in a hard-walled test room. A comparison method is used to determine the octave-band sound power levels of the source.*

ANSI S12.54-1999/ISO 3744-1994 (R2004), Acoustics - Determination of Sound Power Levels of Noise Sources using Sound Pressure - Engineering Method in an Essentially Free Field over a Reflecting Plane

*Specifies a method for measuring the sound pressure levels on a measurement surface enveloping a noise source, under essentially free-field conditions near one or more reflecting planes, in order to calculate the sound power level produced by the noise source. Gives requirements for the test environment and instrumentation, as well as techniques for obtaining the surface sound pressure level from which the sound power level of the source is calculated, leading to results which have a grade 2 accuracy.*

ANSI S12.55-2006/ISO 3745:2003, Acoustics - Determination of sound power levels of noise sources using sound pressure - Precision methods for anechoic and hemi-anechoic rooms

*Specifies methods for measuring the sound pressure levels on a measurement surface enveloping a noise source in anechoic and hemi-anechoic rooms, in order to determine the sound power level or sound energy level produced by the noise source. Gives requirements for the test environment and instrumentation, as well as techniques for obtaining the surface sound pressure level from which the sound power level or sound energy level is calculated, leading to results which have a grade 1 accuracy. The methods specified Are suitable for measurements of all types of noise.*

ANSI S12.56-1999/ISO 3746-1995 (R2004), Acoustics - Determination of Sound Power Levels of Noise Sources using Sound Pressure - Survey Method using an Enveloping Measurement Surface over a Reflecting Plane

*Specifies a method for measuring the sound pressure levels on a measurement surface enveloping the source in order to calculate the sound power level produced by the noise source. It gives requirements for the test environment and instrumentation as well as techniques for obtaining the surface sound pressure level from which the sound power level of the source is calculated, leading to results which have a grade 3 accuracy.*

ANSI S12.57-2002/ISO 3747-2000, Acoustics - Determination of sound power levels of noise sources using sound pressure - Comparison method in situ

*Specifies a method for determining the sound power levels of sound sources in situ,*

*especially if non-movable. A comparison method is used and all measurements are carried out in octave bands. The measurement uncertainty depends on the test environment. The measurement uncertainty is evaluated by comparing with an indicator describing the spatial sound distribution. The accuracy will either be that of an engineering method or a survey method.*

ANSI S12.6-1997 (R2002), Methods for Measuring the Real-Ear Attenuation of Hearing Protectors

*This standard specifies laboratory-based procedures for measuring, analyzing, and reporting the noise-reducing capabilities of hearing protection devices. The methods consist of psychophysical tests conducted on human subjects to determine real-ear attenuation at threshold.*

ANSI S12.60-2002, Acoustical Performance Criteria, Design Requirements and Guidelines for Schools

*Provides acoustical performance criteria, design requirements and design guidelines for new or renovated school classrooms and other learning spaces. These criteria, requirements, and guidelines are keyed to the acoustical qualities needed for speech communication in learning spaces with a high degree of intelligibility. Design guidelines in informative annexes are intended to aid in conforming to the performance and design requirements, but do not guarantee conformance. Test procedures are provided in an annex when conformance to this standard is to be verified.*

ANSI S12.65-2006, Rating Noise with Respect to Speech Interference

*This standard defines a simple numerical method for rating the expected speech-interfering aspects of noise using acoustical measurements of the noise.*

ANSI S12.7-1986 (R2006), Measurement of Impulse Noise

*Describes methods of measurement of impulse noise and presentation of data. Applies to all kinds of impulse noise, whether discrete event sources or multiple event sources but not to sounds from sources which have specific measurement standards based on the general methods for measurement of quasistady noise. Data which may be reported include characteristics of the time variation of the sound pressure, with or without specific frequency weighting, and sound exposure level.*

ANSI S12.8-1998 (R2003), Methods for Determination of Insertion Loss of Outdoor Noise Barriers

*This Standard adopts insertion loss - the difference between acoustical levels before and after a noise-barriter installatin - as the basis for evaluating the aocustical effectiveness of an outdoor nosie barrier. Mehtods are provided to determine the insertion loss of outdoor noise barriers at selected receiver locations and under condtions of interest.*

ANSI S12.9-Part 1-1988 (R2003), Quantities and Procedures for Description and Measurement of Environmental Sound, Part 1

*This standard defines the basic quantities that can be used separately or in combination for the description of community osund and describes basic procedures for measurement of the quentities. The scope of this standard encompasses all types of environmental sound, separately or in combination, that contribute to the total sound at a site.*

ANSI S12.9-Part 2-1992 (R2003), Quantities and Procedures for Description and Measurement of Environmental Sound – Part 2: Measurement of Long-Term, Wide-Area Sound

*This standard describes recommended procedures for measurement of long-term, time-avarage environmetal sound outdoors at one or more locations in a community for environmental assessment or planning for compatible land uses and for other purposes such as noise prediciton validation and regulation.*

ANSI S12.9-Part 3-1993 (R2003), Quantities and Procedures for Description and Measurement of Environmental Sound – Part 3: Short-Term Measurements with an Observer Present

*This standard is the third part of a series related to quantities and procedures for description and measurement of environmental sound. This present standard, Part 3, deals with basic measuremtns of sound with an observer present. Typically, the duration of these measruements ranges from several minutes to several hours.*

ANSI S12.9-Part 4-2005, Quantities and Procedures for Description and Measurement of Environmental Sound – Part 4: Noise Assessment and Prediction of Long-Term Community Response

*Specifies methods to assess environmental sounds and to predict the annoyance response of communities to long-term noise from any and all types of environmental sounds produced by one or more distinct or distributed sound sources. The sources may be separate or in various combinations. Application of the method is limited to areas where people reside and related long-term land uses.*

ANSI S12.9-Part 5-1998 (R2003), Quantities and Procedures for Description and Measurement of Environmental Sound - Part 5: Sound Level Descriptors for Determination of Compatible Land Use

*This Standard provides guidelines for assessing the compatibility of various human uses of land with the actual or projected outdoor noise environment at a site. The total noise environment if characterized by the yearly average total day-night adjusted or non-adjusted sound exposure or the yearly average adjusted or non-adjusted day-night average sound level. This standard is based on the long-term annoyance response of communities as measured by the percent of a community that is highly annoyed.*

ANSI S12.9-Part 6-2000 (R2005), Quantities and Procedures for Description and Measurement of Environmental Sound - Part 6: Methods for Measurement of Awakenings Associated with Noise Events Heard in Homes

*Provides a method to predict sleep disturbance in terms of percent awakenings associated with the noise level of events in terms of sound exposure level (SEL). The Standard was developed using field studies of behavioral awakening primarily in homes near areas of routine aircraft takeoff and landing operations. The database used in derivation of the dose-response relationship consists of more than 5,000 subject-nights of observations in a variety of communities in the United States.*

ANSI S2.1-2000, ANSI/ISO 2041-1990, Vibration and Shock - Vocabulary

*This standard provides definitions for a relatively comprehensive compilation of terms used in the fields related to the theory and practice of (mechanical) vibration and shock, including the transducers and other instrumentation used to sens, measure and record the parameters by means of which the dynamics of rigid and flexible bodies are characterized and the data-processing techniques and methods used to analyze the motions and stresses caused by vibration and shock. It is intended to complement ANSI S1.1-1994, Acoustical Terminology in which terms in acoustics are defined, including, at present, a selection of terms from the fields of mechanical vibration and shock given in this Standard. The principal terms and definitions used in the mathematical fields associated with the analysis of the motions and stresses caused by the application of vibratory and*

ANSI S2.16-1997 (R2006), Vibration Noise Measurements and Acceptance Requirements for Shipboard Equipment

*This standard contains guidelines for limiting the machinery and operating equipment vibration on board ships for the purposes of habitability and mechanical suitability. The mechanical guidelines result in a suitable environment for installed equipment and precludes many major vibration problems such as unbalance, misalignment, or other damage to the machinery and operating equipment.*

ANSI S2.17-1980 (R2004), Machinery Vibration Measurement

*The purpose of this standard is to identify procedures for the measurement of machinery vibration so that results will be comparable when machines of the same type, with similar mounting conditions, are measured by the same technique. The standard has direct applications to preventative maintenance programs, vibration diagnostics, and basic measurement.*

ANSI S2.19-1999 (R2004), Mechanical Vibration – Balance Quality Requirements of Rigid Rotors – Part 1, Determination of Permissible Residual Unbalance

*This part of S12.19 gives recommendations for determining unbalance and for specifying related quality requirements of rigid motors. It specifies (a) a representation of unbalance in one or two planes; (b) methods for determining permissible residual unbalance; (c) methods for allocating it to the correction planes; (d) methods for identifying the residual unbalance state of a rotor by measurement; (e) a summary of errors associated with the residual unbalance identification.*

ANSI S2.2-1959 (R2006), Methods for the Calibration of Shock and Vibration Pickups

*This standard is designed to acquaint the user with the general principles of calibration of shock and vibration pickups and to describe concisely several standard methods which have proven to give reliable and reproducible results. Further details concerning these methods are given in the Appendix. Also, other methods that have not as yet reached the stage of development of the standard methods are described briefly in the Appendix.*

ANSI S2.20-1983 (R2006), Air Blast Characteristics for Single Point Explosions in Air, with a Guide to Evaluation of Atmospheric Propagation and Effects

*Provides qualitative definitions of explosion characteristics for a single point explosion in air, along with methodologies for scaling these characteristics for a wide range of yield and ambient air conditions. Factors for use with common solid explosives are also included. Methods are provided for predictions of long range propagation under atmospheric refractive influences. Target damage estimation procedures are provided for use in explosion operation planning and evaluation.*

ANSI S2.21-1998 (R2002), Method for Preparation of a Standard Material for Dynamic Mechanical Measurements

*Applies to the preparation of a standard material for calibration of instruments for measuring the dynamic mechanical properties of viscoelastic materials.*

ANSI S2.22-1998 (R2002), Resonance Method for Measuring the Dynamic Mechanical Properties of Viscoelastic Materials

*Defines a procedure for measurement and analysis of the dynamic properties of viscoelastic materials using a resonance method. The Standard applies to materials used in sound and vibration damping systems operating at frequencies from a f*

ANSI S2.23-1998 (R2002), Single Cantilever Beam Method for Measuring the Dynamic Mechanical Properties of Viscoelastic Materials

*Defines a procedure for measurement and analysis of the dynamic properties of viscoelastic materials using the single cantilever beam method. The Standard applies to materials used in sound and vibration damping systems operating at frequ*

ANSI S2.24-2001 (R2006), Graphical Presentation of the Complex Modulus of Viscoelastic Materials

*This Standard specifies the procedure for generating a graphical presentation of the frequency and temperature dependence of the complex modulus of viscoelastic materials.*

ANSI S2.25-2004, Guide for the Measurement, Reporting, and Evaluation of Hull and Superstructure Vibrations in Ships

*Contains guidelines for limiting the hull and superstructure vibration of ships for the purposes of habitability and mechanical suitability. The mechanical suitability guidelines result in a suitable environment for installed equipment and preclude many major vibration problems, such as unbalance, misalignment, and other damage to the propulsion system. To obtain data to compare with the guidelines, this standard also specifies data acquisition and processing procedures*

ANSI S2.26-2001 (R2006), Vibration Testing Requirements and Acceptance Criteria for Shipboard Equipment

*This standard describes procedures for vibration testing of shipboard equipment, specifying amplitude, frequency, and endurance requirements.*

ANSI S2.27-2002, Mechanical Vibration - Guidelines for the Measurement and Evaluation of Ship Propulsion Machinery Vibration

*Contains guidelines for the measurement and evaluation of ship propulsion system vibration, including limits for acceptability. It is applicable to all ocean-going ships and inland vessels. Test conditions, instrumentation, data analysis and evaluation, and reporting requirements are described.*

ANSI S2.28-2003, Guide for the Measurement and Evaluation of Vibration of Shipboard Machinery

*Contains procedures for the measurement and evaluation of the mechanical vibration of non-reciprocating machines, as measured on non-rotating parts. It contains criteria for evaluating new machines and for vibration monitoring. This second public review relates to a proposed change in the last paragraph of Clause 3.1 which is shown below.*

ANSI S2.29-2003, Guide for the Measurement and Evaluation of Vibration of Machine Shafts on Shipboard Machinery

*This standard contains procedures for the measurement and evaluation of the mechanical vibration of non-reciprocating machines, as measured on non-rotating shafts. It contains criteria for evaluating new machines and for vibration monitoring. This American National Standard is related to the ISO 7919 series that provides guidelines for the evaluation of different types of machines. The type of machinery covered in this part is shipboard machinery. This is a new ANSI standard, and there is, at present, no International Standards Organization version of this standard.*

ANSI S2.31-1979 (R2004), Methods for the Experimental Determination of Mechanical Mobility, Part I: Basic Definitions and Transducers

*This document provides basic definitions with comments and identifies the calibration tests, environmental tests, and physical measurements necessary to determine the suitability of impedance heads, force transducers, and accelerometers fo use in measuring mechanical mobility.*

ANSI S2.32-1982 (R2004), Methods for the Experimental Determination of Mechanical Mobility, Part II: Measurements Using Single-Point Translation Excitation

*The scope of this standard includes measurement of mobility, accelerance, or dynamic compliance, either as a driving point measurement, or as a transfer measurement. It also applies to the determination of the arithmetic reciprocals of those ratios as free effective mass. Although excitation is applied at a single point, there is no limit on the number of points at which simultaneous measurements of the motion response may be made. Multiple response measurements are required, for example, for modal analyses.*

ANSI S2.34-1984 (R2005), Guide to the Experimental Determination of Rotational Mobility Properties and the Complete Mobility Matrix

*This guide delineates the methods and procedures which may be used to determine the structural mobility properties, translational and rotational, of a system of points on a structure. This guide is to be used for guidance only, since the state of the art is still in flux.*

ANSI S2.4-1976 (R2004), Method for Specifying the Characteristics of Auxiliary Analog Equipment for Shock and Vibration Measurements

*This standard applies to the auxiliary equipment used between a shock or vibration transducer and the final indicator, recorder, or signal processor. This document presents a standard format for indicating pertinent characteristics but does not in any respect become a standard on the performance of the equipment. Since this standard was prepared to cover a wide variety of equipment in considerable detail, not all items will be pertinent to a specific piece of equipment. Also, it is not the intent of this standard to establish an ironclad rule as to which of the characteristics should be included although in many cases important characteristics are emphasized.*

ANSI S2.42-1982 (R2004), Procedures for Balancing Flexible Rotors

*This American National Standard classifies rotors into groups in accordance with their balancing requirements, establishes methods of assessment of final unbalance, and gives initial guidance on the establishment of balance quality grades so that, ultimately, balance quality grades can be established for all types of rotors.*

ANSI S2.43-1984 (R2005), Criteria for Evaluating Flexible Rotor Balance

*Specifies two methods for evaluating the quality of balance of a flexible rotor in a balancing facility before machine assembly, with the aim that the rotor will run satisfactorily after machine assembly and installation on site. The criteria specified are those to be met when the rotor is tested in the balancing facility, but they are derived from those specified for the complete machine, when installed, or from values known to ensure satisfactory running of the rotor when it is installed.*

ANSI S2.46-1989 (R2005), Characteristics to be Specified for Seismic Transducers

*This standard specifies rules for the presentation of important characteristics for electro-mechanical shock and vibration transducers (seismic pick-ups), the electrical outputs of which are known functions of the uniaxial, multiaxial, or angular accelerations, velocities, or displacements of objects the motions of which are being measured.*

ANSI S2.48-1993 (R2006), Servo-Hydraulic Test Equipment for Generating Vibration – Methods of Describing Characteristics

*Provides method for specifying the characteristics of servo-hydraulic test equipment for generating vibration and serves as a guide to the selection of such equipment. It applies to servo-hydraulic vibration generators and power amplifiers, individually and in combination. Provides means to assist a prospective user to calculate and compare the performance of equipment provided by 2 or more manufacturers, even if the vibration generator and the power amplifier are from different manufacturers.*

ANSI S2.60-1987 (R2005), Balancing Machines – Enclosures and Other Safety Measures

*Specifies requirements for enclosures and other safety measures used to minimize hazards associated with the operation of balancing machines under a variety of rotor and balancing conditions. It defines different classes of protection that enclosures and other protective features have to provide, and describes the limits of applicability for each class of protection.*

ANSI S2.61-1989 (R2005), Guide to the Mechanical Mounting of Accelerometers

*Describes the mounting characteristics of accelerometers to be specified by the manufacturer and makes recommendations to the user for mounting accelerometers. The application of this standard is limited to the mounting of electromechanical transducers of the type that are attached on the surface of the structure in motion. It does not cover other types, such as relative motion pickups. This standard is in general accordance with ISO 5348-1987.*

ANSI S2.7-1982 (R2004), Balancing Terminology

*This Standard on terminology contains a collection of terms and definitions relating to balancing procedures and equipment. The terms are grouped into seven major categories covering the subjects of 1. Machines, 2. Rotors, 3. Unbalance, 4. Balancing, 5. Balancing Machines and Equipment, 6. Flexible Rotors, and 7. Rotating Rigid Free-Bodies (i.e., aerospace vehicles). An alphabetical index follows at the end.*

ANSI S2.70-2006, Human Exposure to Vibration Transmitted to the Hand, Guide for Measurement and Evaluation of

*Specifies recommended method for measurement, data analysis, vibration and health risk assessments, and reporting of human exposure to hand-transmitted vibration. Specifies format for measurement, data analysis, vibration and health risk assessments, and reporting of hand-transmitted vibration, periodic or random, in three orthogonal axes, in the frequency range from 5.6 Hz to 1,400 Hz. Three normative annexes address risk assessments, mitigation, training, and medical surveillance.*

ANSI S2.71-1983 (R2006), Guide to the Evaluation of Human Exposure to Vibration in Buildings

*Reactions of humans to vibrations of 1 to 80 Hz inside buildings are assessed in this Standard by use of degrees of perception and associated vibration levels and durations. Accelerations or velocities inside buildings may be measured to assess perceptibility and possible adverse reactions from those inside. A variety of building types and situations are covered by the use of multiplying factors applied to the basic curves. Responses are related to the event durations, frequencies of vibration, and body orientation with respect to the vibration.*

ANSI S2.8-1972 (R2006), Resilient Mountings, Guide for Describing the Characteristics of

*This standard sets forth suggestions as to subject matter and format for describing resilient mountings, so that there will be a clear understanding by both the user and the manufacturer. It is beyond the scope of this standard to present characteristics of resilient mountings.*

ANSI S2.9-1976 (R2006), Nomenclature for Specifying Damping Properties of Materials

*This standards presents the preferred nomenclature (parameters, symbols, and definitions) for specifying the damping properties of uniform materials and uniform specimens, where "uniform" implies homogeneity on a macroscopic scale. For reference purposes, certain non-standard damping parameters are discussed in Appendix A. Also included is a classification of damping test parameters (Appendix B.*

ANSI S3.1-1999 (R2003), Maximum Permissible Ambient Noise Levels for Audiometric Test Rooms

*Specifies maximum permissible ambient noise levels (MPANLs) allowed in an audiometric test room that produce negligible masking (<2 dB) of test signals presented at reference equivalent threshold levels specified in ANSI S3.6-1996. The MPANLs are specified from 125 to 8000 Hz in octave and one-third octave band intervals for two audiometric testing conditions (ears covered and ears not covered) and for three test frequency ranges (125 to 8000 Hz, 250 to 8000 Hz, and 500 to 8000 Hz).*

ANSI S3.13-1987 (R2002), Mechanical Coupler for Measurement of Bone Vibrators

*This Standard specifies requirements for mechanical couplers used for calibrating bone-conduction audiometers and making measurements on bone vibrators and bone-conduction hearing aids. Specific design features are given for the mechanical coupler when driven by a vibrator with a prescribed plane circular tip area and applied with a specific static force. An appendix provides an example of a specific construction of a mechanical coupler.*

ANSI S3.18-1979 (R1999), Whole-Body Vibration, Guide for the Evaluation of Human Exposure to

*Provides a guide for the evaluation of human exposure to whole body vibration.*

ANSI S3.18-2002, ISO 2631-1-1997, Mechanical vibration and shock - Evaluation of human exposure to whole body vibration - Part 1: General requirements

*This part of ISO 2631 defines methods for the measurement of periodic, random and transient whole-body vibration. It indicates the principal factors that combine to determine the degree to which a vibration exposure will be acceptable. Informative annexes indicate current opinion and provide guidance on the possible effects of vibration on health, comfort and perception and motion sickness. The frequency range considered is*
*- 0.5 Hz to 80 Hz for health, comfort and perception, and*
*- 0.1 Hz to 0.5 Hz for motion sickness.*
*Although the potential effects on human performance are not covered, most of the guidance on whole-body vibration measurement also applies to this area. This part of ISO 2631 also defines the principles of preferred methods of mounting transducers for determining human exposure. It does not*

ANSI S3.18-2003, Part 4 ISO 2631-4-2001, Mechanical vibration and shock -- Evaluation of human exposure to whole-body vibration -- Part 4: Guidelines for the evaluation of the effects of vibration and rotational motion on passenger and crew comfort in

*Provides guidance on the application of ANSI S3.18 ISO 2631 to evaluation of the effects of mechanical vibration on the comfort of passengers and crew in fixed-guideway systems. Establishes methods for the evaluation of relative comfort between systems, as opposed to absolute levels of comfort. This part of ANSI S3.18 is applicable to people in normal health exposed to rectilinear vibration along their x-, y- and z-axes, as well as rotational vibration about these (body-centered) axes. Provides guidance on the assessment of comfort as a function of motions along and about vehicle axes.*

ANSI S3.2-1989 (R1999), Method for Measuring the Intelligibility of Speech over Communications System

*Provides a guide for measuring the intelligiblity of speech over communications systems.*

ANSI S3.20-1995 (R2003), Bioacoustical Terminology

*Provides definitions for a wide variety of terms used in human bioacoustics, including hearing, speech, psychoacoustics, and physiological acoustics. It is intended to supplement ANSI S1.1-1994 American National Standard Acoustical Terminology in which more-generally-used terms in acoustics are defined, including a number of terms from physiological and psychological acoustics and music. Those terms from ANSI S1.1-1994 that are related to bioacoustics are included in this standard as annexes.*

ANSI S3.21-2004, Manual Pure-Tone Threshold Audiometry, Method for

*This Standard provides a procedure for pure-tone audiometry that will serve the needs of persons conducting threshold measurements in industry, schools, medical settings, and other areas where valid audiometric threshold measurements are needed.*

ANSI S3.22-2003, Specification of Hearing Aid Characteristics

*Air conduction hearing-aid measurement methods suitable for specification and tolerance purposes. Includes output sound pressure level (SPL) with a 90-dB input SPL, full-on gain, frequency response, harmonic distortion, equivalent input noise, current drain, induction-coil sensitivity, and static and dynamic characteristics of automatic gain control hearing aids. Configurations given for measuring the input SPL to a hearing aid. Allowable tolerances in relation to values specified by the manufacturer are given for certain parameters. Three appendices.*

ANSI S3.25-1989 (R2003), Ear Simulator, Occluded

*The physical configuration and acoustical performance of an occluded ear simulator are specified. This device is designed to simulate the acoustical behavior of that portion of the ear canal between the tip of an earmold and the eardrum, including the acoustic impedance at the eardrum of a median adult human ear over the frequency range from 100 Hz – 10 kHz. The occluded ear simulator is suitable especially for transducers that are sensitive to acoustic load. Specific physical realizations of the ear simulator are described.*

ANSI S3.35-2004, Methods of Measurement of Performance Characteristics of Hearing Aids Under Simulated In-Situ Working Conditions

*Describes techniques to measure hearing aids under simulated conditions of real ear use. For the purpose of these measurements, a suitable manikin and ear simulator are used to represent a typical hearing aid wearer. Acoustical requirements of the test space as well as how the manikin is positioned with respect to the sound source are given. Two methods are presented by which to control the level of the incident sound field at the location of the hearing aid on the manikin during the testing.*

ANSI S3.36-1985 (R2006), Specification for Manikin for Simulated in situ Airborne Acoustic Measurements

*This standard describes a manikin for airborne acoustic measurements. It comprises a head with external ears and ear canals, and a torso that simulates a median human adult. It is intended primarily as an instrument for measuring the acoustic gain of hearing aids under simulated in situ conditions. Both geometric and acoustical response descriptions are given.*

ANSI S3.37-1987 (R2002), Preferred Earhook Nozzle Thread for Postauricular Hearing Aids

*This Standard describes a preferred thread for earhook nozzles on postauricular hearing aids. The need for such a standard arises from the wide array of earhooks that hearing aid dispensers are required to keep in inventory to utilize different postauricular hearing aids from several manufacturers.*

ANSI S3.39-1987 (R2002), Specifications for Instruments to Measure Aural Acoustic Impedance and Admittance (Aural Acoustic Immittance)

*This Standard provides specifications for instruments designed to measure acoustic impedance, acoustic admittance, or both quantities, within the human external ear canal. Terms that apply to these instruments and to related measurements are defined. Four types of instruments are classified. Characteristics, specifications, and recommended calibration procedures then are provided. Material within this standard is intended both for users and for manufacturers of instruments that measure aural acoustic impedance and admittance.*

ANSI S3.4-2005, Procedure for the Computation of Loudness of Steady Sounds

*Specifies a procedure for calculating the loudness of steady sounds as perceived by a typical group of listeners with normal hearing, based on the spectra of the sounds. The possible sounds include simple and complex tones (both harmonic and inharmonic) and bands of noise. The spectra can be specified exactly, in terms of the frequencies and levels of individual spectral components, or approximately, in terms of the levels in 1/3 octave bands covering center frequencies from 50 to 16000 Hz. Sounds can be presented in free field with frontal incidence, in a diffuse field, or via headphones.*

ANSI S3.40-2002; ISO 10819:1996, Guide for the Measurement and Evaluation of Gloves which Are Used to Reduce Exposure to Vibration Transmitted to the Hand

*This European Standard specifies a method for the laboratory measurement, the data analysis and reporting of the Vibration transmissibility of gloves in terms of Vibration transmission from a handle to the palm of the hand in the frequency range from 31,5 Hz to 1250 Hz.*
*The Standard is intended to define a screening test for the Vibration transmission through gloves. It is recognized that many factors influence the transmission of Vibration through gloves.*
*Therefore the transmissibility value according to this Standard is not sufficient to assess the health risk due to Vibration. The transmissibility of Vibration is measured and reported for two input spectra, which are representative of the Vibration of some tools, and may be reported as a function of frequency.*

ANSI S3.41-1990 (R2001), Audible Emergency Evacuation Signal

*Conforms with the international standard. There has been growing interest in the development of an international audible signal which, when heard, would unequivocally mean "evacuate the building immediately." Consequently, an international standard, ISO-8201, entitled "Audible Emergency Evacuation Signal" was approved by ISO and published in December, 1987. In searching for an appropriate audible signal, it was considered that levels of background noise and frequency patterns are so variable, particularly in industry, that no signalling device would be able to "penetrate" all background noises and frequency patterns. For this reason it seemed prudent to select the kind of sound best able to "penetrate" audibly a particular background noise pattern in a given building and then to make that sound unique and understandable by imposing on it a standard recognizable*

ANSI S3.42-1992 (R2002), Testing Hearing Aids with a Broad-Band Noise Signal

*This Standard describes techniques for characterizing the steady-state performance of hearing aids with a broad-band noise signal. The need for such a standard arises from the importance of assessing the performance of hearing aids in environments more nearly representing their real-world use. The noise test signal specified herein has been employed by the National Bureau of Standards for over 20 years in testing hearing aids. Among the tests described are noise saturation sound pressure level, noise gain, frequency response, family of frequency response curves and output versus input characteristic. Additionally, the appendix recommends use of the coherence function to indicate the validity of frequency response measures and distinguishes between use of random and pseudo-random noise and asynchronous versus synchronous analysis.*

ANSI S3.44-1996 (R2006), Determination of Occupational Noise Exposure and Estimation of Noise-Induced Hearing Impairment

*This standard presents the statistical relationship between noise exposures and changes in hearing threshold levels for a noise exposed population, and can be applied to the calculation of the risk of incurring hearing handicap from sustained daily exposure to noise. Provides guidance to the measurement of noise exposure. Unlike its ISO counterpart, it allows assessment of noise exposure using a time/intensity trading relation other than a 3-decibel increase per halving of exposure time.*

ANSI S3.45-1999, Procedures for Testing Basic Vestibular Function

*Defines procedures for performing and reporting a battery of tests for the evaluation of human vestibular function. Six tests are specified. Stimuli are presented to evoke eye movement by a subject whose response is determined by measurement of electrical signals generated by the eye movements. The standard specifies test procedures, measurements, data analysis, and data reporting requirements. These tests, including the data analysis and reporting procedures, are called the Basic Vestibular Function Test Battery. Test interpretation is not a part of this standard. This is the second public review for this standard. It first appeared in the May 9, 1997 issue of Standards Action and is being resubmitted now due to substantive changes to the text.*

ANSI S3.46-1997 (R2002), Methods of Measurement of Real-Ear Performance Characteristics of Hearing Aids

*This Standard provides definitions for terms used in the measurement of real-ear performance characteristics of hearing aids, provides procedural and reporting guidelines and identifies essential characteristics to be reported by the manufacturer of equipment used for this purpose. Acceptable tolerances for the control and measurement of sound pressure levels are indicated. Where possible, sources of error have been identified and suggestions provided for their management.*

ANSI S3.5-1997 (R2002), Methods for the Calculation of the Articulation Index

*This Standard defines a method for computing a physical measure that is highly correlated with the intelligibility of speech as evaluated by speech perception tests given a group of talkers and listeners. This measure is called the Speech Intelligibility Index, or SII. The SII is calculated from acoustical measurements of speech and noise. This Standard is not a substitute for ANSI S3.2-1989 (R1999) American National Standard Method for Measuring the Intelligibility of Speech over Communication Systems.*

ANSI S3.6-2004, Specification for Audiometers

*The audiometers covered in this specification are devices designed for use in determining the hearing threshold level of an individual in comparison with a chosen standard reference threshold level. This standard provides specifications and tolerances for pure tone, speech, and masking signals and describes the minimum test capabilities of different types of audiometers.*

ANSI S3.7-1995 (R2003), Method for Coupler Calibration of Earphones

*The physical configuration and acoustical performance of couplers for calibration of supra-aural and insert earphones are specified. The standard which is a revision of S3.7-1973, describes a family of 6.0 cm3 and 2.0 cm3 couplers, and provides information on the methods for coupler calibration of the respective supra-aural and insert earphones.*

## ASABE (American Society of Agricultural and Biological

ANSI/ASABE S592-2007, Best Management Practices for Boom Spraying

*To enhance responsible stewardship of pest control products associated with the spray application process, with emphasis on equipment selection, setup, and use for efficient application with minimal off-target spray drift and to comply with the pest control product label. The Standard codifies basic BMPs for boom spraying in a step-by-step procedure for a wide audience ranging from those with little familiarity with sprayers to seasoned professionals and researchers.*

*Specific steps apply to many boom spray applications, and the concepts presented will apply to most boom spray applications. Scope inclusive of ground-operated horizontal boom sprayers.*

ANSI/ASABE S593-2006, Terminology and Definitions for Biomass Production, Harvesting and Collection, Storage, Processing, Conversion and Utilization

*The purpose of this Standard is to provide uniform terminology and definitions in the general area of biomass production and utilization. This includes all the terminologies that are used in biomass feedstock production, harvesting, collecting, handling, storage, processing and conversion, bioenergy, biofuels, biopower and bioproducts.*

ANSI/ASABE S596-2006, Recycling Plastic Containers from Pesticides and Pesticide-Related Products

*The purpose is to guide agricultural chemical manufacturers, distributors and applicators; plastic recyclers; and regulatory agencies in the effective handling, storage, disposal and recycling of non-refillable, high-density polyethylene (HDPE) containers for agricultural pesticides and surfactants while enhancing safety. Best management practices are provided that pertain to the “life” of the empty plastic container beginning with proper rinsing through inspection, collection, consolidation and storage to the end use or disposal of the plastic.*

ANSI/ASABE/ISO 14269-1-2006, Tractors and self-propelled machines for agriculture and forestry - Operator enclosure environment, Part 1: General and definitions

*This standard specifies test methods and criteria for the evaluation of the operator enclosure in agricultural and forestry tractors (Agricultural tractors used in forestry applications), and self propelled agricultural machines. This part of ISO 14269 gives terms and definitions used in other parts of ISO 14269.*

ANSI/ASABE/ISO 14269-2-2006, Tractors and self-propelled machines for agriculture and forestry - Operator enclosure environment, Part 2: Heating, ventilation and air-conditioning test method and performance

*Specifies a uniform test method for measuring the contribution to operator environmental temperature and humidity provided by an air-conditioning, heating & ventilation system operating in a specific ambient environment for tractors & self-propelled machines for agriculture & forestry. This method may not determine the complete climatic environment of the operator since this is also affected by heat load from sources other than those on the machine. It is recommended that part 3 of ISO 14269 be used in conjunction with this part to determine more accurately the complete heat loading on the operator enclosure.*

ANSI/ASABE/ISO 14269-3-2006, Tractors and self-propelled machines for agriculture and forestry - Operator enclosure environment, Part 3: Determination of effect of solar heating

*This standard specifies a test method for simulating solar heating in the laboratory and measuring the radiant heat energy from a natural or simulated source. This standard is applicable to tractors and self-propelled machines for agriculture and forestry when equipped with an operator enclosure.*

ANSI/ASABE/ISO 14269-4-2006, Tractors and self-propelled machines for agriculture and forestry - Operator enclosure environment, Part 4: Air filter element test method

*This standard specifies a uniform test method for determining performance levels of operator enclosure panel-type air filters. It is applicable to tractors and self-propelled machines for agriculture and forestry when equipped with an operator enclosure with a ventilation system.*

ANSI/ASABE/ISO 14269-5-2006, Tractors and self-propelled machines for agriculture and forestry - Operator enclosure environment, Part 5: Pressurization system test method

*This standard specifies a test procedure which will provide for uniform measurement of the pressurization inside an operator enclosure of tractors and self-propelled machines for agriculture and forestry when equipped with a ventilation system.*

ANSI/ASABE/ISO 3767-1-1998, Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays - Part 1: Common symbols

*Establishes common symbols for use on operator controls and other displays on tractors and machinery for agriculture and forestry as defined in ISO 3339-0 and ISO 5395. The symbols apply to controls and displays common to tractors and machinery for agriculture and forestry, and powered lawn and garden equipment, as well as to other types of self-propelled work machines designed to operate off public roads, such as earthmoving machines, powered industrial trucks and mobile cranes.*

ANSI/ASABE/ISO 3767-2-1991, W/Amd. 1-3-2006, Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays - Part 2: Symbols for agricultural tractors and machinery

*Establishes symbols for use on operator controls and other displays on tractors and machinery for agriculture as defined in ISO 3339-0. The symbols given in this part of ISO 3767-2 are for controls and displays specific to agricultural tractors and machinery such as combine harvesters, cotton pickers, balers and forage harvesters.*

ANSI/ASABE/ISO 5007-2003, Agricultural wheeled tractors - Operator's seat - Laboratory measurement of transmitted vibration

*Specifies a laboratory method for measuring and evaluating the effectiveness of the suspension of operator seats on agricultural wheeled tractors.*

ANSI/ASABE/ISO 5008-2002 W/Cor.1-2006, Agricultural wheeled tractors and field machinery - Measurement of whole-body vibration of the operator

*Specifies methods for measuring and reporting the whole body vibration to which the operator of an agricultural wheeled tractor or other field machine is exposed when operating on a standard test track.*

ANSI/ASAE D241.4-FEB93 (RAPR2003), Density, Specific Gravity, and Weight Moisture Relationships of Grain for Storage

*Provide recommendations for density, specific gravity and moisture for grain storage.*

ANSI/ASAE EP282.2-SEP93 (RFEB04), Design Values for Emergency Ventilation and Care of Livestock and Poultry

*Provides data and guidelines to assist designing emergency ventilation, feeding, watering, and lighting systems for livestock and poultry.*

ANSI/ASAE EP302.4-AUG93 (RAPR2003), Design and Construction of Surface Drainage Systems on Agricultural Lands in Humid Areas

*Engineering Practice is intended to improve the design, construction and maintenance of surface drainage systems which are adapted to modern farm mechanization.*

ANSI/ASAE EP364.3-2006, Installation and Maintenance of Farm Standby Electric Power

*Provide information to assist installers, maintenance personnel, operators and others in the proper installation, operation, and maintenance of farm standby electrical systems. This Engineering Practice covers both engine-driven and tractor-driven generators for farm standby electrical power service as defined in EGSA-101G, EGSA-101S, and EGSA-101P.*

ANSI/ASAE EP389.2-JAN94 (R2005), Auger Flighting Design Considerations

*This Engineering Practice is a guide for designing conveyor augers using steel helicoid flighting and for specifying helicoid flighting as generally used in agricultural equipment.*

ANSI/ASAE EP403.3-JUL99 (RFEB04), Design of Anaerobic Lagoons for Animal Waste Management

*Describes the minimum criteria for design and operation of anaerobic animal waste lagoons located in predominantly rural or agricultural areas.*

ANSI/ASAE EP406.4-2003, Heating, Ventilating, and Cooling Greenhouses

*This Engineering Practice presents design information for heating, ventilating and cooling greenhouses. Generally accepted methods of heating, ventilating and cooling are presented and the important design features of typical systems are indicated.*

ANSI/ASAE EP411.4-2002 (R2007), Guidelines for Measuring and Reporting Environmental Parameters for Plant Experiments in Growth Chambers

*The purpose of this Engineering Practice is to set forth guidelines for the measurement of environmental parameters that characterize the aerial and root environment in a plant growth chamber. It establishes criteria that will promote a common basis for environmental measurements for the research community and the commercial plant producer and promotes uniformity and accuracy in reporting data and results in the course of conducting plant experiments.*

ANSI/ASAE EP433-SEP91 (R2006), Loads Exerted by Free-Flowing Grain on Bins

*Presents methods of estimating the grain pressures within centrally loaded and unloaded bins used to store free- flowing, agricultural whole grain.*

ANSI/ASAE EP446.2-DEC95 (R2006), Loads Exerted by Irish Potatoes in Shallow Bulk Storage Structures

*Provides guidelines from which designers may calculate loads on vertical & inclined walls, partitions, bin fronts, ducts, & appurtenances that are to resist lateral pressure of potatoes stored in bulk. This practice is for bins that are wider than depth & not deeper than 5.5 m (18 ft); for bins in which length is greater than width; applies to maximum potato pressures measured in full-sized bins.*

ANSI/ASAE EP455-JUL91 (RAPR2003), Environmental Considerations in the Development of Mobile Agricultural Electrical/Electronic Components

*Provides an environmental guideline to aid in the design of electrical /electronic components used on mobile agricultural equipment .*

ANSI/ASAE EP484.2-AUG98 (RAPR2003), Diaphragm, Design of Metal-Clad Post-Frame Rectangular Buildings

*Engineering Practice is a consensus document for the analysis and design of metal-clad wood-frame buildings using roof and ceiling diaphragms, alone or in combination.*

ANSI/ASAE EP486.1-OCT00 (R2005), Shallow Post Foundation Design

*The purpose of this Engineering Practice is to present a design procedure for shallow post foundations that resist moments and lateral and vertical forces acting on them. The design procedure provides necessary definitions, material requirements, and design equations for post foundations. A commentary on the practice is also included.*

ANSI/ASAE EP545-FEB96 (R2005), Loads Exerted by Free-Flowing Grain on Shallow Storage Structures

*This Engineering Practice presents methods of estimating the grain pressures within shallow storage structures used to store free-flowing, agricultural whole grains.*

ANSI/ASAE EP559-FEB97 (RAPR2003), Design Requirements and Bending Properties for Mechanically Laminated Posts

*Engineering Practice is to establish guidelines for designing and calculating allowable bending properties of mechanically laminated columns.*

ANSI/ASAE S201.4-DEC82 (RAPR2003), Agricultural Tractors and Trailing-Type Agricultural Implements, Application of Hydraulic Remote Control Cylinders to

*Standard establishes common mounting and clearance dimensions for hydraulic remote control cylinders and trailing type agricultural implements .*

ANSI/ASAE S229.6-DEC82 (RAPR2003), Baling Wire for Automatic Balers

*Specification covers annealing baling wire for automatic balers.*

ANSI/ASAE S261.7-OCT96 (R2006), Design and Installation of Nonreinforced Concrete Irrigation Pipe Systems

*Guide to engineers in the design & installation of low or intermediate pressure nonreinforced concrete irrigation pipelines & for the preparation of detailed specifications for a particular installation. Restricted to pipelines with vents or stands open to the atmosphere or closed pipelines operating at less than 6 m (20 ft) of head. Systems designed and/or installed under this Standard shall utilize pipe conforming to one or more of the following types of nonreinforced concrete irrigation pipe: Pipelines with mortar joints; Pipelines with rubber gasket joints; Cast-in-place pipelines.*

ANSI/ASAE S276.6-JAN05, Slow-Moving Vehicle Identification Emblem

*This Standard establishes specifications that define a unique identification emblem to be used only for slow-moving vehicles when operated or traveling on highways. It establishes emblem dimensional specifications, performance requirements, related test procedures, and mounting requirements. The emblem shall be used only on slow-moving vehicles and does not replace warning devices such as tail lamps, reflectors, or flashing lights.*

ANSI/ASAE S277.2-1992 (R2003), Mounting Brackets and Socket for Warning Lamp and Slow-Moving Vehicle (SMV) Identification Emblem

*Standard defines mounting devices for use with warning lamps and SMV emblems.*

ANSI/ASAE S278.7-2003, Attachment of Implements to Agricultural Wheel Tractors Equipped with Quick-Attaching Coupler

*This Standard sets forth the requirements for the attachment of three-point hitch implements or equipment to the rear of agricultural wheel tractors equipped with quick-attaching couplers. It is intended to establish those dimensions which are necessary to assure adequate clearance between components and to assure proper functioning of the tractor-implement combination when the implement is attached to the tractor by means of quick-attaching coupler. Design of the latching mechanism and individual components of the coupler not restricted by this Standard are left to the discretion of the manufacturer.*

ANSI/ASAE S279.13-DEC05, Lighting and Marking of Agricultural Field Equipment on Highways

*This standard provides specifications for lighting and marking of agricultural equipment whenever such equipment is operating or is traveling on a highway.*

ANSI/ASAE S289.2-FEB98 (RFEB04), Concrete Slip-Form Canal Linings

*Provides standards and specifications for the installation of concrete slip-form canal linings in the interest of reducing costs and assuring quality control.*

ANSI/ASAE S296.5-2003, General Terminology for Traction of Agricultural Tractors, Self-Propelled Implements, and Traction and Transport Devices

*This terminology is to assist in the standardized reporting of information on traction and transport devices and vehicles. When it Is not possible for data to be reported using this terminology, it is recommended that new terms be clearly defined. Unless otherwise indicated, all definitions refer to individual traction or transport devices or vehicles operating on a horizontal surface.*

ANSI/ASAE S315.3-2002, Automatic Balers, Twine for

*Provides uniform sisal and polyolefin agricultural twine specifications which will insure satisfactory performance in a properly adjusted baler knotter and have adequate durability in normal storage and handling of the baled material. This standard covers twines manufactured for use in small square and large square automatic tie balers. The intention of this Standard is to allow freedom in the use of materials and manufacturing processes.*

ANSI/ASAE S318.16-2006, Safety for Agricultural Field Equipment

*This Standard is a guide to provide a reasonable degree of personal safety for operators and other persons during the normal operation and servicing of agricultural field equipment. This Standard does not apply to skid steer loaders, permanently installed grain dryers, and agricultural equipment covered by other safety standards, such as but not limited to permanently installed farmstead equipment, portable grain augers, and storage structures, except where specifically referenced by other standards.*

ANSI/ASAE S319.3 JUL97 (RAPR2003), Method of Determining and Expressing Fineness of Feed Materials by Sieving

*Determine fineness of feed ingredients where yields are spherical or cubical and define test procedure for the fineness of feed ingredients and method of expressing the particle size of the material.*

ANSI/ASAE S323.2-MAY89 (R2005), Definitions of Powered Lawn and Garden Equipment

*The purpose of this Standard is to classify and define various types of machines and terms so that these definitions may be used in future ASAE Standards and to aid in clear-cut communication.*

ANSI/ASAE S331.5-DEC82 (R2005) , Implement Power Take-Off Driveline Specifications

*The purpose of this Standard is to establish eight categories of universal joint drivelines with two subsets of connecting members each, one heavy duty, HD, and one regular duty, RD. The intended use of the drivelines is between tractor power take-off shafts and implement input shafts, or any universal joint application within the implement. The universal joint driveline from the tractor power take-off shaft to the implement shaft is considered a part of the implement. This Standard does not provide for dimensional interchangeability from one implement to another.*

ANSI/ASAE S338.5-2006, Field Equipment for Agriculture - Safety Chain for Towed Equipment

*This Standard covers the specifications for an auxiliary attaching system to retain a connection between towing and towed machines in the event of separation of the primary attaching system long enough to bring the machines to a stop. It should not be construed that this auxiliary system can ensure that control or connection will be maintained in the event of incidents such as loss of control, rollover, jackknife or collision.. This Standard applies to all combinations of agricultural towing and towed equipment when traveling on highways.*

ANSI/ASAE S343.3-1991(RFEB04), Terminology for Combines and Grain Harvesting

*Establishes terminology pertinent to grain combine design and performance. It is intended to improvcommunication among engineers and researchers and to provide a basis for comparative listing of machine specifications.*

ANSI/ASAE S351-DEC82 (R2007), Hand Signals for Use in Agriculture

*This Standard provides for hand signals to be used in agricultural operations especially when noise or distance precludes the use of normal voice communication. The purpose of the hand signals is to provide an easy means of communication, particularly in the interest of safety.*

ANSI/ASAE S354.5-2006, Safety for Farmstead Equipment

*Provides a reasonable degree of personal safety for operators and other persons during normal operation and servicing of farmstead equipment. It does not apply to agricultural field equipment nor to self-propelled mobile equipment such as motor vehicles, all terrain vehicles, skid-steer loaders, or farmstead equipment covered by other ASABE safety standards unless it is specifically referenced by these standards.*

ANSI/ASAE S362.2-APR88 (R2005), Wiring and Equipment for Electrically Driven or Controlled Irrigation Machines

*This Standard provides detailed information for the application of electrical apparatus to electrically driven or controlled irrigation machines. The purpose of this Standard is to improve the degree of personal safety in operation and application of products and materials under a reasonable range of conditions. This Standard covers all electrical equipment, apparatus, components, and wiring necessary for electrically driven or controlled irrigation machines, from the point of connection of electric power to the machine. Provisions of this Standard apply to electrical equipment for use on circuits operating at voltages between 30 and 600 V.*

ANSI/ASAE S366.2 JUN04/ISO 5675:1992, Agricultural tractors and machinery - General purpose quick-action hydraulic couplers

*Specifies the essential interface dimensions and the operating requirements for hydraulic couplers employed to transmit hydraulic power from agricultural tractors to agricultural machinery and is identical to the ISO standard scope except for the inclusion of: 1.The 15 degree angle to accommodate dust protection; 2. Detailed location for the couplings on the tractor; 3. All of the coupler performance specifications.*

ANSI/ASAE S370.4-AUG01 (R2006), 2000-RPM Power Take-Off for Lawn and Garden Ride-On Tractors

*This Standard establishes the specifications that are essential in order that a 2000-rpm power take-off driven machine may be operated with any make of lawn and garden ride-on tractor equipped with an equivalent size 2000-rpm power take-off drive. This Standard does not in itself insure adequate telescoping of the power line or safety shielding.*

ANSI/ASAE S375.2 JUL97 (RFEB04), Capacity Ratings and Unloading Dimensions for Cotton Harvester Baskets

*Provides a uniform method of expressing the following information relative to cotton strippers and cotton pickers: Capacity of basket, Unloading height of basket, Lip height of raised basket, Unloading angle of basket, Maximum basket height, Working height, Transport height.*

ANSI/ASAE S376.2-JAN98 (RFEB04), Design, Installation, and Performance of Underground Thermoplastic Irrigation Pipelines

*Applies to underground, thermoplastic pipelines used in the conveyance of irrigation water to the point of distribution and may or may not apply to potable water systems.*

ANSI/ASAE S377-APR90 (R2005), Application of Remote Linear Control Devices to Lawn and Garden Ride-on Tractor Attachments and Implements

*The purpose of this Standard is to establish common mounting and clearance dimensions for remote linear control devices as applied to lawn and garden ride-on tractor attachments and implements with such other specifications as are necessary to accomplish permitting the use of any make or model of attachment or implement adapted for control by a remote linear control device and to facilitate changing the remote linear control device from one attachment or implement to another.*

ANSI/ASAE S385.5-APR93 (RAPR2003), Combine Harvester Tire Loading and Inflation Pressures

*Establishes loading and inflation pressures for agricultural type tires when used on self-propelled, hillside, and pull-type combine harvesters.*

ANSI/ASAE S390.4-2004, Definitions and Classifications of Agricultural - Field Equipment

*The purpose of this Standard is to provide classifications and definitions of agricultural field equipment designed primarily for use in agricultural operations for the production of food and fiber. This Standard is intended to establish uniformity in terms used for agricultural field equipment in standards, technical papers, specifications and in general usage.*

ANSI/ASAE S392.2-2005, Cotton Module Builder and Transporter Standard

*The purpose of this Standard is to provide uniform equipment size guidelines for manufacturers that produce cotton module builders and transporters. Standardization will allow harvesting equipment, module builders, transporters, and module covers from various manufacturers to be used compatibly throughout the cotton industry and so avoid problems caused by incompatible equipment dimensions. This Standard also promotes consideration of safety in equipment operation and transport, and in the transporting of seed cotton modules on highways.*

ANSI/ASAE S395-SEP91 (R2007), Safety for Self-Propelled, Hose-Drag Agricultural Irrigation Systems

*This Standard is intended to improve the degree of personal safety for operators and others during the normal application, operation and service of self-propelled, hose-drag agricultural irrigation systems.*

ANSI/ASAE S396.2-JAN91(RFEB04), Combine Capacity and Performance Test Procedure

*Provides the basic requirements for uniform procedures for measuring and reporting combine capacity. Because crop conditions are variable and uncontrollable, the procedure provides only for the comparative testing of one combine, or one combine configuration, relative to another, in a particular crop condition. This Standard is also provides the basic requirements for evaluating the uniformity of material spread from harvest residue spreading or chopping device(s).*

ANSI/ASAE S397.2-FEB93 (RAPR2003), Electrical Service and Equipment for Irrigation

*Provide a common document for those involved in electrical irrigation systems; such as electricians, power suppliers, well drillers, irrigation dealers and manufacturers, extension specialists and irrigators.*

ANSI/ASAE S401.2-AUG93 (RAPR2003), Guidelines for Use of Thermal Insulation in Agricultural Buildings

*Establishes guidelines for evaluating and specifying the type, amount, and manner of installation of thermal insulation in agricultural buildings, including consideration of burning characteristics, insulation values, and proper installation and protection of insulating materials.*

ANSI/ASAE S422-MAR95 (R2005), Mapping Symbols and Nomenclature for Erosion and Sediment Control Plans for Land Distributing Activities

*The purpose of this Standard is to establish a list of standard mapping symbols for use in erosion and sediment control plan development. This Standard facilitates the use and review of such plans by contractors and other professionals. This Standard will not restrict creation of additional symbols as required for practices not included here. This Standard does not imply that these practices are suitable for erosion or sediment control in any or all applications. The symbols are intended only to facilitate communications.*

ANSI/ASAE S423-FEB93 (R2007), Thermal Performance Testing of Solar Ambient Air Heaters

*The purpose of this Standard is to provide a method for testing the thermal efficiency of solar air heaters which are used exclusively for heating ambient air. The test data should provide a basis for computing economic value and for comparing efficiency of collectors of different design and/or construction.*

ANSI/ASAE S424.1-SEP92 (R2007), Method of Determing and Expressing Particle Size of Chopped Forage Materials by Screening

*The purpose of this Standard is to define a test procedure to determine the particle size distribution of chopped forage materials and to define a method of expressing the particle length of the material. The determined particle size distribution can be used to evaluate forage harvesting machine and handling equipment variables and to define forage physical length in animal feeding trials.*

ANSI/ASAE S430.1-FEB96 (RAPR2003), Agricultural Equipment Tire Loading and Inflation Pressures

*Establishes loadings and inflation pressures for agricultural type tires used in agricultural equipment service.*

ANSI/ASAE S436.1-OCT97 (R2007), Test Procedure for Determining the Uniformity of Water Distribution of Center Pivot, Corner Pivot, and Moving Lateral Irrigation Machines Equipped with Spray or Sprinkler Nozzles

*The purpose of this Standard is to define a method for characterizing the uniformity of water distribution of sprinkler packages installed on center pivots and lateral move irrigation machines. This test produces data to be used in computing the coefficient of uniformity, which can assist in system design and/or selection, and can be used to quantify certain aspects of system performance in the field. The coefficient of uniformity is only one factor in evaluating total system performance.*

ANSI/ASAE S448.1-JUL01 (R2006), Thin-Layer Drying of Agricultural Crops

*Provide a unified procedure for determining and presenting the drying characteristics of grains and crops. The drying data determined and presented according to this Standard can be used in characterizing the drying rate of a product, product drying computer simulation, performance testing of drying equipment, and product quality evaluations. This Standard applies specifically to grains and crops that are dried by forced air convection in a thin layer.*

ANSI/ASAE S459-FEB93 (R2007), Shear and Three-Point Bending Test of Animal Bones

*This Standard is designed for use in determining the mechanical properties of animal bones such as the ultimate shear strength, ultimate bending strength, apparent modulus of elasticity, and fracture energy.*

ANSI/ASAE S472-MAR 88 (R2007), Terminology for Forage Harvesters and Forage Harvesting

*The purpose of this Standard is to establish terminology and specifications pertinent to forage harvester design and performance. It is intended to improve communication among engineers and researchers and to provide a basis for comparative listing of machine specifications.*

ANSI/ASAE S478-MAR96 (R2005), Roll-over Protective Structures (ROPS) for Compact Utility Tractors

*The purpose of this Standard is to establish the test and performance requirements of a roll-over protective structure, ROPS, designed for compact utility tractors to minimize the frequency and severity of crushing injury to the operator resulting from accidental tractor upset. It applies to compact utility tractors and doesn't preclude the use of extendable or foldable ROPS as long as these ROPS meet the performance requirements of this Standard. Selfpropelled implements are excluded. This Standard does not apply to tractors with mass greater than 1800 kg. This Standard does not apply to tractors generally designed for mowing lawns and gardening work.*

ANSI/ASAE S483.1-NOV05, Rotary Mower Blade Ductility Test

*The purpose of this standard is to identify production blade lots from which samples are subjected to destructive testing.*

ANSI/ASAE S493.1-2003, Guarding for Agricultural Equipment

*This Standard provides guarding guidelines to minimize the potential for personal injury from hazards associated with agricultural equipment. This Standard applies to agricultural equipment as identified in ASAE Standard S390, Classifications and Definitions of Agricultural Equipment.*

ANSI/ASAE S502-1992 (R2007), Adjusting Forage Harvester Test Data for Varying Crop Moisture

*Pprovides empirical equations to adjust forage harvester feed rates and specific energy measurements to a common crop moisture level of 65% wet basis. The crop moisture compensation equations in this Engineering Practice significantly decrease data scatter as a function of moisture content when compared to data scatter on a wet or dry mass basis.*

ANSI/ASAE S515-JAN94 (RAPR2003), Pallet Load Transfer System for Vegetable Harvesters, Shuttle Vehicles and Road Trucks

*Standard is to ensure compatibility between all vehicles used in palletized load transfer systems for vegetables. Applies to vegetable harvesters, field shuttle vehicles, trailers, over-the-road trucks, and yard facilities*

ANSI/ASAE S522.1-JAN05 (ISO 5674-2004), Tractors and machinery for agricultural and forestry - Guards for power take-off (PTO) drive shafts - Strength and wear tests and acceptance criteria

*0.2 This standard specifies laboratory tests for determining the strength and wear resistance of guards for power take-off (PTO) drive-shafts on tractors and machinery used in agriculture and forestry, and their acceptance criteria. It is intended to be used in combination with ISO 5673. It is applicable to the testing of PTO drive-shaft guards and their restraining means. It is not applicable to the testing of guards designed and constructed to be used as steps.*

ANSI/ASAE S525-1.2-2003, Agricultural Cabs – Environmental Air Quality – Definitions, Test Methods, and Safety Practices

*This Standard provides a quantitative method of establishing an engineering control including definitions, performance criteria, and test procedures for cabs (enclosures) used on agricultural tractors and self-propelled machines. This standard should only be used as part of a managed program of occupational health and safety as defined by applicable regulations when the machines operate in an environment where agricultural pesticides are present.*

ANSI/ASAE S525.2-MAY98 (R2003), Agricultural Cabs - Environmental Air Quality - Part 2: Pesticide Vapor Filters - Test Procedure and Performance Criteria

*Provides procedure for testing and demonstratingcapacity and efficiency of gas and vapor air purifying devices under laboratory conditions. May yield an estimation of the service life under field conditions.*

ANSI/ASAE S539-OCT95 (RAPR2003), Media Filters for Irrigation – Testing and Performance Reporting

*Defines collection of irrigation media filter testdata. Provide procedures to classify and characterize media filter test data from manufacturers and independent testing laboratories.*

ANSI/ASAE S547-DEC 2002, Tip-Over Protective Structure (TOPS) for Front Wheel Drive Turf and Landscape Equipment

*Establishes test procedures and performance requirements of a tip-over protective structure.*

ANSI/ASAE S553-MAR01, Collapsible Emitting Hose (Drip Tape) - Specifications and Performance Testing

*Specifies testing methods, performance requirements, and data to be supplied by the manufacturer for collapsible emitting hose products.*

ANSI/ASAE S574-AUG00 (R2005), Instructional Seat for Agricultural Tractors

*The purpose of this Standard is to provide the minimum design and performance requirements for an instructional seat and restraint designed for limited use by a trainer or trainee inside an enclosed cab on self-propelled agricultural equipment. The instructional seat is not intended or designed for use by children. Information and training should emphasize proper use, and discourage use by those for whom the instructional seat is not intended.*

ANSI/ASAE S584.1-2006, Agricultural Equipment Speed Identification Symbol (SIS)

*This standard is primarily directed to identifying agricultural equipment (implements of husbandry) that have been designed in their original equipment configuration for specified ground speeds greater than 40 km/h (25 mile/h) but under 65 km/h (40 mile/h). It applies to self propelled, semi-integral and towed equipment moving on public roads. The Speed Identification Symbol (SIS) identifies the maximum equipment ground speed based on the ground speed design capability of the specified piece of equipment.*

ANSI/ASAE/ISO 5687-2004, Equipment for harvesting - Combine harvesters - determination and designation of grain tank capacity and unloading device performance

*This International Standard specifies a method for determining and designating the capacity and unloading rate of combine harvester grain tanks and unloading systems. Replaces ANSI/ASAE S312.2-APR93 (RJUNE00)*

ANSI/ASAE/ISO 9190-2002, Lawn And Garden Ride-On (Riding) Tractors - Drawbar

*Specifies dimensions and location requirements for drawbars on lawn and garden ride-on (riding) tractors.*

ANSI/ASAE/ISO 9191-2002, Lawn And Garden Ride-On (Riding) Tractors - Three-Point Hitch

*Specifies requirements for the connection of implements or attachments to the rear of lawn and garden ride-on (riding) tractors by means of a three-point free link hitch in association with a power lift.*

ANSI/ASAE/ISO 9192-2002, Lawn And Garden Ride-On Tractors - One-point Tubular Sleeve Hitch

*Specifies requirements for the connection of implements or attachments to the rear of lawn and garden ride-on (riding) tractors by means of a one-point (single pin connection) hitch in association with a manual or power lift system.*

## ASB (American Society of Baking)

ANSI ASB Z50.1-2006, Bakery Equipment – Safety Requirements

*Changes are not significant in nature and include changing ASB office address and adding references to Z50.2-2003 and robotics standard.*

ANSI/BISSC Z50.2-2003, Bakery Equipment - Sanitation Standard

*The standard will serve as a guide to the design and construction of bakery machinery and equipment which can be readily maintained in a clean and sanitary condition. It is based on the BISSC Sanitation Standards*

## ASC (Accredited Standards Committee X9, Incorporated)

ANSI X9.100-10-2006, Paper Specifications for MICR Documents

*This standard establishes paper specifications for the MICR documents that are used in the US Payments System. While checks and deposit tickets are the primary documents considered in these specifications, users of MICR/OCR E-13B font readers will be well served by applying these specifications to internal documents, when intended for use in reader/sorters.*

ANSI X9.100-111-2004, Specifications for Check Endorsements Including Legibility

*This standard provides for the legibility and uniformity of the endorsement process. It specifies the parameters for the design elements on the back of the check and the placement and data content of endorsements. This standard includes an informative annex that provides a method for measuring the legibility of endorsements with the use of a legibility gauge. This standard is not intended to modify existing MICR standards for checks.*

ANSI X9.100-120-2004, Specifications for Bank Deposit Tickets

*Specifies certain deposit ticket parameters to provide for the processing of personal size and business size deposit tickets through conventional bank deposit and imaging processes. While this standard does not establish a specific design, orientation and layout for bank deposit tickets, it does provide specifications for a range within which key design elements shall be placed. Other bank specific information is excluded from this specification.*

^NSI X9.100-130-2006, Universal Interbank Batch/Bundle Tickets

*This standard specifies the required elements of the Universal Interbank Batch/Bundle Ticket. It is expected that bankers refer to this standard when designing this form. This standard is sufficiently flexible to meet differing document and institution needs without unnecessary constraints.*

ANSI X9.100-140-2004, Specifications for an Image Replacement Document (IRD)

*This standard establishes the construction, layout, data elements, data content and printing specifications for Image Replacement Documents (IRD). An IRD is a substitute image copy of a check or a replacement for a previous IRD that includes a machine readable MICR line. An IRD that may under certain legal arrangements be the practical and legal equivalent of the original paper check or a previous IRD. An IRD conforming to these specifications may be used as a Substitute Check in conformance with the Check Clearing for the 21st Century Act. This standard does not address operational, implementation or settlement issues.*

ANSI X9.100-151-1998 (R2004), Check Strip Extension

*This standard covers the design and the functional characteristics of the strip extension ("strip") as affixed to a check. These strips provide a new MICR clear band area used to modify or correct the MICR line of items for forward collection, returns, rejects, or other banking interchange systems.*

ANSI X9.100-160 Part 1-2004, Placement and Location of Magnetic Ink Printing (MICR) - Part 1

*Part 1 of this standard covers only design considerations that apply to placement and location of magnetic ink printing on checks, drafts, and other documents intended for automated processing among depository institutions. Other types of documents such as internal control forms are not covered. A complete understanding of MICR printing requires reference to other standards and technical guidelines listed in Clause 2.*

ANSI X9.100-160 Part 2-2004, Placement and Location of Magnetic Ink Printing (MICR) - Part 2: EPC Field Use

*Part 2 of this standard establishes external processing code (EPC) assignments and management, and specifies the MICR characters approved for use in the U.S. Payments System.*

ANSI X9.100-161-2004, Creating MICR Document Specification Forms

*This standard specifies the contents for MICR Document Specification Forms. It may be used to create specifications for the design and manufacture of checks and deposit tickets, as well as other financial institution MICR documents. The standard is suffic*

ANSI X9.100-170-2004, Fraud Deterrent Icon Standard

*This standard establishes the design and usage requirements of the padlock icon for visually communicating the presence of security features on a check. The standard specifies characteristics of security features that meet the requirements for use of the padlock icon.*

ANSI X9.100-180 Part 1-2006, Specifications for Electronic Exchange of Check and Image Data

*This standard, including the normative annexes, establishes the file sequences, record types and field formats to be used for the electronic exchange of check MICR line data, associated check processing data, check images and optional user information in the form of cash letters. This standard does not address operational, implementation or settlement issues. These issues may include, but are not limited to, a choice of: data and image compression, encryption, and transmission specifications and data representation. The informative annexes attached to this standard provide useful information for implementing the standard.*

ANSI X9.100-20 Parts 1, 2 & 3-2006, Print and Test Specifications for Magnetic Ink Printing (MICR) Part 1: Print Specifications, Part 2: Conformance Testing, Part 3: Secondary Reference Documents

*Part 1 of this standard specifies the shape, dimensions, magnetic signal level, and tolerances for the E-13B characters which include ten numerals and four special symbols printed in magnetic ink and used for the purpose of character recognition. It describes the various known types of printing defects and other printing considerations, together with the tolerances permitted. Part 2 provides informative conformance testing requirements for the Part 1 specifications. Part 3 specifies the requirements for secondary reference documents and the test equipment for calibrating and maintaining their signal level.*

ANSI X9.100-40-1, X9.100-40-2-2006, Specifications for Check Image Tests Part 1: Definition of Elements and Structures, Part 2: Application and Registration Procedures

*Part 1 of ANS X9.100-40 defines the elements and structures for standard check image tests used by the financial industry to assess specific attributes of check images. The specification establishes a framework for defining check image tests, conveying the results from executing a check image test, and conveying any parameters used in executing check image tests. Part 2 of ANS X9.100-40 describes the application and registration procedures used to register check image tests that conform to this ANS X9.100-40 Part 1 standard*

ANSI X9.101/ISO 6166-2003, Securities and related financial instruments – International securities identification numbering systems (ISIN)

*Provides a uniform structure for international securities identification numbers (ISINs). It is intended for use in any application in the trading and administration of securities and other financial instruments.*

ANSI X9.103-2004, Motor Vehicle Retail Sales and Lease: Electronic Contracting

*The scope of this standard begins at the time of signing the Contract, inclusive of signature capture, and includes the creation, storage and assignment of Electronic Chattel Paper where the assignment will involve establishing control of the Electronic Chattel Paper.*

ANSI X9.104, Part 1-2004, Financial Transaction Card Originated Messages - Card acceptor to acquiring host messages Part 1: Message, data elements and code values

*Part 1 of X9.104 defines a common interface for the exchange of information between point of sale systems or terminal devices located in a retail establishment and the acquiring host transaction processing system(s). This part of X9.104 is applicable to all aspects of payment processing required by these retail facilities, including the reporting of specific products that are part of a purchase.*

ANSI X9.104 Part 2-2004, Financial transaction card originated messages - Card acceptor to acquiring host messages Part 2: Convenience store and petroleum marketing industry

*This part of X9.104 provides example of messages used in the convenience store and petroleum marketing industry based on the message formats defined in X9.104 part 1. This part of X9.104 also defines data elements and code values for use in this environment.*

ANSI X9.105 Part 3-2003, Financial transaction card originated messages - Interchange messages specifications - Part 3: Maintenance procedures for messages, data elements and code values

*This part of ISO 8583 establishes the role of the maintenance agency (MA) and specifies the procedures for adding messages and data elements to ISO 8583-1 and to codes listed in Annex A of ISO 8583-1. The responsibilities of the MA relate to all message type identifiers and classes, data elements and subelements, dataset identifiers and codes within ISO 8583-1, with the exception of Institution Identification Codes.*

ANSI X9.105-1/ ISO 8583-1-2003, Financial transaction card originated messages - Interchange message specifications - Part 1: Messages, data elements and code values

*It specifies a common interface by which financial transaction card-originated messages can be interchanged between acquirers and card issuers. It specifies message structure, format and content, data elements and values for data elements. The method by which settlement takes place is not within the scope of this part.*

ANSI X9.106-2003/ISO 18245, Retail Financial Services - Merchant Category Codes

*This Standard defines code values used to enable the classification of merchants into specific categories based on the type of business, trade or services supplied. Values are specified only for those merchant categories that are generally expected to originate retail financial transactions. It also establishes the procedures for a Registration and Maintenance Management Group (RMMG), which considers requests for new code values, and a Maintenance Agency (MA), which provides the administrative procedures required to maintain an up-to-date list of codes.*

ANSI X9.107-2003/ISO 4909, Bank cards-Magnetic stripe data content for track 3

*Establishes specifications for cards issued by or acceptable to the banking industry and is intended to permit interchange based on the use of magnetic stripe encoded information. It specifies the data content and physical location of read/write information on track 3. This replaces ANSI X9.1-1996.*

ANSI X9.12-1991 (R1998), Municipal Securities, Specifications for Fully Registered

*Defines the physical characteristics and format of a municipal security including certificate size, content, and layout. The specific language regarding provisions of the instrument is defined by the issuing authority and is not prescribed in the body of this standard. At a minimum, this standard is intended for use in the issuance of all fully registered municipal securities.*

ANSI X9.14-1983 (R2001), Securities Transaction Interchange Forms, Specifications for

*Establishes uniform formats for frequently used paper forms to convey information by the securities industry. The objective of this standard is to maintain efficiency where paper forms are still used.*

ANSI X9.20-1998, Securities – Institutional Delivery System

*Describes the formats to be used by all institutions professionally engaged in the securities business, in particular banks, brokers, investment managers, and money managers for purposes of processing security transactions through the National Institutional Delivery system operated by a Clearing Corporation or Depository. The standardized input format will provide for a more efficient computer processing for all parties involved in a securities transaction.*

ANSI X9.24 Part 1-2004, Retail Financial Services - Symmetric Key Management - Part 1: Using Symmetric Techniques

*This part of ANS X9.24-2003 covers both the manual and automated management of keying material used for financial services such as point-of-sale (POS) transactions (debit and credit), automated teller machine (ATM) transactions, messages among terminals and financial institutions, and interchange messages among acquirers, switches and card issuers. This part of ANS X9.24-2003 deals exclusively with management of symmetric keys using symmetric techniques. Additional parts may be created in the future to address other methods of key management.*

ANSI X9.24 Part 2-2006, Retail Financial Services Symmetric Key Management Part 2: Using Asymmetric Techniques for the Distribution of Symmetric Keys

*This part of ANS X9.24 covers the management of keying material used for financial services such as point of sale (POS) transactions, automatic teller machine (ATM) transactions, messages among terminals and financial institutions, and interchange messages among acquirers, switches and card issuers.*

ANSI X9.30.1-1997, Public Key Cryptography for the Financial Services Industry - Part 1: The Digital Signature Algorithm (DSA)

*Defines a method for digital signature generation and verification for the protection of messages and data using the Digital Signature Algorithm (DSA). This standard is used in conjunction with the hash function, as defined in American National Standard for Public Key Cryptography – Part 2: The Secure Hash Algorithm (SHA-1), BSR X9.30.2. In addition, this standard provides the criteria for the generation of public and private keys that are required by the algorithm and the procedural controls required for the secure use of the algorithm. Specific sections include definitions and common abbreviations, application, the DSA, Generation of Primes for the DSA, Random Number Generation for the DSA.*

ANSI X9.30.2-1997, Public Key Cryptography for the Financial Services Industry - Part 2: The Secure Hash Algorithm (SHA-1)

*Produces a 160-bit representation of the message, called the message digest, when a message with a bit length less than 2 to 64th power is input. The message digest is used during the generation of a signature for the message. The message digest is computed during the generation of a signature for the message. The SHA-1 is also used to compute a message digest for the received version of the message during the process of verifying the signature. Any change to the message in transit will, with a very high probability, result in a different messages digest, and the signature will fail to verify. The Secure Hash Algorithm (SHA-1) described in this standard is required for use with the Digital Signature Algorithm and may be used whenever a secure hash algorithm is required.*

ANSI X9.31-1998, Digital Signatures Using Reversible Public Key Cryptography for the Financial Services Industry (rDSA)

*Covers both the manual and automated management of keying material using both asymmetric and symmetric key cryptography for the wholesale financial services industry.*

ANSI X9.32-1998 (R2006), Data Compression in Wholesale Financial Telecommunications

*This Standard establishes a method for the compression, decompression, and related control functions associated with the electronic transmission of wholesale financial data. Also provided by this Standard are techniques to allow for the optimization of the compression function, to detect errors in the compression process, and to prevent the expansion of data.*

ANSI X9.37-2001, Specification for Electronic Check Exchange

*Provides the financial industry with a format necessary to perform electronic check exchange (ECE). The format supports forward presentment, posting, return notification, and return requests, as well as existing customer information reporting products. The standard also supports multiple check clearing alternatives, e.g., bank-to-bank, bank-to-switch.*

ANSI X9.42-2003, Public Key Cryptography for the Financial Services: Agreement of Symmetric Keys Using Discrete Logarithm Cryptography

*Partially adapted from ISO 11770-3, specifies schemes for the agreement of symmetric keys using Diffie-Hellman and MQV algorithms. It covers methods of domain parameter generation, domain parameter validation, key pair generation, public key validation, shared secret value calculation, key derivation, and test message authentication code computation for discrete logarithm problem based key agreement schemes. These methods may be used by different parties to establish a piece of common shared secret information such as cryptographic keys. The shared secret information may be used with symmetrically-keyed algorithms to provide c*

ANSI X9.45-1999, Enhanced Management Controls Using Digital Signatures and Attribute Certificates

*Defines strategies for reducing the security and financial risks associated with electronic business systems using digital signatures. Attribute certificates would be used to convey authorizations and restrictions that inform verifiers when an entity's signature would be considered valid. Attributes might include specified dollar amounts, cosignature requirements, preapproved counterparties, confirm to (address), and time of day. The benefits of this standard are cost reduction, enhanced security, greater manageability, and greater flexibility for business transactions.This standard was first listed for public review in the June 5, 1998 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI X9.49-1998, Secure Remote Access to Financial Services for the Financial Industry

*Defines the minimum security requirements for a secure and protected exchange of information between a user and a financial service provider. The protection offered will provide integrity for a message during transmission; provide secrecy of the message during transmission; identify the rightful user and financial service provider prior to and during data transmission; and prevent repudiation of a message or transaction by either party.*

ANSI X9.5-1988 (R2001), Financial Institution Numbering System (FINS)

*Provides a six-digit number that is used to track lost or stolen physical securities in the United States.*

ANSI X9.52-1998, Triple Data Encryption Algorithm Modes of Operation

*Defines triple-DES algorithm for use in both wholesale and retail financial applications. As part of this definition, related standards that should be modified to accommodate the use of this algorithm on an optional basis are also identified. (NOTE: The Public Review of the draft document listed in the July 3, 1998 issue of Standards Action is withdrawn from consideration and a new document is hereby submitted in its place.)*

ANSI X9.55-1997, Public Key Cryptography for the Financial Services Industry: Extensions to Public Key Certificates and Certificate Revocation Lists

*Specifies extensions to the definitions of public-key certificates and certificate revocation lists in Public Key Cryptography for the Financial Services Industry: Certificate Management, BSR X9.57. These extensions are in the following areas: the keys involved, including key identifiers for subject and issuer keys, indicators of intended or restricted key usage, and indicators of certificate policy; name forms for a certificate subject, a certificate issuer, or a CRL issuer, and additional attribute information about a certificate subject; included in CA-certificates, i.e., certificates for CAs issued by other CAs, to facilitate the automated processing of certification paths when multiple certificate policies are involved, e.g., when policies vary for different applications in an environment or when interoperation with external environments occurs; and time at which the condition causing*

ANSI X9.57-1997, Public Key Cryptography for the Financial Services Industry: Certificate Management

*Defines certificate management procedures and data elements. This is the second public review for this standard. It first appeared in the December 22, 1995 issue of Standards Action. It is being resubmitted due to substantive changes made to the original submittal.*

ANSI X9.58-2002, Financial Transaction Messages - Electronic Benefits Transfer (EBT) - Food Stamps

*Provides all parties involved in Electronic Benefits Transfer (EBT) transactions for Food Stamps with technical specifications for exchanging financial transaction messages between an acquirer and EBT card issuer processor. It specifies message structure, format and content, data elements and values for data elements used in the Food Stamp program. The method by which settlement takes place is not within the scope of this standard.*

ANSI X9.59-2006, Electronic Commerce for the Financial Services Industry: Account Based Secure Payment Objects

*This standard describes a model of account based electronic payments. It identifies the roles played by different components of the payment process and the flow of information between those roles. The roles are the consumer, who wishes to make a payment, a merchant which provides value, and their respective Financial Institutions, the consumer financial institution and the merchant financial institution. This standard also specifies a collection of electronic payment objects and references digital signature techniques to secure their content.*

ANSI X9.6-1991 (R1998), Securities Identification

*This standard provides specifications for uniquely identifying an eligible securities issue. It will serve as the common denominator in communications among users for completion of trassactions and exchange of information. It specifies both the configuration of the number and the meaning attached to each portion.*

ANSI X9.62-2005, Public Key Cryptography for the Financial Services Industry : The Elliptic Curve Digital Signature Algorithm (ECDSA)

*This Standard defines methods for digital signature (signature) generation and verification for the protection of messages and data using the Elliptic Curve Digital Signature Algorithm (ECDSA). ECDSA is the elliptic curve analogue of the Digital Signature Algorithm (ANS X9.30). The ECDSA shall be used in conjunction with an Approved hash function, as specified in the X9 Registry Item 00003, Secure Hash Standard (SHS). This ECDSA Standard provides methods and criteria for the generation of public and private keys that are required by the ECDSA and the procedural controls required for the secure use of the algorithm with these keys.*

ANSI X9.63-2001, Key Agreement and Key Management Using Elliptic Curve-Based Cryptography

*Specializes ISO/IEC 15946-3 "Cryptographic Techniques Based on Elliptic Curves - Part 3: Key Establishment" for use the by financial services industry. This standard defines key establishment schemes that employ asymmetric cryptographic techniques. The arithmetic operations involved in the operation of the schemes take place in the algebraic structure of an elliptic curve over a finite field. Both key agreement and key transport schemes are specified. Supporting mathematical definitions and examples are also provided.*

ANSI X9.65-2004, Triple Data Encryption Algorithm (TDEA), Implementation Standard

*Specifies methodologies for the implementation of ANSI X9.52, Triple Data Encryption Algorithm (TDEA) Modes of Operations for the enhanced cryptographic protection of digital information. The modes of operation defined in ANSI X9.52 are specified for both enciphering and deciphering operations. These modes provide a means of extending the effective key space of the ANSI X3.92 Data Encryption Algorithm (DEA). ANSI X9.52 provides multiple modes of operation. This standard will assist system integrators to select and implement the appropriate mode for their organizations.*

ANSI X9.68-2001, Digital Certificates for Mobile/Wireless and High Transaction Volume Financial Systems: Part 2: Domain Certificate Syntax

*Defines syntax for a more compact certificate than that defined in ISO 15782-1 and X.509. This syntax is appropriate for use in environments with constraints imposed by mobility and/or limited bandwidth (e.g., wireless communications with personal digital assistants), high volumes of transactions (e.g., Internet commerce), or limited storage capacity (e.g., smart cards). This syntax is also geared towards use in account-based systems such as X9.59.*

ANSI X9.69-1998, Framework for Key Management Extensions

*Adds new technology to the financial community's suite of security mechanisms. The new technology will provide a more flexible and granular means for controlling the production and usage of keys. The Key Management scheme proposed in this new work item provides flexible and secure methods for handling keys. The "Key Establishment" portion of key management allows designated groups of users to establish keys via a key derivation procedure, thus avoiding key distribution in the usual sense. The "Key Usage Control" portion of the key management allows users to control the usage of key, where the keys are either stored or transmitted within a cryptographic system.*

ANSI X9.7-1999, Bank Check Background and Convenience Amount Field

*Specifies the location and background design of essential check data fields and is intended for all business size and personal checks.*

ANSI X9.73-2003, Cryptographic Message Syntax

*The Standard specifies a cryptographic message syntax that can be used to protect financial transactions and other documents from unauthorized disclosure and modification.*

ANSI X9.79-2001, Public Key Infrastructure (PKI) Practices and Policy Framework

*Defines the components of a PKI and sets a framework of practices and policy requirements for a PKI. The standard draws a distinction between PKI systems used in open, closed and network environments. It further defines the operational practices relative to industry accepted information systems control objectives. PKI practices implementing this standard can support multiple policies that incorporate the use of digital signature technology. This standard allows for the implementation of operational, baseline PKI practices that satisfy industry accepted information systems control objectives.*

ANSI X9.8 Part 1-2003, Banking - Personal Identification Number Management and Security - Part 1: PIN protection principles and techniques for online PIN verification in ATM & POS systems

*X9.8 2003 Part 1 covers the basic principles & techniques which provide the minimum security measures required for effective international PIN management. These measures are applicable to those institutions responsible for implementing techniques for the management and protection of PINs. PIN protection techniques applicable to financial transaction card originated transactions in an online environment and a standard means of interchanging PIN data. These techniques are applicable to those institutions responsible for implementing techniques for the management and protection of the PIN at Automated Teller Machines and acquirer sponsored Point-of-Sale (POS) terminals.*

ANSI X9.80-2005, Prime Number Generation, Primality Testing, and Primality Certificates

*In the current state of the art in public key cryptography, all methods require, in one way or another, the use of prime numbers as parameters to the various algorithms. This document presents a set of accepted techniques for generating primes. This standard defines methods for generating large prime numbers as needed by public key cryptographic algorithms. It also provides testing methods for testing candidate primes presented by a third party.*

ANSI X9.82 Part 1-2006, Random Number Generation Part 1: Overview and Basic Principles

*This Standard defines techniques for the generation of random numbers that shall be used whenever ASC X9 Standards require the use of a random number or bitstring for cryptographic purposes. Part 1 contains: 1. A functional model for random bit generators, 2. The general properties necessary for random bit generators to produce bitstrings that are suitable for cryptographic use, and 3. Approved methods for converting a random number into a random bitstring and vice versa.*

ANSI X9.83-2002, Specifications for Electronic Check Adjustments

*This standard establishes the file sequences, record types, and field formats to be used for the electronic exchange of check adjustment messages. The standard format supports check related adjustment notices and requests for individual checks, bundles of checks and check cash letters. It supports the full range of adjustment types currently in use by financial institutions. The standard may be used whether or not the particular check, bundle of checks or cash letter was presented via paper or via an electronic check exchange file.*

ANSI X9.84-2003, Biometric Information Management and Security

*This Standard specifies the minimum security requirements for effective management of biometric data. Within the scope of this Standard the following topics are addressed: Security for the collection, distribution, and processing, of biometric data, encompassing data integrity, authenticity, and non-repudiation; Management of biometric data across its life cycle comprised of the enrollment, transmission and storage, verification, identification, and termination processes; Usage of biometric technology, including one-to-one and one-to-many matching, for the identification and authentication of banking customers and employees; Application of biometric technology for internal and external, as well as logical and physical access control; Encapsulation of biometric data; Techniques for the secure transmission and storage of biometric data; Security of the physical hardware used*

ANSI X9.93-2-2004, Financial transaction messages - Electronic Benefits Transfer (EBT) Part 2 Files

*Provides all parties involved in Electronic Benefits Transfer (EBT) transactions with technical specifications for exchanging financial transaction files for the Women, Infants, and Children (WIC) program and the framework for adding other EBT files and detail records in the future. The document standardizes file formats and thereby maximizes EBT productivity for all stakeholders in the industry.*

ANSI X9.93-2002, Financial Transaction Messages - Electronic Benefits Transfer (EBT) - Part 1: Messages ; Part 2: Files

*Part 1: Messages - Provides all parties involved in (EBT) transactions with technical specifications for exchanging financial transaction messages. The document standardizes message formats based on the ISO 8583:1993 standard and thereby maximizes EBT productivity for all stakeholders in the industry. Part 2: Files - Provides all parties involved in (EBT) transactions with technical specifications for exchanging financial transaction files for the Women, Infants, and Children (WIC) program and the framework for adding other EBT files and detail records in the future.*

ANSI X9.95-2005, Trusted Time Stamp Management and Security

*This standard specifies the minimum security requirements for the effective use of time stamps in a financial services environment.*

ANSI X9.96-2004, XML Cryptographic Message Syntax (XCMS)

*Specifies a text based Cryptographic Message*

*Syntax (CMS) represented using XML 1.0 encoding that can be used to protect financial transactions and other documents from unauthorized disclosure and modification.*

ANSI X9.99-2004, Privacy Impact Assessment Standard

*This standard recognizes that a Privacy Impact Assessment (PIA) is an important management tool that should be used within an organization or by third parties to identify and mitigate privacy issues and risks associated with processing consumer data using automated, networked information systems. This PIA Standard scope: • provides references to educate the reader on privacy topics and financial privacy in particular • describes the privacy impact assessment activity, in general • defines the common components of a PIA regardless of business system affecting financial institutions, and • explains how to improve the quality of business-system s*

## ASCE (American Society of Civil Engineers)

ANSI/ASCE/SEI 25-2007, Earthquake Actuated Gas Shut-off Devices

*This Standard provides minimum functionality requirements for earthquake-actuated automatic gas shutoff devices and systems meant to include mechanical devices consisting of a sensing means and a means to shut off the flow of gaseous fuels.*

ANSI/ASCE/T&DI 21-2006, Automated People Mover Standards, Part 1

*This standard includes minimum requirements for the design, construction, operation, and maintenance of automated people mover systems. It also establishes the minimum set of requirements necessary to achieve an acceptable level of safety and performance, and as such, may be used in the safety certification process.*

## ASHRAE (American Society of Heating, Refrigerating and

ANSI/ASHRAE 105-1984 (R1999), Building Energy Performance, Methods of Measuring and Expressing

*Provides a consistent method of measuring and expressing the energy performance of buildings and aids in the formation of a building energy performance database. Establishes minimum requirements for a database used in establishing energy performance standards. Fosters a commonality in the reporting of the energy performance of existing or proposed buildings to facilitate comparison, design and operation improvements, and development of building energy performance standards. Specifies techniques for measuring and expressing the energy performance of buildings. Also defines minimum requirements of the database required for use in building energy performance standards and provides a consistent, uniform method of reporting predicted or measured energy used to determine energy performance.*

ANSI/ASHRAE 109-1986 (R2003), Methods of Testing to Determine the Thermal Performance of Flat Plate Solar Collectors Containing a Boiling Liquid

*The purpose of this standard is to provide test methods for determining the thermal performance of flat-plate solar energy collectors that use boiling fluids for thermal energy transfer. It applies to flat-plate collectors in which some of the fluid entering the collector boils and some fraction of it leaves as a saturated vapor. It does not apply to collectors in which the thermal storage or condenser unit is integral with the collector*

ANSI/ASHRAE 113-2005, Method of Testing for Room Air Diffusion

*This proposed revision updates ASHREA Standard 113-1990, which defines a method of testing air diffusion performance in the occupied zone of spaces such as offices or similar buildings.*

ANSI/ASHRAE 118.1-2003, Method of Testing for Rating Commercial Gas, Electric, and Oil Service Water Heating Equipment

*The purpose of this standard is to provide test procedures for rating directly heated commercial service water heating equipment.This standard provides test procedures for determining the efficiency and hot water delivery capability. This standard applies to electric resistance, electric air-source heat pump, gas-fired, and oil-fired water heating equipment, including hot water supply boilers, with input ratings less than 12,500,000 Btu/h and greater than: Electric Resistance 12 kW, Electric Heat Pump 6 kW, Gas-Fired 75,000 Btu/h, Oil-Fired 105,000 Btu/h.*

ANSI/ASHRAE 118.2-2006, Method of Testing for Rating Residential Water Heaters

*This proposed revision of ASHRAE Standard 118.2 - 1993, Method of Testing for Rating Residential Water Heaters, incorporates various changes to improve clarity and consistency. Some material was moved to appendices. Other changes were to require one pre-draw, to require a 24 hour soak-in period before the test, and to handle recovery periods that are preceded by multiple draws. The tolerances allowed in some measurements were reduced and the references were updated.*

ANSI/ASHRAE 119-1988 (R2004), Air Leakage Performance for Detached Single-Family Residential Buildings

*Establishes performance requirements for air leakage of residential buildings with the goal of reducing the air infiltration load. It provides a method of classifying the air tightness of residential buildings. It does not address the potential conflicts with adequate indoor air quality, ventilation, and combustion air.*

ANSI/ASHRAE 120-1999, Methods of Testing to Determine Flow Resistance of HVAC Air Ducts and Fittings

*Determines the change in total pressure resulting from air flow in HVAC ducts and fittings.Test results can be used to determine duct flow losses in pressure loss per unit length. Fitting losses are reported as local loss coefficients.*

ANSI/ASHRAE 125-1992 (R2006), Method of Testing Thermal Energy Meters for Liquid Streams in HVAC Systems

*The purpose of this standard is to provide a method of testing factory-assembled thermal energy meters used to measure the thermal added to or extracted from a liquid stream supplying an HVAC system.*

ANSI/ASHRAE 127-2001, Method of Testing for Rating computer and Data Processing Room Unitary Air Conditioners

ANSI/ASHRAE 128P-2001, Methods of Rating Unitary Spot Air Conditioners

*Establishes a uniform set of requirements for rating unitary spot air conditioners. This Standard applies to unitary air conditioners that cool a zone within a space and discharge the rejected heat back into that space. Air leaving the evaporator and condenser is discharged into the same space and there is no physical boundary separating those discharges. This Standard does not apply to the rating and testing of individual assemblies, such as condensing units or direct expansion fan coil units for separate use, nor does it apply to air conditioners which are computer and data processing room air conditioners or are covered by American National Standard for Unitary Air-Conditioning and Air-Source Heat Pump Equipment, ANSI/ARI 210/240-94.*

ANSI/ASHRAE 129-1997 (R2002), Measuring Air-Change Effectiveness

*This standard prescribes a method for measuring air-change effectiveness in mechanically ventilated spaces and buildings that meet specified criteria. The air-change effectiveness is a measure of the effectiveness of outdoor air distribution to the breathing level within the ventilated space.*
*2.1 The method of measuring air-change effectiveness compares the age of air where occupants breathe to the age of air that would occur throughout the space if the indoor air were perfectly mixed.*
*2.2 The standard includes measurement procedures and criteria for assessing the suitability of the test space for measurements of air-change effectiveness.*

ANSI/ASHRAE 130-1996 (R2006), Methods of Testing for Rating Ducted Air Terminal Units

*This standard specifies instrumentation and facilities, test installation methods and procedures for determining the capacity and related performance of constant-volume and variable-volume air terminal units.*

ANSI/ASHRAE 133P-2001, Method of Testing Direct Evaporative Air Coolers

*Establishes a uniform method of laboratory testing for rating packaged and component direct-evaporative air coolers. This standard was originally listed for public review in the November 7, 1997 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/ASHRAE 134-2005, Graphic Symbols for Heating, Ventilating, Air-Conditioning and Refrigerating Systems

*Provides a comprehensive set of symbols for use in drawings and documents relating to the design of HVAC&R systems. In a survey of governments and standards organizations from around the world, the project committee found agreement in some areas of symbol usage and practice but wide variation in others. This standard aims to establish a common symbol language in order to standardize HVAC&R drawings & make them more accessible for the growing number of international users.*

ANSI/ASHRAE 135-1995, BACnet – A Data Communication Protocol for Building Automation and Control Networks

*This protocol provides a comprehensive set of messages for conveying encoded binary, analog, and alphanumeric data between devices including: ___(a) hardware binary input and output values, ___(b) hardware analog input and output values, ___(c) software binary and analog values, ___(d) text string values, ___(e) schedule information, ___(f) alarm and event information, ___(g) files, and ___(h) control logic. This protocol models each building automation and control computer as a collection of data structures called objects, the properties of which represent various aspects of the hardware, software, and operation of the device. These objects provide a means of identifying and accessing information without requiring knowledge of the details of the device's internal design or configuration.*

ANSI/ASHRAE 135.1-2006, Method of Testing Conformance to BACnet

*To define a standard method for verifying that an implementation of the BACnet protocol provides each capability claimed in its Protocol Implementation Conformance Statement (PICS) in conformance with the BACnet standard.*

ANSI/ASHRAE 135.1a-2006, Method of Test for Conformance to BACnet

*This first public review of proposed addendum 135.1a adds new tests and revises tests resulting from updates to ANSI/ASHRAE 135 since the original publication of Standard 135.1-2003.*

ANSI/ASHRAE 135a-2005, BACnet - A Data Communication Protocol for Building Automation and Control Networks

*As currently defined, the Life Safety Zone and Life Safety Point object types are not adequate for simulating/testing when Out_Of_Service is TRUE (see rationale for details). The proposed solution: make the Tracking_Value of both object types a required property and writable when Out_Of_Service is TRUE. Instead of the Present_Value, the Tracking_Value is decoupled from input(s) or process when Out_Of_Service is TRUE. The Present_Value shall not be writable in out-of-service operation.*

ANSI/ASHRAE 135b-2001, BACNET - A Data Communication Protocol for Building Automation and Control Networks

*The proposed change is to remove UTC timestamps from Trend Logs and guarantee Trend Log record ordering.*

ANSI/ASHRAE 135c-2006, BACnet - A Data Communication Protocol for Building Automation and Control Networks

*This second public review draft of Addendum c makes independent substantive changes to the first public review. Addendum c defines a standard means of using "web services" to integrate facility data from disparate data sources, including BACnet networks, with a variety of business enterprise applications. This is essential for Standard 135 because Web services is emerging as the predominant technology for the integration of a wide variety of enterprise information.*

ANSI/ASHRAE 135d-2006, BACnet - A Data Communication Protocol for Building Automation and Control Networks

*This second public review draft of Addendum d makes independent substantive changes to the first public review. Addendum d adds a new Structured View object type, allows acknowledgement of unseen TO-OFFNORMAL event notifications, relaxes the Private Transfer & Text Message BIBB requirements, excludes LIFE_SAFETY and BUFFER_READY notifications from the Alarm Notifications BIBBs, and makes other changes that are described in the foreword of this draft.*

ANSI/ASHRAE 135e-2001, BACnet - A Data Communications Protocol for Building Automation and Control Networks

*Presents a number of proposed substantive changes for public review. These modifications are the result of change proposals made pursuant to the continuous maintenance procedures contained in the Manual for Processing ASHRAE Standards and of deliberations within Standing Standard Project Committee 135. The proposed changes are as follows: (1) Define the PTP connection status when the half-router can and cannot re-establish the connection; (2) Add Object Profiles and Extensions; and (3) Add the capacity for devices to advertise the maximum number of segments of a segmented APDU that they can receive.*

ANSI/ASHRAE 136-1993 (R2006), A Method of Determining Air Change Rates in Detached Dwellings

*The effective outdoor change rates calculated by use of this standard are based on the use of measured air leakage data, include the effects of infiltration and mechanical ventilation, are annual avg values, apply only to detached single family dwellings.*

ANSI/ASHRAE 137-1995 (R2004), Methods of Testing for Efficiency of Space-Conditioning/Water-Heating Appliances that Include a Desuperheater Water Heater

*This standard covers electric, air-to-air, space-conditioning appliances that include a refrigerant-to-water desuperheater and have rated cooling capacities of less than 65,000 Btu/h.*

ANSI/ASHRAE 138P-2005, Method of Testing for Rating Ceiling Panels for Sensible Heating and Cooling

*This third public review draft has been revised to modify the temperature ranges in some definitions and procedures, to relax the accuracy and precision limits for some test variables, to modify the minimum test panel surface area and provide a new equation for easily calculating the minimum number of test panels, to allow the test room to be directly air-conditioned and not have a test chamber (with certain provisions), and to replace propylene glycol in hydronic circuits with plain water.*

ANSI/ASHRAE 139-1998, Methods of Testing for Rating Desiccant Dehumidifiers Utilizing Heat for the Regeneration Process

*Provides test methods for determining the moisture removal capacity of heat-regenerated desiccant dehumidifiers as well as the co-incident energy performance so that comparative evaluations of capacity and performance can be made irrespective of the type or make of the device. This is the second public review for this standard. It first appeared in the December 8, 1995 issue of Standards Action and is being resubmitted now due to substantive changes to the text.*

ANSI/ASHRAE 140-2001, Method of Test for the Evaluation of Building Energy Analysis Computer Programs

*Specifies test procedures for evaluating the technical capabilities and ranges of applicability of computer programs that calculate the thermal performance of buildings and their HVAC systems.*

ANSI/ASHRAE 140a-2004, Method of Test for the Evaluation of Building Energy Analysis Computer Programs

*ANSI/ASHRAE Standard 140-2001 currently includes tests for the evaluation of building energy analysis computer program models that calculate building envelope and thermal fabric loads. Addendum A adds tests for the evaluation of building energy analysis computer program models that calculate unitary space-cooling mechanical equipment performance based on manufacturer design data presented as empirically derived performance maps.*

ANSI/ASHRAE 143P-2000, Methods of Testing for Rating Indirect Evaporative Coolers

ANSI/ASHRAE 146-2006, Method of Testing for Rating Pool Heaters

*This first public review draft is a proposed revision of Standard 146-1998, which prescribes uniform methods of testing and rating pool heaters and applies to all pool heaters operated by gas, oil, or electricity, including heat pumps using ambient air as a heat source. The draft makes a number of major changes to the way heat pump pool heaters are tested. Interested persons are invited to identify suggested improvements to the standard before publication of the revised document.*

ANSI/ASHRAE 147-2002, Reducing Emission of Fully Halogenated Chlorofluorocarbon (CFC) Refrigerants in Refrigeration and Air-Conditioning Equipment and Applications

*Establishes practices and procedures that will reduce inadvertent release of halogenated refrigerants. The practices and procedures in this standard cover release reduction of halogenated hydrocarbon and halogenated ether refrigerants (a) from stationary refrigeration, air-conditioning, and heat-pump equipment and systems and (b) during manufacture, installation, testing, operation, maintenance, repair, and disposal of equipment and systems. This standard was listed for public review in the 2/11/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/ASHRAE 149-2000 (R2005), Laboratory Methods of Testing Fans Used to Exhaust Smoke in Smoke Management Systems

*Establishes uniform methods of laboratory testing for exhaust fans, fan components, and accessories that are to be permanently installed in smoke management systems. It excludes portable, mechanical-draft, circulating, attic, and non-electrically driven fans. The tests cover aerodynamic performance, operation at the specified elevated temperature, reversal, and damper tests.*

ANSI/ASHRAE 15-2001, Safety Code for Mechanical Refrigeration

*8/23/1994*
*This code applies to refrigerating systems and heat pumps used in the occupancies defined in Section 3. It does not apply where water is the primary refrigerant. Application: This Code shall apply to refrigerating systems installed subsequent to its adoption and to parts replaced and components added after its adoption. Equipment listed by an approved nationally recognized testing laboratory is deemed to meet the design, manufacture, and factory test requirements section of this Code, for the refrigerant or refrigerants for which such equipment is designed. Exceptions: In cases of practical difficulty or unnecessary hardship, the authority having jurisdiction may grant exceptions from the literal requirements of this Code or permit the use of other devices, materials or methods, but only when it is clearly evident that equivalent protection is thereby*

ANSI/ASHRAE 150P-2000 (R2004), Method of Testing the Performance of Cool Storage Systems

*Prescribes a uniform set of testing procedures for determining the cooling capacities and efficiencies of cool storage systems. In addition to the testing procedures, this standard identifies the test equipment required, the data required, the calculations used, and defines terminology. The standard does not cover testing of the air side distribution.*

ANSI/ASHRAE 151P-2002, Practices for Measurement, Testing, Adjusting and Balancing Shipboard Heating, Ventilation, Air Conditioning and Refrigeration Systems

*Provides uniform and systematic practices for making measurements in testing, analyzing, balancing, and reporting the performance of the heating, ventilation, air-conditioning and refrigeration (HVAC&R) systems on board ships. Describes methods for evaluating shipboard HVAC&R systems.*
*Applies to all air-moving equipment, hydronic equipment, and HVAC heat-transfer equipment, refrigeration equipment, HVAC electrical power, and control equipment. Describes methods for measuring temperature, humidity, enthalpy, current, wattage, voltage, rotation, fluid flow, heat flow, pressures, sound and vibration levels in HVAC&R systems.*
*Includes the following:*
*(a.) Minimum system configuration requirements to*
*ensure the system can be tested and balanced*

ANSI/ASHRAE 152P-2004, Method of Test for Determining the Design and Seasonal Efficiencies of Residential Thermal Distribution Systems.

*This third public review of proposed Standard 152 incorporates changes resulting from the previous review. It changes several definitions, revises some of the nomenclature, refines instrument specifications, revises the geographic climate conditions table, deletes unneeded language and equations used for determining delivery effectiveness, relaxes the precision of the building pressure measurement, updates references, and corrects several minor errors.*

## ANSI/ASHRAE 154-2003, Ventilation for Commercial Cooking Operations

*Incorporates several independent substantive changes resulting from comments from the prior review. It reduces the minimum velocity for grease hood ductwork from 1500 to 500 fpm, removes the limits for maximum velocity, removes the exhaust-discharge requirements relating to neighboring properties and property lines, makes an editorial clarification, and updates a revised reference.*

## ANSI/ASHRAE 158.1-2004, Methods of Testing Capacity of Refrigerant Solenoid Valves

*Provides a means of accurately measuring the refrigerant mass flow capacity of solenoid valves. The flow capacity may be expressed in terms of refrigerating effect with various refrigerants by performing simple thermodynamic computations. It is anticipated that the Air Conditioning & Refrigeration Institute (ARI) will revise its Standard 760, entitled Solenoid Valves for Use With Volatile Refrigerants, to require that this standard be used as a method of test for capacity.*

## ANSI/ASHRAE 158.2P-2006, Methods of Testing Capacity of Refrigerant Pressure Regulators

*This proposed standard provides a method of test for the capacity of refrigerant pressure regulators. It is anticipated that ARI will revise their Standard 770, entitled Refrigerant Pressure Regulating Valves, to require this standard to be used as a method of test for capacity.*

## ANSI/ASHRAE 15a-2004, Safety Standard for Refrigeration Systems

*This proposed addendum corrects an omission when republishing the standard in 2001 and clarifies wording in selected sections as suggested in Continuous Maintenance submissions. The changes include adding A2 and A3 refrigerants to Section 7.5.2, adding a new Section 7.5.3 for Higher Flammability Refrigerants, clarifying the wording of Section 9.7.2.3, combining Section 9.7.2.4 into Section 9.7.2.3, and updating reference information in Appendices D and E.*

## ANSI/ASHRAE 15b-2006, Safety Standard for Refrigeration Systems

*The current version of ASHRAE/ANSI Standard 15-2004 allows relief valves to discharge back into other parts of the system (see 9.4.3, 9.7.3, 9.7.8.1 and 9.8). The proposed change in this addendum is intended to continue allowing this as an option but clarifies the requirements to improve safety.*

## ANSI/ASHRAE 15c-2000, Safety Code for Mechanical Refrigeration

*This standard specifies safe design, construction, installation, and operation of refrigerating systems.*
*2.1 This code establishes safeguards for life, limb, health, and property; and prescribes safety standards.*
*2.2 This code applies to the following new installations and to modifications of existing installations made after adoption of this code:*
*(a) to mechanical refrigerating systems and heat pumps used in the occupancies defined in Section 4,*
*(b) to parts or components added,*
*(c) to parts or components replaced only if they are not identical in function, and*
*(d) to substitution of a refrigerant having a different number designation. ANSI/ASHRAE Standard 34 provides refrigerant number designations.*
*2.3 This code does not apply where water is*

## ANSI/ASHRAE 15d-2000, Safety Code for Mechanical Refrigeration

*This addendum deletes the requirement for Self-Contained Breathing Apparatus (SCBA).*

## ANSI/ASHRAE 16-1983 (R1999), Room Air Conditioners and Packaged Terminal Air Conditioners, Method of Testing for Rating

*Establishes a uniform method of testing for obtaining rating data; specifies types of test equipment for performing such tests; specifies data required and calculations used; and lists and defines the terms used in testing. This standard prescribes a method of testing for obtaining cooling capacities and air flow quantities for rating room conditioners and packaged terminal air conditioners.*

## ANSI/ASHRAE 169-2006, Weather Data for Building Design Standards

*This proposed new standard is intended as a comprehensive source of climate data for those involved in building design. It provides a variety of climatic information used in the design, planning and sizing of buildings' energy systems and equipment and should be a valuable resource available for referencing in building design standards. The weather data has been compiled from ANSI/ASHRAE/IESNA Standard 90.1-2004, ANSI/ASHRAE Standard 90.2-2004, and the 2005 ASHRAE Handbook--Fundamentals.*

## ANSI/ASHRAE 169a-2006, Weather Data for Building Design Standards

*This proposed addendum to Standard 169-2006 adds climatic data for seven new locations in Tables C-1 and C-3: Reagan National Airport and six island locations in the Pacific Ocean. It also adds climatic data for China (368 locations) and Taiwan (38 locations) and corrects some data errors for locations in Mexico (Tables B-3 & C-3). These changes provide consistency with recently approved addenda to Standards 90.1-2004 and 90.2-2004. For further information, see the foreword to this addendum.*

## ANSI/ASHRAE 17-1998 (R2003), Capacity Rating of Thermostatic Refrigerant Expansion Valves, Method of Testing for

*Prescribes a method of testing the capacity of thermostatic refrigerant expansion valves for use in vapor-compression air-conditioning and refrigeration systems. It is applicable to thermostatic expansion valves, expansion valves of the direct-acting type but not the pilot-operated type, and many currently used refrigerants deemed available and suitable according to ANSI/ASHRAE Standards 15 and 34.*

## ANSI/ASHRAE 18-2006, Method of Testing for Rating Drinking-Water Coolers with Self-Contained Mechanical Refrigeration Systems

*This proposed revision of Standard 18 adds a method of test for energy consumption of self-contained, mechanically refrigerated drinking-water coolers and assumes that ARI will specify rating conditions for energy consumption in a future revision of Standard 1010.*

ANSI/ASHRAE 20-1997 (R2006), Methods of Testing for Rating Remote Mechanical-Draft Air-Cooled Refrigerant Systems

*This standard prescribes methods of laboratory testing to measure the heat rejection capabilities of remote mechanical-draft, air-cooled refrigereant condensers for refrigerating and air conditioning.*

ANSI/ASHRAE 22-2003, Methods of Testing for Rating Water-Cooled Refrigerant Condensers

*This standard has received two prior public reviews, but it has now been determined that substantive changes are needed. Because substantive changes are not permissible in a reaffirmation, this draft has been revised so that it is essentially the same as the current (1992) standard. Because its ANSI approval has expired, this standard will be resubmitted for ANSI approval and published as a revised standard. A new committee will address the substantive changes that are needed in the near future.*

ANSI/ASHRAE 23-2005, Methods of Testing for Rating Positive Displacement Refrigerant Compressors and Condensing Units

*Adds zeotropic alternative refrigerants, excludes emerging supercritical refrigerants like CO2 (which require a new test standard), provides six test methods for determining refrigerant mass flow rates, permits the same test method for the primary and confirming tests under certain conditions, includes test methods that properly account for the effects of liquid refrigerant injection, and adds compressor-efficiency computations to the test requirements.*

ANSI/ASHRAE 24-2000 (R2005), Methods of Testing for Rating Liquid Coolers

*Prescribes methods of testing for rating liquid coolers. It classifies the types of liquid coolers, defines the terms for rating them, and establishes the methods of test that shall be used to obtain liquid-cooler ratings.*

ANSI/ASHRAE 25-2001 (R2006), Methods of Testing Forced Convection and Natural Convection Air Coolers for Refrigeration

*Prescribes methods of testing the cooling capacities and air flow rates of forced convection and natural convection air coolers for refrigeration. It does not include air coolers of the recalculated primary liquid refrigerant type. It does not include air-conditioning units for which testing methods are given in other standards.*

ANSI/ASHRAE 26-1996 (R2006), Mechanical Refrigeration and Air-Conditioning Installations Aboard Ship

*Provides the minimum general requirements for the design , construction, installation, operation, inspections, and maintenance of mechanical refrigerations and air-conditioning equipment aboard ships to permit the safe, efficient, and reliable operation of such systems.*

ANSI/ASHRAE 28-1996 (R2006), Method of Testing Flow Capacity of Refrigerant Capillary Tubes

*This standard prescribes two test methods for determining the flow of capacity of capillary tubes such as are used for refrigerant metering in refrigeration systems, traditional method and alternative method.*

ANSI/ASHRAE 29-1988 (R2005), Methods of Testing Automatic Ice Makers

*This standard prescribes the methods of testing automatic ice makes. The automatic ice maker may comprise one or more sections for shipping purposes. This standard does not include automatic ice makes installed in household refrigerators, combination refrigerators-freezers, and household freezers.*

ANSI/ASHRAE 32.1-2004, Methods of Testing and Rating Bottled and Canned Beverage Vendors and Coolers

*This proposed revision updates the standard to include vending machines for other types of sealed containers besides bottles and cans. This 2nd public review draft increases the tolerance of instruments and systems for measuring electrical energy, adds a requirement to conduct the energy consumption test at 75°F ambient, rewords the provision regarding the measurement of beverage temperature in the recovery test, and specifies how to conduct an energy consumption test in tropical conditions.*

ANSI/ASHRAE 32.2-2003, Methods of Testing Pre-Mix and Post-Mix Soft Drink Vending and Dispensing Equipment

*Prescribes a uniform method for testing and rating the capacity and efficiency of pre-mix and post-mix beverage dispensing equipment. It is a revision of an earlier version of the standard published in 1997. Due to changes in the industry, the scope of the standard has been made more specific to include equipment types that are appearing on the market and exclude those that have disappeared from the market.*

ANSI/ASHRAE 33-2001, Methods of Testing Forced Circulation Air Cooling and Air Heating Coils

*Prescribes laboratory methods of testing forced-circulation air-cooling coils for application under nonfrosting conditions and forced-circulation air-heating coils to assure uniform performance information for establishing ratings. This standard (a) describes and specifies testing instruments and apparatus, laboratory test methods and procedures, the test data to be recorded, and the calculations to be made from test data; (b) defines the terms used in testing; and (c) specifies standard thermodynamic properties. This standard does not specify the types of tests used for production or field testing.*

ANSI/ASHRAE 34a-2006, Designation and Safety Classification of Refrigerants

*This proposed addendum adds a designation of R-422B to the blend R-125/134a/600a (55.0/42.0/3.0) with tolerances of (+/-1.0/+/-1.0/+0.1,-0.5) and a safety classification of A1.*

ANSI/ASHRAE 34b-2006, Designation and Safety Classification of Refrigerants

*This proposed addendum adds a designation of R-422C to the blend R-125/134a/600a (82.0/15.0/3.0) with tolerances of (+/-1.0/+/-1.0/+0.1,-0.5) and a safety classification of A1.*

ANSI/ASHRAE 34c-2006, Designation and Safety Classification of Refrigerants

*This proposed addendum adds a designation of R-423A to the blend R-134a/227ea (52.5/47.5) with tolerances of (+/-1.0/+/-1.0) and a safety classification of A1.*

ANSI/ASHRAE 34e-2006, Designation and Safety Classification of Refrigerants

*This proposed addendum adds a designation of R-424A to the blend R-125/134a/600a/600/601a (50.5/47.0/0.9/1.0/0.6) with tolerances of (+1,-1/+1,-1/+0.1,-0.2/+0.1,-0.2/+0.1,-0.2) and a safety classification of A1.*

ANSI/ASHRAE 34f-2006, Designation and Safety Classification of Refrigerants

*This proposed addendum adds a designation of R-425A to the blend R-32/134a/227ea (18.5/69.5/12.0) with tolerances of (+0.5,-0.5/+0.5,-0.5/+0.5,-0.5) and a safety classification of A1.*

ANSI/ASHRAE 34g-2006, Designation and Safety Classification of Refrigerants

*This proposed addendum adds a column to Tables 1 and 2 titled “Toxicity Under Code Classification” with each refrigerant designated as highly toxic, toxic (as defined by the International Fire Code, Uniform Fire Code and OSHA) or neither (for refrigerants less toxic than defined above). All other columns in Table 1 and Table 2 are unchanged.*

ANSI/ASHRAE 34h-2006, Designation and Safety Classification of Refrigerants

*This proposed addendum adds a designation of R-422D to the blend R-125/134a/600a (65.1/31.5/3.4) with tolerances of (+0.9,-1.1/+1.0,-1.0/+0.1,-0.4) and a safety classification of A1.*

ANSI/ASHRAE 34n-2006, Designation and Safety Classification of Refrigerants

*This addendum provides general guidance for the numbering of C4-C8 alkanes.*

ANSI/ASHRAE 34u-2006, Number Designation and Safety Classification of Refrigerants (Addendum u)

*This proposed addendum specifies criteria to determine recommended Refrigerant Concentration Limits (RCL) in occupied spaces and adds RCL values to Tables 1 & 2. It deletes informational items from the tables and includes new definitions, calculational and data criteria, and supporting references. The definitions relate an intermediate term, the acute toxicity exposure limit (ATEL), to the immediately dangerous to life and health (IDLH) concentration for which IDLH values have not been adopted.*

ANSI/ASHRAE 37-2005, Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment

*In this 2nd public review draft the Reynolds number equation was re-written in a different format (Section 6.3.3), the description of the duct losses (Section 7.3.3.3) was also re-written to more accurately represent a method for calculating these losses, and all references were updated to show their latest revised versions. All other changes were editorial, such as ensuring consistency in the use of words or phrases to agree with the terminology presented in the ASHRAE Fundamentals Handbook.*

ANSI/ASHRAE 40-2002 (R2006), Heat Operated Unitary Air-Conditioning Equipment for Cooling, Methods of Testing for Rating

*This standard applies to heat-operated unitary air conditioners and heat pumps consisting of one or more assemblies, including engine-driven systems. Where such equipment is provided in more than one assempbly, the separate assemblies are designed to be used together.*

ANSI/ASHRAE 41.1-1986 (R2006), Temperature Measurement, Standard Method for

*The procedures described herein are inteded for use in testing heating, refrigerating and air-conditioning equipment and components.*

ANSI/ASHRAE 41.10-2003, Flowmeter Test Methods for Mass Flow Measurements of Volatile Refrigerants

*This standard provides recommended practices for the measurement of mass flow rate of volatile refrigerants using flowmeters.*

*a)This standard applies where the entire flow stream of the volatile refrigerant enters and exits either as a "vapor only" or "liquid only" state.*

*b)This standard covers all refrigerants listed in the 2001 ASHRAE Handbook - Fundamentals and ANSI/ASHRAE Standard 34-1997, Designation and Safety Classification and Refrigerants.*

ANSI/ASHRAE 41.4-1996 (R2006), Method for Measurement of Proportion of Lubricant in Liquid Refrigerant

*This standard provides a method for measurement of proportion of lubricant in liquid refrigerant.*

ANSI/ASHRAE 41.6-1994 (R2006), Method for Measurement of Moist Air Properties

*To describe various instruments and techniques for the measurement of moist air properties.*

ANSI/ASHRAE 41.7-1984 (R2006), Standard Method for Measurement of Flow of Gas

*This standard provides flow-measuring techniques for volatile refrigerant, gaseous phase and air under conditions where the method for flow measurement set forth in ASHRAE Std41.2 are inconvenient or unsatisfactory.*

ANSI/ASHRAE 41.9-2000 (R2006), A Standard Calorimeter Test Method for Flow Measurement of a Volatile Refrigerant

*This standard provides recommended practices for measuring the mass flow rate of volatile refrigerants using calorimeters.*

## ANSI/ASHRAE 51-2001, ANSI/AMCA 210-2001, Addendum A, Laboratory Methods of Testng Fans for Aerodynamic Performance Rating

*In revising the 1984 edition, one revison produced Note 4 of Figure 4A. The intended result of the revision was to specify a dimensional measurement location that would be suitable for checking by a state-of-the-art measurement device. The unintended effect of this revision was the tightening of the tolerance on that dimension beyond that which is possible to achieve by existing and customary commercial fabrication processes. This went unnoticed during the review process. To rectify this oversight, it is necessary to revert to the requirement as given in the 1985 edition.*

## ANSI/ASHRAE 51/AMCA 210-1999, Laboratory Methods of Testing Fans for Rating

*This standard was first listed in the April 14, 1995 issue of Standards Action. IT is being resubmitted due to substantive changes which are listed below in their entirety:*
*Change reference [4] as shown below.*
*´ˆSHRAE Standard 41.5-75(1975) Standard Measurement Guide Guideline 2-1986 (RA90), Engineering Analysis of Experimental Data*
*Remove the first sentence in Figure 6 as shown below.*
*To avoid excessive pressure drop through the flow straightener, careful attention to construction tolerances and details is important. Cell sides shall be flat and straight. Where y ³ 3 mm (0.125 in.), the leading edge of each segment shall have a chamber of 1.3 mm (0.05 in.) per side. The method of joining cell segments (such as tack welds) shall be kept to the minimum required for mechanical integrity and shall result in minimum protrusion into the*

## ANSI/ASHRAE 52.2-1999, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size

Establishes a test procedure for evaluating the performance of air-cleaning devices as a function of particle size. Describes a method of laboratory testing to measure the performance of general ventilation air cleaning devices. This is the third public review for this standard. It previously appeared in the April 12, 1996 and November 8, 1996 issues of *Standards Action*. It is being resubmited now due to substantive changes made to the original submittal.

## ANSI/ASHRAE 52.2a-2006, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size

*Proposes revisions to Section 5.16.1. The reference filter check in the current standard is not practical. The shape of the filtration efficiency curve is somewhat S-shaped, and the present criteria are not applicable for such shapes. By proposing that the shift be measured on the filtration efficiency axis, the addendum makes the specification applicable in all cases. It also allows a wider selection of filters so it is easier for testing laboratories to locate reference filters.*

## ANSI/ASHRAE 55P-2004, Thermal Environmental Conditions for Human Occupancy

*This fourth draft of Standard 55 contains independent substantive changes (ISC) to the third public review draft. Primary changes include the replacement of the 3 classes of thermal comfort with a single minimum set of requirements, deletion of references to responsible parties, clarifications to the method of compliance, and the addition of an input/output table to Addendix D. Only the indicated parts of the standard are open for comment.*

## ANSI/ASHRAE 58-1986 (R1999), Rating Room Air Conditioner and Packaged Terminal Air Conditioner Heating Capacity, Method of Testing for

*Prescribes test methods for determining the heating capacities and air flow quantities for room air conditioners and packaged terminal air conditioners equipped with means for room heating. This standard establishes a uniform method of testing for obtaining rating data; specifies test equipment for performing such tests; specifies data required and calculations to be used; and lists and defines the terms used in testing.*

## ANSI/ASHRAE 62.1-2004, Ventilation for Acceptable Indoor Air Quality

*Last Final Action 5/16/1991*

## ANSI/ASHRAE 62.1a-2006, Ventilation and Acceptable Indoor Air Quality

*This addendum simplifies the analytical conditions for required dehumidification performance. The modified requirement clarifies that each system must be analyzed to check its dehumidification performance at a specific, challenging condition. The addendum also adds an exception to the analytical requirement for high humidity spaces and an exception to the requirement for net positive intake airflow when a specific process needs excess exhaust.*

## ANSI/ASHRAE 62.1b-2006, Ventilation for Acceptable Indoor Air Quality

*This addendum cleans up a number of issues: 1.This addendum corrects discrepancies and omissions between Table 5-2, 6-1 and 6-4. 2.The addendum deletes several space types from Table 5-2. 3.The addendum modifies Table 6-1 by providing an air classification for Science laboratories. 4.The addendum modifies Table 6-1 by moving the following space types from Table 5-2 and by providing ventilation rates for these spaces. 5.The addendum modifies Table 6-1 by creating a new Note E that refers to combustion equipment used on playing surfaces. 6.The addendum deletes the existing Note F from Table 6-4.*

ANSI/ASHRAE 62.1c-2006, Ventilation for Acceptable Indoor Air Quality

*This addendum updates material in Appendix B of the current standard, which contains a number of air-quality guidelines and regulations issued by bodies other than ASHRAE. For many years, this appendix has been the only compendium of such information. It has been very helpful to users of the IAQ Procedure and to those using the standard in IAQ evaluations. To be clear, this ASHRAE Standard does not propose or endorse any specific contaminant concentration standards or guideline values, but rather lists those values established by other cognizant authorities.*

ANSI/ASHRAE 62.1d-2006, Ventilation for Acceptable Indoor Air Quality

*This addendum updates Table 4-1 so that it matches the current NAAQS pollutant listing (which was most recently amended July 1, 2004) rather than the previous NAAQS pollutant listing (which was amended July 1, 1987). The entries in the table are not subject to alteration by ASHRAE, since the table is merely a re-print of a government publication. However, the “normative” reference to the government document, in Section 9, is subject to review by ASHRAE.*

ANSI/ASHRAE 62.1d-2006, Ventilation for Acceptable Indoor Air Quality

*This addendum updates Table 4-1 so that it matches the current NAAQS pollutant listing (which was most recently amended July 1, 2004) rather than the previous NAAQS pollutant listing (which was amended July 1, 1987). The entries in the table are not subject to alteration by ASHRAE, since the table is merely a re-print of a government publication. However, the “normative” reference to the government document, in Section 9, is subject to review by ASHRAE.*

ANSI/ASHRAE 62.1g-2006, Ventilation for Acceptable Indoor Air Quality, Addenda g

*An earlier draft of this addendum was approved for publication but then appealed. The appeals panel upheld one part of the appeal relating to language in the pressurization and separation requirements. The panel concluded that the language calling for air not to flow from ETS areas into ETS-free areas could be interpreted as not even allowing eddies at the boundary between the two spaces. The SSPC did not intend this meaning, and in this draft it has revised the language to remove this concern.*

ANSI/ASHRAE 62.2a-2004, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings, Addendum a

*This addendum eliminates the backdrafting test in Appendix A. Based on the best industry-accepted method found in the National Fuel Gas Code, the backdrafting test has always raised questions about how to apply it to solid fuel-burning appliances. Also, it cannot be performed until the home is completed, placing any remedial balancing at a difficult stage of construction or sale. As a remedy, this addendum proposes 15 cfm/100 square feet as the upper limit for minimizing backdrafting potential.*

ANSI/ASHRAE 62.2b-2004, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings

*This proposed addendum replaces the term "severe cold climate," which is defined as a climate that has more than 8000 ?F degree-days, with the term "very cold climate," which is defined as a climate that has more than 9000 ?F degree-days. With the change, Standard 62.2 climate definitions will be more consistent with the proposed revisions to the ICC climate zone definitions, which will simplify implementation of 62.2 into code. For the main impact of this change, refer to the foreword to 62.2b.*

ANSI/ASHRAE 62.2g-2006, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings

*Condensing clothes dryers have entered the market. This addendum recognizes that the exhaust from the dryers (a condensate) can be discharged into a drain rather than from an opening in the building envelope.*

ANSI/ASHRAE 62.2P-2003, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings

*This draft of Standard 62.2 focuses on a key issue from prior reviews. For the 2nd review the sound rating for intermittent exhaust fans was set at 1.5 sone maximum. In response to commenters in the home building industry, the requirement was limited to kitchen fans in the 3rd review. It has now been found that building a 1.5-sone fan is more costly than previously thought, so this draft proposes a requirement of 3 sone for both kitchen and bathroom fans. Fans larger than 400 cfm are exempt.*

ANSI/ASHRAE 62aa-2004, Ventilation for Acceptable Indoor Air Quality

*This addendum converts requirements related to outdoor air intake location and intake protection into mandatory and enforceable language. This 3rd public review draft deletes the separation distance requirement for general building exhaust in Table 5.2, it allows the use of the National Fuel Gas Code and other established standards instead of the separation distance for combustion vents in Table 5.2, and it revises the requirements related to the limitation of rain penetration such that they relate more closely to industry practice for testing and specifying louvers.*

ANSI/ASHRAE 62ae-2003, Ventilation and Acceptable Indoor Air Quality

*This addendum addresses a number of distinct issues that have not been dealt with by previous addenda. It adds definitions of the terms indoor air, cognizant authority and industrial space. It modifies or deletes several existing definitions in an attempt to clarify language and to delete a term that is not used in the standard.*

ANSI/ASHRAE 62af-2003, Ventilation and Acceptable Indoor Air Quality in Commercial, Institutional, and High-Rise Residential Buildings, Addenda af

*This addendum implements changes to the Purpose and Scope of the standard that are contained in the approved Target, Title Purpose and Scope of the standard. These changes address how the standard relates to new and existing buildings, clarifies its coverage of industrial and laboratory spaces, and adds a caveat concerning situations where outdoor air quality may be poor.*

### ANSI/ASHRAE 62d-1999, Ventilation for Acceptable Indoor Air Quality

*Contains requirements for commercial, institutional, and residential building spaces intended for human occupancy and principles contained in this standard may also be applied to other spaces intended for human occupancy. Considers chemical, physical, and biological contaminants, as well as factors such as moisture and temperature, that can affect human health and perceived air quality. Addendum 62d adds Subsection 2.4 from the June 1997 approved scope with only editorial modification.*

### ANSI/ASHRAE 62e-1999, Ventilation for Acceptable Indoor Air Quality

*Contains requirements for commercial, institutional, and residential building spaces intended for human occupancy and principles contained in this standard may also be applied to other spaces intended for human occupancy. Considers chemical, physical, and biological contaminants, as well as factors such as moisture and temperature, that can affect human health and perceived air quality. Addendum 62e deletes the words "and a moderate amount of smoking" from the footnote to Table 2 of 6.1.3. Also, it deletes a related comment from Table 2 related to Conference Rooms.*

### ANSI/ASHRAE 62f-1999, Ventilation for Acceptable Indoor Air Quality

Contains requirements for commercial, institutional, and residential building spaces intended for human occupancy and principles contained in this standard may also be applied to other spaces intended for human occupancy. Considers chemical, physical, and biological contaminants, as well as factors such as moisture and temperature, that can affect human health and perceived air quality. Addendum 62f changes Table 2, 6.1.3, 6.2.1 and Appendix D references in order to clarify several misunderstandings regarding $CO_2$ as a contaminant in buildings and its use as an indicator of acceptable indoor air quality.

### ANSI/ASHRAE 62h-2003, Ventilation for Acceptable Indoor Air Quality, Addenda h

*This 4th public review of Addendum 62h addresses concerns raised in the last review draft, which added an allowance for compliance with the Indoor Air Quality Procedure through an "equivalency" with the IAQ conditions by use of the Ventilation Rate Procedure. The allowance concerned some commenters, especially its potential use in smoking areas. The committee deleted the allowance, noting that the IAQ Procedure as now worded in the addendum already allows such "alternative" design approaches.*

### ANSI/ASHRAE 62i-2002, Ventilation for Acceptable Indoor Air Quality (Addenda i)

*Replaces material in sections 4 and 6 regarding the use of the IAQ Procedure. It describes situations in which the IAQ procedure can or must be used, and it does so in mandatory and enforceable language. It does not tell one how to use this procedure, only when. (Addendum 62h addresses the former issue.) This is the second Public Review for this standard. It was originally listed fn the November 6, 1998 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

### ANSI/ASHRAE 62j-2001, Ventilation for Acceptable Indoor Air Quality, Addenda j

*Replaces the current performance requirement for natural ventilation systems with a prescriptive requirement that is similar to many model building codes. The existing section is difficult for designers to understand and to use (see interpretations 62-1989-8 and 62-1989-14) and it is difficult to enforce. This is the second Public Review for this standard. It was originally listed fn the November 6, 1998 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

### ANSI/ASHRAE 62k-2002, Ventilation for Acceptable Indoor Air Quality, Addenda k

*Deletes the current Section 4 (Classification) and adds a new informative appendix addressing application of the standard in new and existing buildings. The current Section 4 discusses the two procedures for determining design ventilation rates, but contains no requirements and is therefore inconsistent with a standard in code-intended language. The new appendix attempts to address the issue of application of the standard in new and existing buildings. The appendix contains informative guidance on when the standard applies in new and existing buildings. It also contains a code-language version of these requirements that could be adopted, with or without modification, by jurisdictions that do not have a building code. Earlier versions of this addendum attempted to make this material part of the standard (in Section 4), but it was pointed out that this could create conflicts with*

### ANSI/ASHRAE 62l-2001, Ventilation for Acceptable Indoor Air Quality, Addenda l

*Creates a new section on construction and ventilation system start-up, recognizing that acceptable indoor air quality is impacted by more than simply the design of the HVAC system. Requirements include such measures as ventilation system balancing.*

### ANSI/ASHRAE 62m-2001, Ventilation for Acceptable Indoor Air Quality, Addenda m

*Creates a new section on operating and maintenance procedures, recognizing the importance of these procedures on acceptable indoor air quality. Requirements include such measures as frequency of system inspection and air cleaner maintenance.*

### ANSI/ASHRAE 62n-2004, Ventilation and Acceptable Indoor Air Quality in Commercial, Institutional, and High-Rise Residential Buildings, Addenda n

*This 3rd public review of Addendum 62n (a proposed revision of the Ventilation Rate Procedure) tries to satisfy unresolved commenters from prior reviews. It revises the definition of "zone," presents simple approaches for determining outdoor air intake rates for single-zone and 100% outdoor air systems, revises the tables of default values of zone and system ventilation efficiencies, and revises the normative appendix presenting a detailed methodology for determining ventilation efficiencies.*

ANSI/ASHRAE 62o-2003, Ventilation for Acceptable Indoor Air Quality

*Contains minimal normative guidance for ventilation of areas containing environmental tobacco smoke (ETS), simply stating that additional ventilation shall be provided relative to a similar ETS-free area. In informative language, it contains a method for determining this additional ventilation based upon chamber studies of occupant perception from the 1980s.*

ANSI/ASHRAE 62p-2001, Ventilation for Acceptable Indoor Air Quality, Addenda p

*Independently addresses combustion processes, since all designers may not be subject to building codes and since building code content can change from minimum mandatory requirements. Combustion processes consume oxygen from combustion air and produce water vapor, carbon dioxide and other contaminants. Many building codes already adequately and appropriately address the proper indoor use of fuel-burning appliances, in terms of both combustion air and venting of combustion products.*

ANSI/ASHRAE 62q-2001, Ventilation for Acceptable Indoor Air Quality, Addenda q

*Modifies several definitions for clarity. In addition, several definitions that are adequately defined in standard dictionaries are deleted for brevity, as are others that are not used in the body of the standard.*

ANSI/ASHRAE 62r-2003, Ventilation and Acceptable Indoor Air Quality in Commercial, Institutional, and High-Rise Residential Buildings, Addenda r

*This addendum addresses outdoor air-quality assessment and air-cleaning requirements.*

*The current standard requires outdoor air assessment and recommends outdoor cleaning but does not require it. The section where outdoor air cleaning is currently discussed (Section 5.9) is replaced with a new Section 4, which requires outdoor air-quality assessment for all ventilation systems. Documented assessment is expected to lead to informed decisions related to the location of intakes and outdoor air-cleaning measures.*

ANSI/ASHRAE 62s-2001, Ventilation for Acceptable Indoor Air Quality, (Addenda s)

*Expands and clarifies requirements for equipment-related particle filtration. These requirements are intended to lower the level of particulate matter in the ventilation system where wet surfaces are present, thereby reducing the rate of dirt accumulation on ventilation system components, including ductwork.*

ANSI/ASHRAE 62t-2002, Ventilation for Acceptable Indoor Air Quality

*Replaces section 5.11. In so doing, it clarifies and codifies requirements for drain pan design, carryover from cooling coils, access for inspection and cleaning, and requirements related to the proper application of humidifiers and water spray devices within the air distribution system. Recognizing that liquid water within the air distribution system increases the likelihood of microbial growth, the requirements in this addendum seek to prevent standing water in drain pans, limit water droplet carryover, and minimize stagnant water in humidifier and water spray sumps.*

ANSI/ASHRAE 62u-2002, Ventilation for Acceptable Indoor Air Quality

*Adds requirements related to the control of ventilation systems. An improperly controlled system is unlikely to deliver ventilation air at design minimum levels. This addendum does not cover optional demand controlled ventilation requirements. It specifically addresses VAV system controls for outdoor air intake airflow. The intake control requirements recognize that, at low supply volumes, sufficient outdoor airflow may not be maintained if a fixed outdoor air intake damper position is used. In most cases, an active outdoor air control system must be provided to ensure minimum intake rates are maintained.*

ANSI/ASHRAE 62v-2002, Ventilation for Acceptable Indoor Air Quality, Addenda v

ANSI/ASHRAE 62w-2001, Ventilation for Acceptable Indoor Air Quality, Addenda w

*Defines performance criteria for air stream surface materials in ventilation system equipment, ducts and plenums. Conformance with these criteria is intended to minimize the potential for microbial growth and dissemination through the air distribution system. Installation provisions are intended to minimize internal insulation material from becoming loose, damaged, or collecting dirt at joints and seams.*

ANSI/ASHRAE 62x-2003, Ventilation for Acceptable Indoor Air Quality

*Revises the humidity control requirements currently described in Section 5.10. Building pressurization requirements to minimize the infiltration of moist outdoor air (which can cause condensation on building surfaces during cooling operation) have also been added. This addendum has had four public reviews and the independent substantive changes in this draft respond to recent public review comments. Proposed additions are underlined and deletions are struck through.*

ANSI/ASHRAE 62y-2004, Ventilation for Acceptable Indoor Air Quality

*This proposed addendum classifies air with respect to contaminant and odor intensity and limits the recirculation of lower-quality air into spaces with air of higher quality. This 5th public review adds a sentence to the Class 2 Note under 5.x.1 to address concerns raised by the restaurant/hospitality industry and changes some classifications from 3 to 2 because of the restrictive requirement that class 3 air can only be recirculated to the space from which it comes.*

ANSI/ASHRAE 62z-2003, Ventilation and Acceptable Indoor Air Quality in Commercial, Institutional, and High-Rise Residential Buildings, Addenda z

*This addendum addresses air-cleaning requirements for ozone. The current standard requires outdoor air assessment, and recommends outdoor cleaning for contaminants of concern, but it does not require cleaning for ozone. This addendum requires gaseous air cleaning when the outdoor ozone concentration is high, but it does not require air cleaning for other gaseous contaminants.*

ANSI/ASHRAE 63.1-1995 (R2002), Methods of Testing Liquid Line Refrigerant Driers

*Prescribes test methods for determining flow capacity and water capacity performance characteristics of liquid line refrigerant driers. This standard applies only to those driers which employ a desiccant as defined in the Definitions Section. A dissicant's performance varies with respect to its activation. The water capacity test method prescribed in this standard can be used to test a drier either "as received," or after being reactivated in accordance with the manufacturer's recommendations. This standard applies only to liquid line driers for use in systems employing halocarbon refrigerants which have an atmospheric boiling point below 20ºC(68ºF).*

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ANSI/ASHRAE 63.2-1996 (R2006), Method of Testing Liquid Line Filter-Drier Filtration Capability

*The purpose of this standard is to prescribe a laboratory test method for evaluating the ııtration capability of filters and filter driers used in liquid lines of refrigeration systems.*

ANSI/ASHRAE 64-2005, Methods of Testing Remote Mechanical-Draft Evaporative Refrigerant Condensers

*This proposed revision modifies the title, purpose, and scope of the standard to made it clear that the standard is intended to be a laboratory method of test. As now modified, the standard prescribes methods of laboratory testing remote mechanical draft evaporative refrigerant condensers. Following this standard, different laboratories should produce equivalent results on the same equipment.*

ANSI/ASHRAE 68-1997, ANSI/AMCA 330-1997, Laboratory Method of Testing In-Duct Sound Power Measurement Procedure for Fans (also designated ANSI/AMCA 330-86)

*Determines by test the sound power radiated into an anechoically terminated duct on the supply and/or return side of air handling equipment.*

ANSI/ASHRAE 70P-2006, Method of Testing the Performance of Air Outlets and Air Inlets

*This proposed revision of Standard 70 updates the 1991 edition by covering a broader range of air-device types and sizes, by specifying commercially available test instruments that have increased accuracy, by defining test facilities and installation procedures to better reflect the device under investigation at its intended application, and by clarifying methods of calculating test data so they apply to the broader range of air devices now available in the market.*

ANSI/ASHRAE 72-2005, Method of Testing Commercial Refrigerators and Freezers

*Makes independent substantive changes to the previous draft in order to clarify or modify the testing conditions and reporting of results as suggested by commenters. In addition, informative Appendix A is added to show test results typically needed for various rating programs such as performance certifications. In general, this standard combines Standard 72-1998 for open refrigerators and Standard 117-2002 for closed refrigerators.*

ANSI/ASHRAE 78-1985 (R2003), Method of Testing Flow Capacity of Suction Line Filters and Filter-Driers

*Establishes a method for measuring the flow capacity of refrigerant suction line filters and filter-driers. It is intended for use on both sealed and replaceable element type suction line filters and filter-driers of all types. The test method is based on using air as the testing medium and calculating the results to refrigerant gas flow under various conditions.*

ANSI/ASHRAE 79-2002 (R2006), Methods of Testing for Rating Room Fan-Coil Air Conditioners

*This standard includes procedures that describe and specifiy test instruments and apparatus, describe and specify laboratory test instruments and apparatus, laboratory test methods and procedures, test data to be recorded, calculation to be made from test data, define terms used in testing and specify standard thermoedynamic properties.*

ANSI/ASHRAE 86-1994 (R2006), Method of Testing the Floc Point of Refrigeration Grade Oil

*The test for floc point is intended to determine the waxing tendency of refrigeration grade oils at low temps.The test is based on evaluation of the wax preceipitation tendency of a mixture aonctaining 90% R-12 and 10% by volume of the oil being tested.*

ANSI/ASHRAE 87.2-2002, In-Situ Method of Testing Propeller Fans for Reliability

*Establishes a method of testing propeller fans to measure those dynamic characteristics that are essential in the proper selection and application of such fans to minimize the potential for fatigue failure.This standard applies to propeller fans used in heating, ventilation, refrigeration and air conditioning equipment which:*
*(a) are built-up or monolithic construction,*
*(b) may include a slinger ring or hub, or both, and*
*(c) are direct or belt driven.*
*This test method characterizes the fan in the application for which it is intended.*

ANSI/ASHRAE 87.3P-2001 (R2006), Method of Testing Propeller Fan Vibration - Diagnostic Test Methods

*This standard establishes laboratory and on-site diagnostic test methods for identifying causes of vibration problems involving direct-driven propeller fans for condenser cooling in air conditioning units, heat pumps, and others.*

ANSI/ASHRAE 90.1n-2003, Energy Standard for Buildings Except Low-Rise Residential Buildings

*Updates the normative references. These changes affect the testing procedures for determining the building material thermal properties and assembly U-factors of Sections A9.3.1 and A9.3.2 of Normative Appendix A. Test procedure ASTM C1363 replaces ASTM C236 and ASTM C976 for these properties. Also, where credit is taken for a low-emissivity coating for skylights, the coating emissivity shall now be determined in accordance with NFRC 300-2001 instead of NFRC 301-1993.*

ANSI/ASHRAE 90.2-2007, Energy Efficient Design of New Low-Rise Residential Buildings

*7/24/1995*

*This Standard covers new residential dwelling units for human occupancy. For purposes of this Standard, residential dwelling units include single family houses and multi-family structures of three stories (above grade) or fewer including manufactured housing and mobile homes, and does not include transient housing such as hotels, motels, nursing homes, jails and barracks. This Standard covers building envelope, heating and air-conditioning equipment and systems, and provisions for overall building design alternatives and trade-offs. This Standard does not cover specific procedures for the operation, maintenance and use of residential buildings. This Standard does not cover portable products such as appliances and heaters. This Standard does not cover residential electric service wiring or lighting requirements.*

ANSI/ASHRAE 90.2a-2006, Energy Efficient Design of Low-Rise Residential Buildings

*The current language in the 2004 edition of Standard 90.2 has the potential for causing confusion when Section 8.7.1, which provides a choice of assessing duct location in the Annual Energy Cost Budget Method, is compared to Chapters 5 and 6 of the Standard. The prescriptive provisions in these Chapters do not cite such a distinction. This addendum is designed to address this difference with more concise text that coordinates the provisions.*

ANSI/ASHRAE 90.2b-2006, Energy Efficient Design of Low-Rise Residential Buildings

*These requirements for basement walls with interior insulation represent insulation levels necessary to ensure a minimal level of energy efficiency.*

ANSI/ASHRAE 90.2f-2006, Energy Efficient Design of Low-Rise Residential Buildings

*The Project Committee felt changes to the values in moderate climates are appropriate because of recent studies that examined the energy benefits of higher SHGC in moderate to cold climates revealed that higher values could have some benefit to energy savings. In particular, these studies found in Climate Zones 4 and 5 that higher values would not result in higher energy use and could permit the builders/designers more flexibility in choosing higher or lower SHGC depending on building location and fenestration orientation without having a detrimental impact on energy use.*

ANSI/ASHRAE 90.2g-2004 , Energy-Efficient Design of Low-Rise Residential Buildings

*This proposed addendum deletes all provisions, tables, figures and references that are solely associated with manufactured housing. SSPC 90.2 recommends this action because the energy regulations governing manufactured housing are controlled by the HUD Code (The HUD Code, 24 CFR 3280) and the Manufactured Housing Institute recognizes only the Federally Mandated HUD Code. In addition, Standard 90.2-2001 is less stringent than the HUD Code for six states.*

ANSI/ASHRAE 90.2g-2006, Energy Efficient Design of Low-Rise Residential Buildings

*the following changes were needed to clarify the requirements for High Albedo roofs.*

ANSI/ASHRAE 90.2h-2004, Energy-Efficient Design of Low-Rise Residential Buildings

*This proposed addendum adds a roofing product rating program developed by the Cool Roof Rating Council (CRRC) as a credible and readily available means to determine radiative energy performance and to establish compliance with the standard. The test procedure is considered comparable to the ASTM solar reflectance test methods currently cited. A roofing product can be verified by a label placed on it (or its container or technical literature) or through the CRRC's web site directory.*

ANSI/ASHRAE 90.2h-2006, Energy Efficient Design of Low-Rise Residential Buildings

*The ASHRAE Standard 90.2-2004 climatic data for China contains a single location (Shanghai/Hongqiao) and two locations in Taiwan. This limited data is not adequate to effectively use the standard in China. The SPC 169 Weather Data for Building Design Standards has similar climatic data and SPC 169 is working on the development of a standard that will contain all of the data required by 90.1 and 90.2, including China, when completed. In the interim, this addendum adds the current climatic data for just China (368 locations) and Taiwan (38 locations) until the SPC 169 work is published.*

ANSI/ASHRAE 90.2i-2004, Energy-Efficient Design of Low-Rise Residential Buildings

*The revisions proposed in this second public review draft clarify the intent of Section 6.7 in the first public review draft while adding a new exception for packaged air-conditioning/electric furnace units that were previously not addressed by this requirement. This second public review draft also makes extensive changes to Tables 5-2 and 5-11, responding to commenters who recommended further simplification of the tables.*

ANSI/ASHRAE 90.2i-2006, Energy Efficient Design of Low-Rise Residential Buildings

*This addendum updates the standards referenced by Standard 90.2-2004. In one case both the standard and Table 5.9.1 are updated in order to coordinate the proposed change. The standards shown have been reviewed and references have been revised in preparation for the 2007 edition of Standard 90.2.*

ANSI/ASHRAE 90.2j-2004, Energy-Efficient Design of Low-Rise Residential Buildings

*This proposed addendum provides clarification that all combinations of cooling and heat pump equipment must have rated capacity and efficiency performance data consistent with federal law.*

ANSI/ASHRAE 90.2k-2004, Energy-Efficient Design of Low-Rise Residential Buildings

*This proposed addendum revises the piping insulation requirements in ASHRAE Standard 90.2 to be consistent with the requirements in ASHRAE Standard 90.1-2001.*

ANSI/ASHRAE 93-2003, Solar Collectors, Method of Testing to Determine the Thermal Performance of

*Provides test methods for determining the thermal performance of solar energy collectors that use single-phase fluids and have no significant internal energy storage. It applies to non-concentrating and concentrating solar collectors in which a fluid enters the collector through a single inlet and leaves the collector through a single outlet. For additional information on the applicability of this standard, refer to the scope section in the standard itself.*

ANSI/ASHRAE 94.1-2002 (R2006), Method of Testing Active Latent-Heat Storage Devices Based on Thermal Performance

*This standard applies to latent heat thermal energy storage devices in which a transfer fluid enters the device through a single inlet and leaves the device through a single outlet.*

ANSI/ASHRAE 94.2-1989 (R2006), Devices with Electrical Input and Thermal Output Based on Thermal Performance, Methods of Testing

*This standard applies to thermal storage devices that are charged electrically and discharged thermally.*

ANSI/ASHRAE 94.3-1986 (R2006), Active Sensible Thermal Energy Storage Devices, Method of Testing Based on Thermal Performance

*This standard applies to sensible-heat-type thermal energy storage devices in which a trasnfer fluid enters the device through a single inlet and leaves the device through a single outlet.*

ANSI/ASHRAE 97-1999 (R2003), Sealed Glass Tube Method to Test the Chemical Stability of Materials for Use Within Refrigerant Systems

*Establishes a means of testing the various materials used in hermetic and non-hermetic refrigerant systems. The test is primarily intended as an accelerated screening tool and can provide valuable information on the chemical stability of system materials. The test involves charging sealed glass tubes with the material, aging the tubes, and then analyzing the results by various means.*

ANSI/ASHRAE 99-2006, Refrigeration Oil Description

*First published in 1981 and reaffirmed in 1987, Standard 99 provides a uniform means of identifying particular refrigeration oils without resorting to commercial names or designations by utilizing common laboratory tests that are well recognized by those concerned with the use of the oil. This proposed revision of the standard expands its scope to include synthetic lubricants, especially those used with HFC refrigerants.*

ANSI/ASHRAE Standard 116-1995 (R2005), Methods of Testing for Rating Seasonal Efficiency of Unitary Air Conditioners and Heat Pumps

*This standard covers electrically driven, air-cooled air conditioners and heat pumps used in residential applications withcooling and heating capacity of 65,000 Btu/b and less. The methods of test in this standard are broadly applicable, but this standard provides cooling and heating hours in temperature bins for only the contiguous states of the continental USA. Equipment with single-speed, multiplespeed, variable-speed, unloading, or multiple compressors for ducted and ductless systems are included. Standard does not apply to room air conditioners.*

ANSI/ASHRAE/IESNA 100-2006, Energy Conservation in Existing Buildings

*This proposed revision of ANSI/ASHRAE/IESNA Standard 100-1995 (which was modified by Addendum b) brings it in line with other published ASHRAE documents; specifically ANSI/ASHRAE/IESNA Standard 90.1-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings, and the 2003 ASHRAE Handbook--HVAC Applications. This draft, which is the Second Public Review Draft, includes further improvements in response to the First Public Review in October 2004.*

ANSI/ASHRAE/IESNA 100b-1997, Energy Conservation In Existing Buildings

*Proposes to make changes to Section 7.5 Electric Motors and Subsection 7.8.2.6 relating to total connected lighting power (CLP)*

ANSI/ASHRAE/IESNA 90.1-2007, Energy Efficient Design of New Buildings Except Low-Rise Residential Buildings (Including Addenda B, C, D, E, F, G, I and M)

*The Purpose of this standard (hereafter referred to as code) is to provide minimum requirements for the energy-efficient design of buildings except low-rise residential buildings. This code provides: (a) minimum energy-efficient equirements for the design and construction of; 1. New buildings and their systems, 2. New portions of buildings and thier systems, and 3. New systems and equipment in existing buildings. (b) criteria for determining compliance with these requirements. 2.2 The provisions of this code apply to: (a0 the envelope of buildings provided that the enclosed spaces are:*
*1. heated by a heating system whose output capacity is greater than or equal to 3.4 Btu//h*ft -2 (10W/m-2), or 2. cooled by a cooling system whose sensible output capacity is greater than or equal to 5 Btu/h * ft-2 (15 W/m-2);*
*(b) the following systems and equipment used*

ANSI/ASHRAE/IESNA 90.1a-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum incorporates proposals made by leaders at the U.S. Green Building Council into Appendix G, Performance Rating Method. It clarifies how windows should be distributed and how uninsulated assemblies should be treated in the baseline simulation model. It also increases the size range for packaged VAV systems in this model and provides more detail on how service hot water systems should be modeled. These revisions may affect the ultimate performance rating of buildings.*

ANSI/ASHRAE/IESNA 90.1aa-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This Addendum updates the references in Section 12 to the current referenced material. Some of the references were deleted because they are no longer referenced by the standard, some were updated to reflect the correct reference, and others were changed to reflect the most current document.*

ANSI/ASHRAE/IESNA 90.1ab-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum modifies exception d to Section 6.3.6.1 to define commercial kitchen hoods per IMC (International Mechanical Code). IMC defines a Type 1 hood as a kitchen hood for collecting and removing grease vapors, and smoke. The change was made because the project committee discovered that NFPA 96 does not contain a Type 1 classification for kitchen hoods as stated in exception d. And since the wording is now the same as that in the IMC, there is no need to reference it.*

ANSI/ASHRAE/IESNA 90.1ac-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This addendum as a whole proposes modifications to Section 11, the Energy Cost Budget (ECB) Method, in order to incorporate items from Appendix G that apply. This second public review draft includes several independent substantive changes to the first public review draft to incorporate improvements suggested by reviewers. The changes are intended to add clarity and specificity to a number of different paragraphs.*

ANSI/ASHRAE/IESNA 90.1ad-2005, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum adds a roofing product rating program developed by the Cool Roof Rating Council (CRRC) as a credible and readily available means to determine radiative energy performance and to establish compliance with the standard. The test procedure is considered comparable to the ASTM solar reflectance test methods currently cited. A roofing product can be verified by a label placed on it (or its container or technical literature) or through the CRRC's web site directory.*

ANSI/ASHRAE/IESNA 90.1ae-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This second public review draft of proposed addendum ae further modifies the occupancy sensor control requirement to provide exemptions for spaces with multi-scene control where control conflicts may arise, for shop and lab classrooms where safety issues may arise, and for preschool through twelfth-grade classrooms where occupancy is generally constant and therefore less energy savings is available.*

ANSI/ASHRAE/IESNA 90.1ag-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed revision of the retail "sales area" LPD value is a correction of the previously approved Addendum g. When the initial table of space-by-space method LPDs was prepared for Addendum g public review, the "Retail Sales area" was inadvertently left at the previous 90.1-2001 value of 2.1 W/ft2 (23 W/m2). This addendum revises this value to the correct value produced by the applicable space type models of 1.7 W/ft2 (18 W/m2).*

ANSI/ASHRAE/IESNA 90.1ah-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This addendum is intended to add weather data for 9 new locations, including the District of Columbia (to remedy an earlier omission) plus 6 locations in the US Territories and a new location in the Philippines. These additions do not impact the stringency of the standard but simply increase its usability. The omission of DC from the current list of weather locations surfaced during training sessions about 90.1-1999/2001 compliance that were presented in the region near Washington, DC.*

ANSI/ASHRAE/IESNA 90.1ai-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This addendum proposes that Section 9.2.3 be revised so that internally illuminated exit signs shall not exceed 5 watts per face. The existing standard has no wattage limitation for exit signs, only an efficiency requirement for luminaries operating at greater than 20 watts. The foreword to this addendum shows that, with exits signs generally available today, the 5-watt maximum is both possible and economical.*

ANSI/ASHRAE/IESNA 90.1ak-2005, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This second public review draft of proposed Addendum ak makes several independent substantive changes to the first draft: it removes Note d from the table and updates two references. The main purpose of Addendum ak is to restore the testing requirements (CTI STD-201) that were removed by Addendum b to Standard 90.1-2001, in effect canceling most of the changes that were made to the standard by Addendum b.*

ANSI/ASHRAE/IESNA 90.1al-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum updates some of the references that relate to Section 11, specifically those that concern building energy simulation software programs and annual weather data. All of these references are found in Informative Appendix E.*

ANSI/ASHRAE/IESNA 90.1am-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This addendum proposes to reduce the number of climate zones from 26 to 8. The effect of this proposed change would be to reduce the size of 90.1 and simplify compliance. In addition, this change would make 90.1 more consistent with other standard and code documents in its treatment of climate zones.*

ANSI/ASHRAE/IESNA 90.1b-2005, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum corrects problems found in addendum d, which established single-package vertical air conditioners (SPVAC) and heat pumps (SPVHP) as new product classes and established test procedures and standards for these products. DOE's examination of Addendum d revealed some deficiencies with the test procedures (ARI Standard 390-2001) and with the minimum efficiency standards, which were inconsistent with current federal regulations. This addendum corrects these deficiencies.*

ANSI/ASHRAE/IESNA 90.1c-2005, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum revises the definition of building entrance to include vestibules and clarifies the envelope requirements and exceptions for vestibules in Section 5.4.3.4. The reasoning for each exception is provided in the foreword to this addendum.*

ANSI/ASHRAE/IESNA 90.1d-2005, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum updates the references cited in Standard 90.1, especially those applicable to the building envelope (Section 5), and deletes references that are not cited in the body of the standard.*

ANSI/ASHRAE/IESNA 90.1e-2005, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum recognizes that track and busway type lighting systems can be limited by circuit breakers and permanently installed current limiters below a value of 30 W/lin ft (98 W/lin m). This wording allows these limits to be used to calculate installed power for these installed lighting systems.*

ANSI/ASHRAE/IESNA 90.1f-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum raises the minimum efficiency standard for 3-phase air-cooled central air conditioners and heat pumps less than 65,000 BTU/h in Tables 6.8.1A and 6.8.1B of Standard 90.1-2004 to 13 SEER/7.7 HPSF to be consistent with federal minimum standards for single-phase residential equipment. The proposal also removes the products class for small duct high velocity (SDHV) equipment to be consistent with the DOE final rule.*

ANSI/ASHRAE/IESNA 90.1g-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum amends the minimum efficiency levels of air-cooled air conditioners and heat pumps greater or equal to 65,000 BTU/h contained in Tables 6.8.1A and 6.8.1B of Standard 90.1-2004.*

ANSI/ASHRAE/IESNA 90.1h-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum revises the exceptions to Sections 6.4.3.1.2 and 6.4.3.6 in Standard 90.1-2004. Table 2.1 of ASHRAE's Thermal Guideline for Data Processing Environments (pg, 10), provides environmental conditions for electronic equipment such as that found in data processing centers. This more recent publication found that electronic equipment can perform under more relaxed conditions than were previously believed. In light of this new information, it makes sense to remove these types of spaces from having specific exceptions on temperature and humidification dead bands.*

ANSI/ASHRAE/IESNA 90.1i-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum adds language to Section 9.1.4(b) that allows additional flexibility in assigning wattage to luminaires with multi-level ballasts where other luminaire components would restrict lamp size. In these cases the manufacturer's labeling of maximum wattage based on these restrictions would be allowed as the maximum value for compliance calculation.*

ANSI/ASHRAE/IESNA 90.1j-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum to Section 9.4.1.3 allows additional flexibility in complying with the controls requirements by allowing additional combinations of commonly available control equipment. This flexibility allows designers and builders additional cost-effective options for compliance.*

ANSI/ASHRAE/IESNA 90.1k-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*Metal building roofs often include blanket insulation draped over purlins in screw-down roof designs. U-factors for screw down roofs with R-10, R-11, and R-13 insulation were included in Table A2.3 of 90.1-2004. This proposed addendum adds U-factors for R-19 insulation to Table A2.3. U-factors for R-19 Screw Down Roofs were included in California Title 24 (2005 Joint Appendices Table IV.7.*

ANSI/ASHRAE/IESNA 90.1l-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed addendum updates the reference of ANSI/ASHRAE Standard 140-2001, Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs to the latest version of Standard 140, the 2004 version, which includes additional tests covering unitary cooling equipment models. These additional tests increase the coverage and potentially reduce errors occurring in building energy simulation programs used the Energy Cost Budget section.*

ANSI/ASHRAE/IESNA 90.1m-2003, Energy Efficient Design of New Buildings Except Low-Rise Residential Buildings

ANSI/ASHRAE/IESNA 90.1n-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*Exception (b) to Section 5.5.4.4.1 allows users to take credit for overhangs towards compliance with the maximum SHGC requirements. The table of credits was developed based on an opaque overhang. This addendum provides clarification on how the credits would apply to louvered overhangs and to partially opaque overhangs.*

ANSI/ASHRAE/IESNA 90.1o-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*The ASHRAE Standard 90.1-2004 climatic data for China contains a single location (Shanghai/Hongqiao) which is not adequate to effectively use the standard across the entire country. The SPC 169 Weather Data for Building Design Standards has current climatic data and is developing a standard that would contain all of the data required by 90.1 and 90.2. In the mean time the current climatic data for just China (368 locations) and Taiwan (38 locations) was made available and used to develop this proposal.*

ANSI/ASHRAE/IESNA 90.1p-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This proposed modification addresses the often special lighting needs of certain groups of individuals other than just the “visually impaired” where spaces are designed specifically for their use. The standard industry light level and design recommendations on which the standard LPDs are based do not specifically include special categories and adjustments for persons with special lighting needs. Therefore, the existing exemption for “visually impaired” has been reworded to more clearly indicate where lighting exemptions may be granted for medical condition needs.*

ANSI/ASHRAE/IESNA 90.1q-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This third public review draft of proposed Addendum q makes independent substantive changes to the previous draft. It adds some very specific applications to table 9.3.2 to remove the potential confusion that could occur in using the standard if these applications were absent from the table. Examples of the new applications are Lighting at ATM Machines, Lighting at Entrances and Gatehouse, and Lighting at Drive-up windows at Fast Food Restaurants. No LPD values have been revised in this draft.*

ANSI/ASHRAE/IESNA 90.1r-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*The following changes are an update for ARI Standard 340/360 from 2000 to 2004. The changes in ARI 340/360 include an update in the test method of equipment between 65,000-135,000 Btu.*

ANSI/ASHRAE/IESNA 90.1s-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*ASHRAE Standard 62.1-2004 is quite different from the current referenced version of ASHRAE Standard 62-1999, as a result the following changes are required in order to update the reference for ASHRAE Standard 90.1, required changes in the referenced text section, as well as in Section 12. While there are substantive changes, the committee attempted to keep the intent of the referenced sections the same for Standard 90.1.*

ANSI/ASHRAE/IESNA 90.1t-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*The following change to Table 6.8.1F adds an additional requirement of combustion efficiency to the current requirement of thermal efficiency for boilers. The change also reflects a new test procedure from DOE which references the H.I. Htg Boiler Std.*

ANSI/ASHRAE/IESNA 90.1u-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This addendum provides guidance for complying with the intent of the baseline building design for HVAC systems 5, 6, 7, and 8 which shall be modeled as floor-by-floor HVAC systems.*

ANSI/ASHRAE/IESNA 90.1v-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*Proposed change to Section 6.2.3.8, Ventilation Controls for High-Occupancy Areas.*

ANSI/ASHRAE/IESNA 90.1x-2006, Energy Standard for Buildings Except Low-Rise Residential Buildings

*After a review of Chapter 12, Normative References it is proposed to update ASTM C1549 to the most current year. It is also proposed to update portions of Appendix G with the changes made to the body of Section 5. ASTM C1549 was added as a reference to 90.1-2004 in Addendum AD.*

ANSI/ASHRAE/IESNA 90.1y-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This addendum changes the limitation on VAV fan motor requirements from 30 hp (22kW) to 15 hp (11kW). The reduction to 15 hp (11kW) from 30 hp (11kW) is justifiable since the cost of VFD's has decreased significantly over the past few years.*

ANSI/ASHRAE/IESNA 90.1z-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings

*This change clarifies the language in the exception to Section 6.2.1. The modification was to clearly show that applications requiring secondary coolants (e.g.: glycol or brine) for freeze protection are excluded from the standard. This was previously implied in the labels of "Leaving Chiller Water Temperature, Entering Condenser Water Temperature and Condensing Water Temperature Rise", but has now been more clearly defined.*

ANSI/ASHRAE/SMACNA 126-2000, Methods of Testing HVAC Air Ducts

*Provides laboratory test procedures for the evaluation of HVAC air ducts. This standard may be used to determine HVAC air-duct structural strength, dimensional stability, durability and leakage characteristics.*

## ASIS (ASIS International)

## ASME (American Society of Mechanical Engineers)

ANSI B1.20.3-1976 (R2003), Dryseal Pipe Threads (Inch)

*Dryseal pipe threads are based on the USA (American) pipe thread, however, they differ from the USA (American) pipe thread in that they are designed to seal pressure tight joints without the necessity of using sealing compounds. This standard covers criteria for Dryseal Pipe Threads.*

ANSI B16.18-2001 (R2005), Cast Copper Alloy Solder Joint Pressure Fittings

*Cast copper alloy solder joint pressure fittings designed for use with copper water tube, establishes requirements for: pressure-temperature ratings, abbreviations for end connections, sizes and method of designating openings of fittings, marking, material, dimensions and tolerances, and tests.*

ANSI B18.11-1961 (R2005), Miniature Screws

*This Standard covers the complete general and dimensional data for slotted head miniature screws recognized as American National Standard.*

ANSI B18.2.3.8M-1981 (R2005), Screws, Metric Hex Lag

*This Standard covers the complete general and dimensional data for metric hex lag screws recognized as American National Standard*

ANSI B18.2.4.4M-1982 (R2005), Nuts, Metric Hex Flange

*This Standard covers the complete general and dimensional data for metric hex flange nuts recognized as American National Standard.*

ANSI B18.22M-1981 (R2005), Washers, Metric Plain

*This Standard covers general specifications and dimensions for flat, round hold washers, both soft (as fabricated) and hardened, intended for use in general purpose applications.*

ANSI B27.6-1992 (R2005), General-Purpose Uniform Cross Section Spiral Retaining Rings

*This Standard is intended to cover complete general and dimensional data for two series of general purpose uniform cross section spiral retaining rings, which may be used with the nominal size shafts and housings listed in the grooves of the recommended dimensions listed.*

ANSI B27.7M-1977 (R2005), General Purpose Tapered and Reduced Cross Section Retaining Rings (Metric)

*This Standard is intended to cover complete general and dimensional data for three series of general purpose tapered and reduced cross section retaining rings, which may be used with the nominal size shafts and housings listed in the grooves of the recommended dimensions listed.*

ANSI B27.8M-1978 (R2005), General Purpose Tapered and Reduced Cross Section Retaining Rings (Metric): Type 3DM1 – Heavy Duty External Rings: Type 3EMl – Reinforced "E" Rings: Type 3FM1 – "C" Type Rings

*This Standard is intended to cover complete general and dimensional data for three series of general purpose metric tapered and reduced cross section retaining rings, which may be used with the nominal size shafts and housings listed in the grooves of the recommended dimensions listed.*

ANSI B32.100-2005, Preferred Metric Sizes for Flat, Round, Square, Rectangle, and Hexagon Metal Products

*Establishes a preferred series of metric thicknesses, a preferred series of metric widths, and a preferred series of metric lengths for flat metal products of rectangular cross section. The thicknesses and widths shown in this Standard are also applicable to base metals that may be coated in later operations. This Standard also establishes a preferred series of metric sizes for round, square, rectangular and hexagonal metal products.*

ANSI B94.21-1968 (R2003), Gear Shaper Cutters

*Covers types, sizes, tolerances, marking and nomenclature for ground, finishing type gear shaper cutters for generating involute spur and helical gears, splines, and serrations. It also covers ground, finishing type involue herringbone gear shaper cutters for generating herringhone gears.*

ANSI B94.7-1980 (R2005), Hobs

*This standard covers types, sizes, tolerances, marking and nomenclature for hobs of one-piece construction used for generating involute gears, involute splines, parallel side splines, involute serrations and roller chain sprockets.*

ASME A112.1.2-2004, Air Gaps in Plumbing Systems

*Identifies methods of providing protection against backsiphonage through means of an air gap and establishes physical requirements and methods of testing of air gaps for plumbing fixtures and water receptors.*

ASME A112.1.3-2000 (R2005), Air Gap Fittings for Use with Plumbing Fixtures, Appliances and Appurtenances

*This Standard establishes physical requirements and methods of testing for air gap fittings for protecting against back siphonage and back pressure backflow.*

ASME A112.14.1-2003, Backwater Valves

*Establishes requirements for dimensions, performance requirements, connections, materials and finishes, testing and marking of backwater valves. Types of backwater valves covered in this Standard include horizontal backwater valves, combination horizontal backwater valves and manual gate valves, terminal backwater valves, combination floor drains with backwater valves, vertical or 90° backwater valve and related products.*

ASME A112.14.3-2000 (R2004), Grease Interceptors

*This Standard covers general product requirements as well as the performance criteria for the testing and rating of grease interceptors, whose rated flows are 100 gpm (380 L/m) or less.*

ASME A112.14.4-2001, Grease Removal Devices

*Establishes requirements for grease interceptors that are equipped with automatic grease removal devices (GRD). It includes testing requirements and performance criteria designed to assure conformance with this standard. This standard was listed for public review in the 5/21/1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*
*NOTE: 30-day PR with Published chages in separate e-mail*

ASME A112.14.6-2006, FOG (Fats, Oils & Greases) Disposal Systems

*This Standard establishes requirements for FOG (Fats, Oils & Greases) disposal systems.*

ASME A112.18.1-2005/CSA B125.1-2005, Plumbing Fixture Fittings

*Applies to plumbing supply fittings and accessories located between the supply line stop and the terminal fitting, inclusive,as follows:; (a) automatic compensating valves for individual wall-mounted showering systems; (b) bath and shower supply fittings; (c) bidet supply fittings; (d) clothes washer supply fittings; (e) drinking fountain supply fittings; (f) humidifier supply stops; (g) kitchen,sink,and lavatory supply fittings; (h) laundry tub supply fittings; (i) lawn and sediment faucets; (j) metering and self-closing supply fittings; and (k) supply stops.*

ASME A112.18.1-2006/CSA B125.1-2006, Plumbing supply fittings

*Includes supplements as follows: Amendment FT-05-01, Definition of operating control, Amendment FT-05-02, Lawn and sediment faucets, Amendment FT-05-19, Update reference to ASSE 1019-2004*

ASME A112.18.2/CSA B125.2-2005, Plumbing Fixture Waste Fittings

*This Standard applies to plumbing waste fittings NPS-2 and smaller.*

ASME A112.18.2/CSA B125.2-2006, Plumbing Waste Fittings

*Includes the following amendment: Amendment FT-05-08, Inking procedure for detection of cracks*

ASME A112.18.3-2002, Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings

*Addresses functional performance and requires physical characteristics of devices and systems, which provide backflow protection consistent with the level of risk associated with the plumbing fixture fitting application. The Standard establishes specific performance criteria and provides the test methods to prove compliance. It is applicable to all plumbing fixture fittings with outlets not protected by an air gap.*

ASME A112.18.6-2003, Flexible Water Connectors

*This Standard establishes requirements for flexiblewater connectors used in potable water systems under continuous pressure and in accessible locations only. It covers physical and performance requirements, test methods, materials, connections, and other significantproperties, in addition to a general description of materials used. Certain features of construction of the finished product are given, together with the method of marking and identification.*

ASME A112.18.7M-1999 (R2004), Deck Mounted Bath/Shower Transfer Valves with Internal Backflow Prevention

*This Standard establishes requirements for deck mounted, bath/shower transfer valves with integral backflow protection on the secondary outlets.*

ASME A112.19.10-2003, Dual Flush Devices for Water Closets

*Covers physical and performance requirements and test methods pertaining to dual flush devices that are installed within water closet tanks which use 3.5 gal per flush (13.2 Lpf) or greater volume to reduce total volumetric water consumption.*

ASME A112.19.12-2006, Wall Mounted and Pedestal Mounted, Adjustable and Pivoting Lavatory and Sink Carrier Systems

*This Standard establishes physical requirements and tests addressing structural strength, adjustments, materials and drain line hydraulics, mechanical, material, testing, marking, and documentation requirements for wall mounted and pedestal mounted adjustable, pivoting, elevating and tilting lavatory, sink and shampoo bowl carrier systems intended to facilitate use by individuals who are physically challenged.*

ASME A112.19.13-2001, Electrohydraulic Water Closets

*Establishes performance, electrical/electronic conformance, temperature, life cycle, marking and identification requirements for electrohydraulic water closets. This standard ws originally listed for public review in the January 29, 1999 issue of Standards Action. It is being resubmitted due to substantive changes in the text.*

### ASME A112.19.14-2006, Six Liter Water Closets Equipped with Dual Flushing Device

*This Standard establishes physical, material, testing, and marking requirements for six-liter water closets that incorporate a water-conserving dual flushing feature into the fixture. The tests specified in this Standard are for removal of liquid wastes and toilet tissue or other comparable waste loads that are expected when actuating the reduced flush feature of the unit.*

### ASME A112.19.15-2005, Bathtub/Whirlpool Bathtubs with Pressure Sealed Doors

*Establishes material, mechanical, electrical, marking, and testing requirements for bathtubs/whirlpool bathtubs with doors that are made water tight by the use of a pressure seal. It addresses the functional performance and physical characteristics for a pressure sealed door of a bathtub/whirlpool bathtub. The door is intended to allow for entry into the fixture when the tub is empty, and maintains water tightness when the tub is full.*

### ASME A112.19.16-2006, Terrazzo Fixture Requirements

*Establishes the minimum requirements for terrazzo materials that are used to manufacture plumbing fixtures for general use. It includes material, structural and physical test requirements and marking and identification of fixtures complying with this Standard.*

### ASME A112.19.17-2002, Manufactured Safety Vacuum Release Systems for Residential and Commercial Swimming Pool, Spas, Hot Tub and Wading Pool Suction Systems

*Establishes general requirements, dimensions and tolerances, materials, installation instructions, testing requirements, and markings and identification for SVRS Devices. SVRS Devices are intended to be utilized on pool, spa, hot tub, and or therapy unit suction systems. SVRS Devices covered under this standard are designed to prevent high vacuum occurrences that cause human body or body part suction entrapment. Demonstration of compliance with this Standard is merely an indication that the product meets the performance requirements and specifications contained in thisStandard. The responsibility for verification of the device? performance on anycirculation system shall be the responsibility of the design professional.The provisions of this Standard are not intended to prevent the use of any alternatematerial or method of construction, provided any such alternate*

### ASME A112.19.19-2006, Vitreous China Non-Water Urinals

*This Standard establishes requirements and test methods pertaining to materials, significant dimensions and functional performance for vitreous china non-water urinals. The sanitary performance requirements and test procedures apply to all types of non-water urinals that discharge into gravity waste systems in permanent buildings and structures independent of occupancy*

### ASME A112.19.1M Supplement 1-1998 (R2004), Enamel Cast Iron Plumbing Fixtures

*This Standard applies to enameled cast iron plumbing fixtures and includes requirements for materials, cnstruction, inspection, testing, marking, and definitions.*

### ASME A112.19.1M Supplement 2-2000 (R2004), Enameled Cast Iron Plumbing Fixtures

*This Standard applies to enameled cast iron plumbing fixtures and includes requirements for materials, cnstruction, inspection, testing, marking, and definitions.*

### ASME A112.19.1M-1994 (R2004), Enameled Cast Iron Plumbing Fixtures

*This Standard applies to enameled cast iron plumbing fixtures and includes requirements for materials, cnstruction, inspection, testing, marking, and definitions.*

### ASME A112.19.2-2003, Vitreous China Plumbing Fixtures and Hydraulic Requirements for Water Closets and Urinals

*This Standard establishes requirements and test methods pertaining to materials, significant dimensions and functional performance for vitreous china plumbing fixtures. The sanitary performance requirements and test procedures apply to all types of water closets and urinals that discharge into gravity waste systems in permanent buildings and structures independent of occupancy. Fixtures referenced in this Standard include water closets, lavatories, urinals, bidets, service sinks, drinking fountains, and institutional application fixtures.*

### ASME A112.19.3-2000 (R2004), Stainless Steel Plumbing Fixtures (Designed for Residential Use)

*This Standard establishes the requirements for the types, thicknesses, and finish of stainless steel metal to be used for the fixtures and certain features of construction designed for residential use. Also given are definitions, inspection methods, and means for identification of fixtures complying with this Standard.*

### ASME A112.19.4M-1994 (R2004), Porcelain Enameled Formed Steel Plumbing Fixtures

*This Standard covers materials, methods of inspection, dimensions, testing, and identification of porcelain enameled formed steel plumbing fixtures, such as bathtubs, sinks, and lavatories, which are in general use and demand.*

ASME A112.19.4M-Supplement 1-1998 (R2004), Porcelain Enameled Formed Steel Plumbing Fixtures

*Adds a revision to paragraph 4.2.2 relating to "Lavatory Overflows" and adds a new paragraph, 5.4 "Lavatory Overflow Test." to the previously submitted revison to paragraph 3.3.6. This is the second public review for this standard. It was originally listed in the February 13, 1998 issue of Standards Action. It is being resubmitted now due to substantive changes.*

ASME A112.19.4M-Supplement 2-2000 (R2004), Porcelain Enameled Formed Steel Plumbing Fixtures

*Revises lavatory overflow requirements.*

ASME A112.19.5-2005, Trim for Water-Closet Bowls, Tanks and Urinals

*This Standard establishes criteria for those items of trim for water-closet bowls, tanks, and urinals known as spuds, locknuts for spuds, flush valves, and flush elbows. Requirements for fill valves (ballcocks) are defined in ANSI/ASSE 1002. This Standard does not address the compatibility of materials. Nothing stated herein shall preclude the production of special design flush valves with unique non-standard features for use in low consumption plumbing fixtures.*

ASME A112.19.7-2006, Hydromassage Bathtub Appliances

*Establishes performance criteria for whirlpool and air jetted bathtub appliances and suction fittings used in whirlpool bathtub appliances. It is intended for use by, but not limited to, manufacturers, distributors, retailers, architects, engineers, plumbing contractors, jetters, installers, regulatory agencies, and users.*

ASME A112.19.8-2007, Suction Fittings for Use in Swimming Pools, Wading Pools, Spas and Hot Tubs

*Establishes materials, testing and marking requirements for suction fittings that are designed to be totally submerged for use in swimming pools, wading pools, spas and hot tubs, as well as other aquatic facilities.*

ASME A112.19.9M-1991 (R2002), Non-Vitreous Ceramic Plumbing Fixtures

*Covers physical requirements and test methods pertaining to material, grading, dimensions, certain features of construction, and types and sizes of plumbing fixtures of non-vitreous ceramic currently in general use and demand. Also given are definitions, inspection methods, and tests, which establish generally acceptable quality standards. Fixtures included in this Standard are water closet tanks, lavatories, urinals without integral trap, bidets, bathtubs, shower receptors, kitchen and bar sinks, service sinks, and drinking fountains.*

ASME A112.20.1-2004, Qualification of Installers of High Purity Piping Systems

*Establishes minimum training and performance criteria, identified by industry consensus, for high purity piping system installers. It applies to any individual who installs high purity piping systems, which are typically specified for critical clean applications in the semiconductor, pharmaceutical, biotechnology, chemical, fiber optics, food, and dairy industries.*

ASME A112.20.2-2004, Qualification of Installers of Firestop Systems and Devices for Piping Systems

*Establishes minimum requirements, identified by industry consensus, for the training and qualification of installers of firestop systems and devices for piping systems. The qualifications under this Standard are restricted to those that are required by this standard, the model building and plumbing codes requirements for firestopping developed by NFPA, ICBO, SBCCI, BOCA, ICC and IAPMO, and consensus standards for piping system penetrations of fire resistance rated walls, partitions, floors, floor/ceiling assemblies, roof/ceiling assemblies or shaft enclosures.*

ASME A112.21.3M-1985 (R2001), Hydrants for Utility and Maintenance Use

*Establishes requirements for hydrants including nonfreeze wall, ground post, and floor types and moderate climate wall and floor types, which are used in buildings and grounds as water supply terminals, employed principally for lawn and flower bed watering hoses and normal building maintenance functions. It covers definitions, connection, materials, variations, testing and operation, and general requirements for the hydrant types included in the scope.*

ASME A112.3.4-2000 (R2004), Macerating Toilet Systems and Related Components

*This Standard establishes physical, performance, and testing requirements applicable to macerating toilet systems and related components.*

ASME A112.36.2M-1991 (R2002), Cleanouts

*Covers cleanouts including floor and wall types used in concealed piping in and adjacent to commercial, industrial, institutional, and other buildings open to public use.*

ASME A112.4.1-1993 (R2002), Water Heater Relief Valve Drain Tubes

*Covers the test methods and performance requirements applicable to water heater relief valve drain (or runoff) tubes for use with listed relief valves having a steam rating of 100,000 BTU per hour (Btuh) or less.*

ASME A112.4.14-2004, Manually Operated, Quarter-Turn Shutoff Valves for Use in Plumbing Systems

*Establishes requirements for manually operated, quarter turn valves in nominal sizes (NPS) £ 2. These valves are intended for indoor installation as potable water shutoff valves between the meter and the supply stop. Valves governed by this Standard are intended for service at temperatures between 34 °F (1 °C) and 180 °F (82 °C), with an allowable working pressure rating not less than 125 psi (862 kPa).*

ASME A112.4.2-2003, Water Closet Personnel Hygiene Devices

*This Standard establishes general and performance requirements, test methods and marking requirements for bidet sprays and other optional features as applied to water closets, water closet seats and other retrofit devices. Products covered by this standard are intended to be supplied with cold water only.*

ASME A112.4.3M-1999 (R2004), Plastic Fittings for Connecting Water Closets to the Sanitary Drainage System

*This Standard establishes physical, performance,and testing requirements applicable to the joint that connects a water closet to the sanitary drain piping of a plumbing system.*

ASME A112.4.7-2002, Point of Use and Branch Water Sub-metering Systems

*Establishes the physical and accuracy requirements, and test methods which pertain to point of use and branch sub-metering systems applied in the plumbing system downstream of the main utility meter at the point of use or in a branch line serving a single residence.*

ASME A112.6.1M-1997 (R2002), Supports for Off-the-Floor Plumbing Fixtures for Public Use

*Applies to floor-affixed supports for off-the-floor plumbing fixtures, including combinations carriers and waste fittings for water closets, and carriers for urinals, lavatories, sinks, and water coolers.*

ASME A112.6.2-2000 (R2004), Framing-Affixed Supports for Off-the-Floor Water Closets with Concealed Tanks

*This Standard establishes minimum performance requirements for framing-affixed supports for off-the-floor water closets with concealed tanks.*

ASME A112.6.3-2001, Floor Drains

*Establishes design requirements for floor, area, adjustable floor, and trench drains which are used inside of, or outside and immediately adjacent to, building structures which are typically other than residential. It includes definitions, nomenclature, outlet types and connections, grate free area, top loading classification, materials and finishes, and variations in product design. This standard was listed for public review in the 4/21/2000 issue of Standards Action. It is being resubmitted due*

*to substantive changes to the text, which are listed here in their entirety.*

ASME A112.6.4-2003, Roof, Deck, and Balcony Drains

*Establishes minimum design requirements for roof drains including general purpose, gutter and cornice, parapet and promenade, balcony or deck types, which convey rainwater from the roof area of building structures. It includes definitions, nomenclature outlet types and connections, dome or grate free area, top loading classifications, materials and finishes, and accessories. This standard was listed for public review in the 4/21/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ASME A112.6.7-2001, Enameled and Epoxy Coated Cast Iron and PVC Plastic Sanitary Floor Sinks

*Applies to enameled and epoxy coated cast iron and PVC plastic sanitary floor sinks and include requirements for mater construction, inspection, testing and marking. This standard was listed for public review in the 7/28/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ASME A112.6.9-2005, Siphonic Roof Drains

*Establishes minimum requirements and provides guidelines for the proper design, installation, examination, and testing of siphonic roof drains and siphonic roof drainage piping systems. It includes definitions of terms and parameters involved in the proper design of siphonic drainage systems.*

ASME A120.1-2006, Safety Requirements for Powered Platforms and Traveling Ladders and Gantries for Building Maintenance

*This Standard establishes safety requirements for powered platforms (scaffolds) for buildings where window cleaning and related services are accomplished by means of suspended equipment at heights in excess of 35 ft (11 m) above a safe surface (e.g., grade, street, floor, or roof level). Additionally, this standard establishes safety requirements for permanent traveling ladders and gantries (TLG).*

ASME A13.1-2007, Scheme for the Identification of Piping Systems

*This Standard is intended to establish a common system to assist in identification of hazardous materials conveyed in piping systems and their hazards when released in the environment.*

ASME A17.1-2004, Elevators and Escalators, Safety Code for

*Covers safety requirements for elevators, escalators, dumbwaiters, moving walks and material lifts.*

ASME A17.1a-2005, Safety Code for Elevators and Escalators

*Covers safety requirements for elevators, escalators, dumbwaiters, moving walks and material lifts.*

ASME A17.1S-2005, Supplement to ASME A17.1-2004 Safety Code for Elevators and Escalators

*Covers safety requirements for electrica and hydraulic elevators.*

ASME A17.2-2004, Guide for Inspection of Elevators, Escalators, and Moving Walks

*Covers recommended inspection and testing procedures for electric and hydraulic elevators, escalators, and moving walks required to conform to the Safety Code for Elevators and Escalators, A17.1-1955 and later editions and the Safety Code for Existing Elevators and Escalators, A17.3. This Guide also addresses some requirements from editions of A17.1 prior to 1955. Note: This Guide may not reflect the latest requirements in the current A17.1 and A17.3 Codes.*

ASME A17.3-2005, Safety Code for Existing Elevators and Escalators

*The Code covers requirements for existing elevators, escalators, and their hoistways.*

ASME A17.4-1999, Guide for Emergency Evacuation of Passengers from Elevators

*Guide for evacuation of passengers from stalled elevators.*

ASME A17.5-2004, Elevator and Escalator Electrical Equipment

*Applies to the electrical equipment for elevators, escalators, moving walks, dumbwaiters, material lifts, and elevating devices for persons with physical disabilities (platform lifts and stairway chairlifts): (a) motor controllers; (b) motion controllers; (c) operation controllers; (d) operating devices; and (e) all other electrical equipment not listed/certified and labelled/marked to another product safety standard or code.*

ASME A17.7/CSA B44.7-2006, Performance Based Safety Code for Elevators and Escalators

*This Code covers the design, construction, operation, inspection, testing, maintenance, alteration, and repair of the following equipment and its associated parts, rooms, spaces and hoistways, where located in or adjacent to a building or structure: (a) hoisting and lowering mechanisms, equipped with a car, which move between two or more landings. This equipment includes, but is not limited to elevators (see 1.3). (b) power-driven stairways and walkways for carrying persons between landings. This equipment includes, but is not limited to escalators and moving walks (see 1.3). (c) hoisting and lowering mechanisms equipped with a car which serves two or more landings and is restricted to the carrying of material by its limited size or limited access to the car. This equipment includes, but is not limited to dumbwaiters and material lifts (see 1.3). NOTE 1.1.1(b) and (c): Only elevators are covered in*

ASME A18.1-2005, Safety Standard for Platform Lifts and Stairway Chairlifts

*This safety Standard covers the design, construction, installation, operation, inspection, testing, maintenance, and repair of inclined stairway chairlifts and inclined and vertical platform lifts intended for transportation of a mobility impaired person only.*

ASME A90.1-2003, Safety Standard for Belt Manlifts

*Applies to the manufacture, installation, maintenance, inspection, and operation of continuous belt manlifts.*

ASME AG-1-2003, Nuclear Air and Gas Treatment, Code on

*This Code provides requirements for design, fabrication, inspection, and testing of air cleaning and conditioning components and appurtenances, as well as air cleaning components used in engineering safety systems in nuclear facilities.*

ASME AG-1a-2004, Code on Nuclear Air and Gas Treatment

*Provides requirements for design, fabrication, inspection, and testing of air cleaning and conditioning components and appurtenances, as well as air cleaning components used in engineering safety systems in nuclear facilities.*

ASME B1.1-2003, Unified Inch Screw Threads (UN and UNR Thread Form)

*This Standard specifies the thread form, series, class, allowance, tolerance, and designation for unified screw threads. (In order to emphasize that unified screw threads are based on inch modules, they may be denoted unified inch screw threads.) Several variations in thread form have been developed for unified threads; however, this Standard covers only UN and UNR thread forms. For easy reference, a metric translation of this Standard has been incorporated as APPENDIX C. Appendices A through E contain useful information that is supplementary to the sections of this Standard.*

ASME B1.10M-2004, Unified Miniature Screw Threads

*Specifies the thread form, series, tolerance, and designation for the Unified Miniature Screw Threads. The series covers a diameter range of 0.30 mm to 1.40 mm, extending the metric M-Profile and unified thread series that begin at 1.6 mm.*

ASME B1.11-1958 (R2006), Microscope Objective Thread

*This standard covers the screw thread used for mounting the objective assembly to the body or lens turret of microscopes. It is based on, and intended to be interchangeable with, the screw thread introduced and adopted many years ago by the Royal Microscopical Society of Great Britain, generally known as the "RMS thread" and now almost universally accepted as the basic standard for microscope objective mountings. Formal recognition, however, has been extremely limited.*

ASME B1.12-1987 (R2003), Screw Threads – Class 5 Interference – Fit Thread

*Provides dimensional tables for external and internal plastic flow interference-fit (Class 5) threads of modified National thread form in the coarse thread series (NC) in sizes 0.250 in. through 1.500 in. This is not the ANSI B1.1 UN thread form. It is intended that designs conforming with this Standard will provide adequate torque conditions which fall within the limits shown in Table 8. The minimum torques are intended to be sufficient to insure that externally threaded members will not loosen in service; the maximum torques establish a ceiling below which seizing, galling, or torsional failure of the externally threaded components is reduced. This Standard provides for the maximum allowable interference.*

ASME B1.13M-2005, Metric Screw Threads – M Profile

*This Standard contains general metric standards for a 60 deg symmetrical screw thread with a basic ISO 68-1 profile designated M profile. The M profile threads of tolerance class 6H/6g are intended for metric applications where inch class 2A/2B have been used. At the minimum material limits, the 6H/6g results in a looser fit than the 2A/2B. Tabular data is also provided for a tighter tolerance fit external thread of class 4g6g,which is approximately equivalent to the inch class 3A but with an allowance applied. Formulation and tolerancing data is included for applications requiring other fits.*

ASME B1.16M-1984 (R2006), Gages and Gaging for Metric M Screw Threads

*This Standard provides essential specifications and dimensions for the gages used on M series metric screw threads, and covers the specifications and dimensions for the thread gages and measuring equipment listed in Tables 1 and 2. The basic purpose and use of each gage are also described. For easy reference, customary conversion of metric tables has been incorporated as part of Appendix D. Appendices A through D contain useful nonmandatory information that is supplementary to the required Sections of this Standard.*

ASME B1.2-1983 (R2001), Gages and Gaging for Unified Screw Threads

*Provides essential specifications and dimensions for the gages used on Unified Inch screw threads (UN and UNR thread form), and covers the specifications and dimensions for the thread gages and measuring equipment listed in Tables 1 and 2. The basic purpose and use of each gage are also described.*

ASME B1.20.1-1983 (R2006), Pipe Threads, General Purpose (Inch)

*Covers dimensions and gaging of pipe threads for general purpose applications.*

ASME B1.20.2M-2006, Pipe Threads, 60 deg., General Purpose

*Specifies the designations, dimensions, and tolerances and establishes a verification system for 60 degree included angle pipe threads. It is applicable for general purpose pipe and fitting connections. Where pressure tight joints are required, it is intended that taper pipe threads conforming to this Standard be made up wrench-tight with a sealant. To prevent galling on certain piping materials such as stainless steel, the sealant should contain a lubricant.*
*Internal parallel (straight) pipe threads, series NPSC, are used with external taper pipe threads, series NPT. Internal taper pipe threads, series NPT, are used with external taper pipe threads, series NPT.*

ASME B1.20.5-1991 (R2004), Gaging for Dryseal Pipe Threads (Inch)

*Provides information regarding practical dry seal thread inspection methods and commonly used gages for production evaluation purposes. All dimensions are in inches unless*

*otherwisespecified.*

ASME B1.20.7-1991 (R2003), Hose Coupling Screw Threads – Inch

*Provides standards for application to the threaded parts of hose couplings, valves, nozzles, and all other fittings used in direct connection with hose intended for domestic, industrial, andgeneral service in nominal sizes of 1/2, 3/8, 3/4, 1, 1 1/4,1 1/2, 2, 2 1/2, 3, 3 1/2, and 4 in.*

ASME B1.21M-1997 (R2003), Metric Screw Threads – MJ Profile

*Establishes the basic triangular profile for the MJ thread form; provides a system of designations; lists the standard series of diametedpitch combinations for diameters from 1.6 to 200 mm; and specifieslimiting dimensions and tolerances.It specifies the characteristics of the MJ metric series of threads having a minimum 0.1501 1P radius at theroot of the external thread, and also having the minor diameter of the external and internal threads increased above the ASME B 1.13M thread form to accommodate the external thread root radius.*

ASME B1.22M-1985 (R2006), Gages and Gaging Practice for “MJ” Series Metric Screw Threads

*This Standard provides essential specifications and dimensions for the gages used on MJ series metric screw threads, and covers the specifications and dimensions for the thread gages and measuring equipment listed in Tables*
*1 and 2. The basic purpose and use of each gage are also described. For easy reference, customary conversion of metric tables has been incorporated in Appendix D. The Appendices contain useful information that is supplementary to the sections of this Standard.*

ASME B1.3-1992 (R2001), Screw Thread Gaging Systems for Dimensional Acceptability – Inch and Metric Screw Threads (UN, UNR, UNJ, M, and MJ)

*Presents screw thread gaging systems suitable for determining the acceptability of UN, UNR, UNJ, M, and MJ screw threads on externally and internally threaded products. It establishes the criteria for screw thread acceptance when a gaging system is used.*

ASME B1.30M-2002, Screw Threads – Practice for Calculating and Rounding Dimensions

*The purpose of this Standard is to establish uniform and specific practices for calculating and rounding the numeric values used for inch and metric screw thread design data dimensions only. No attempt is made to establish a policy of rounding actual thread characteristics measured by the manufacturer or user of thread gages. Covered is the Standard Rounding Policy regarding the last figure or decimal place to be retained by a numeric value and the number of decimal places to be retained by values used in intermediate calculations of thread design data dimensions. Values calculated to this standard for inch and metric screw thread design data dimensions may very slightly from values shown in existing issues of ASME B1 screw thread standards and are to take precedence in all new or future revisions of ASME B1 standards as applicable except as noted in*

ASME B1.5-1997 (R2004), Acme Screw Threads

*This standard provides specifications, formulas, and tables relating to Acme screw threads.*

ASME B1.7-2006, Screw Threads, Nomenclature, Definitions, and Letter Symbols for

*The purpose of this Standard is to establish uniform practice for standard screw threads with regard to the following: a) screw thread nomenclature, and b) letter symbols for the designating features of a screw thread for use on drawings, in tables of dimensions which set forth dimensional standards and in other records, and for expressing mathematical relationship. This Standard consists of a glossary of terms, illustrations, an illustrated table showing the application of symbols, and a table of thread series designations. Many of the terms and symbols specified in this Standard vary considerably from those prior to the 1984 Issue, because ISO terms and symbols have been adopted where the intended definition is the same.*

## ASME B1.8-1988 (R2006), Stub Acme Screw Threads

*When formulated prior to 1895, regular Acme screw threads were intended to replace square threads and a variety of threads of other forms used chiefly for the purpose of producing traversing motions on machines, tools, etc. For current information on Acme threads, see the latest edition of ASME/ANSI B1.5. The Stub Acme thread came into being early in the 1900s. Its use has been generally confined to those unusual applications where a coarse-pitch thread of shallow depth is required due to mechanical or metallurgical considerations. Federal Government Use. When this Standard is approved by the Department of Defense and Federal Agencies and is incorporated into FED-STD H28/13,Screw Thread Standards for Federal Services, Section 13, the use of this Standard by the Federal Government is subject to all the requirements and limitations of FED-STD*

## ASME B1.9-1973 (R2001), Buttress Inch Screw Threads

*Relates to screw threads of buttress form and provides:*
*(a) A form of 7 deg /45 deg buttress thread with 0.6p basic height of thread engagement*
*(b) A table of preferred diameter-pitch combinations*
*(c) A formula for calculating pitch diameter tolerances*
*(d) Tolerances for major and minor diameters*
*(e) A system of allowances between external and internal threads*
*(f) Recommended methods of measuring and gaging*
*(g) Dimensional acceptability of buttress product*

## ASME B107.1-2002, Socket Wrenches, Hand (Inch Series)

*This Standard is intended to cover the complete general and dimensional data for provides dimensional, performance, and safety requirements for detachable socket wrenches with square drive for hand use. Inclusion of dimensional data in this Standard is not intended to imply that all of the products described herein are stock production sizes. Consumers are requested to consult with manufacturers concering lists of stock production sizes.*

## ASME B107.10-2005, Handles and Attachments for Hand Socket Wrenches

*This Standard provides dimensional, performance, and safety requirements for the more generally used handles and attachments utilized by mechanics in repair and maintenance of vehicles, machinery, and other items. Inclusion of dimensional data in this Standard is not intended to imply that all of the products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of stock production size s.*

## ASME B107.11M-2002, Pliers, Diagonal Cutting, and Nippers, End Cutting

*This Standard covers the dimensional and functional characteristics of pliers suitable for cutting wire. Pliers shall have cutting edges diagonal to or at right angles to their longitudinal axis.*

*Inclusion of dimensional data in this standard is not intended to imply that all of the pliers described herein are stock production sizes. Consumers should consult with manufacturers concerning list of stock production sizes.*

## ASME B107.12-2004, Nut Drivers (Spin Type, Screwdriver Grip) (Inch Series)

*This standard provides performance and safety requirements for nutdrivers with an integral socket and shaft that utilize a screwdriver-type hand grip.*

## ASME B107.13M-2003, Pliers – Long Nose, Long Reach

*Provides performance and safety requirements for long nose, long reach pliers. Inclusion of dimensional and functional data in this Standard is not intended to imply that all products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of stock production sizes.This Standard may be used as a guide by state authorities and other regulatory bodies in the formulation of laws or regulations. It is also intended for voluntary use by establishments that use or manufacture thetools covered.*

## ASME B107.14-2004, Hand Torque Instruments (Mechanical)

*This Standard provides performance and safety requirements for manually operated torque instruments, commonly used for mechanical measurement of torque for control of the tightness of threaded fasteners. It is not intended to describe products infrequently utilized or those designed for special purposes.*

## ASME B107.15-2002, Flat-Tip and Phillips Screwdrivers

*This Standard covers the straight handle-type screwdrivers of flat tip design intended for manual operation in driving or removing screws with slotted recesses. The screwdrivers are of the types normally used by cabinetmakers, carpenters, sheet metal workers, production workers, mechanics, etc. The intention is to specify performance rather than design detail.*

*Inclusion of dimensional data in the Standard is not intended to imply that all of the products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of stock production sizes.*

*Using a screwdriver as a pry bar or striking it with a hammer are clearly misuses of the tool, and nothing in this Standard shall be interpreted as condoning any tool misuse.*

## ASME B107.16M-1998 (R2004), Shears (Metal Cutting, Bench, and Hand)

*This standard covers hand shears used for cutting metal.*

## ASME B107.17M-1997 (R2002), Gages, Wrench Openings, Reference

*This Standard establishes final inspection gage sizes for wrench openings, and spark plug wrench openings for inch and metric sizes. This Standard does not cover every available size, but only those most commonly manufactured.*

ASME B107.18M-2003, Pliers (Wire Twister)

*Intended to cover the general dimensional and functional characteristics for wire twister pliers, which are used primarily for twisting safety wires (lock wire) on critical equipment on aircraft, automotive equipment, and for other similar applications. Inclusion of dimensional data in this Standard is not intended to imply that all products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of stock production sizes.This Standard may be used as a guide by state authorities or other regulatory bodies in the formulation of laws or regulations. It is also intended for voluntary use by establishments that use or manufacture the tools covered.*

ASME B107.19-2004, Pliers, Retaining Ring

*This Standard provides performance and safety requirements for ball peen hammers. Ball peen hammers have a striking face on one end of the head for use in striking punches and chisels, and a ball peen on the opposite end for use in riveting, shaping, and straightening unhardened metals. This Standard is intended to serve as a guide in selecting, testing, and using the hand tools covered herein. It is not the purpose of this Standard to specify the details of manufacturing.*

ASME B107.2-2002, Socket Wrenches, Extensions, Adaptors, and Universal Joints, Power Drive (Impact) (Inch Series)

*This Standard is intended to cover the complete general and dimensional data for detachable socket wrenches, extensions, adaptors, and universal joints for power drive impact use.*
*Inclusion of dimensional data in this standard is not intended to imply that all of the products described herein are stock production sizes. Consumers are requested to consult with manufacturers or their representatives concerning lists of stock production sizes.*
*All dimensions in this standard are in inches.*

ASME B107.20M-2004, Pliers (Lineman's, Iron Worker's, Gas, Glass, and Fence)

*Provides performance and safety requirements for pliers having gripping surfaces and/or cutting edges.*

ASME B107.21-2005, Wrench, Crowfoot Attachments

*Provides performance and safety requirements for crowfoot wrenches having a wrench component of the open end type or flare nut type. Each type is designed to receive the external drive end of a socket wrench handle.*
*Inclusion of dimensional data in this Standard is not intended to imply that all of the products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of stock production sizes.*

ASME B107.22M-1998 (R2004), Electronic Cutters and Pliers

*This Standard covers the general dimensional and functional characteristics of electronic cutters having cutting edges diagonal to the cutters' longitudinal axis and cutters having cutting edges at right angles to the cutters' longitudinal axis.*

ASME B107.23-2004, Pliers, Multiple Position, Adjustable

*B107.23 provides performance and safety requirements for adjustable joint and slip joint pliers.*

ASME B107.24-2002, Locking Pliers

*This Standard covers the dimensions and functional characteristics of locking pliers that are suitable for gripping and wrenching operations. Some of the locking wrench pliers are provided with cutters. Inclusion of dimensional and functional data in the Standard is not intended to imply that all products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of stock production sizes.*

ASME B107.25-2002, Pliers – Performance Test Methods

*This Standard details the purpose, apparatus, procedures, and performance specifications for the functional testing of pliers. It is intended to be used by manufacturers, purchasers, and other persons involved with evaluating pliers products. Test procedures described herein are used to evaluate conformance to performance requirements.*

ASME B107.27-2003, Pliers, Multi-Position, Electrical Connector

*Provides performance and safety requirements for pliers (also known as Cannon Plug Pliers) that are used primarily for connecting or disconnecting threaded lock collars of electrical connectors. Inclusion of dimensional data in this Standard does not mean that all products described herein are stock production sizes. Consumers should consult with manufacturers concerning lists of stock production sizes.This Standard may be used as a guide by state authorities or other regulatory bodies in the formulation of laws or regulations. It is alsointended for voluntary use by establishments that use or manufacture the tools covered.*

ASME B107.28-2005, Electronic Torque Instruments

*Provides performance and safety requirements for manually operated electronic torque instruments with integral or interchangeable heads. It includes requirements for endurance, torque value ranges, and accuracy for these torque instruments. It is not intended to describe products infrequently utilized or those designed for special purposes.*

ASME B107.29-2005, Electronic Tester, Hand Torque Tools

*This Standard provides performance and safety requirements for electronic torque testers used for checking manually operated hand held torque wrenches and torque screwdrivers.*

ASME B107.30-2002, Cross Tip Screwdrivers

*This Standard covers straight handle-type screwdrivers of PHILIPS®[1] and POZIDRIV®[1] design intended for manual operation in driving or removing screws with PHILIPS or POZIDRIV recesses. The screwdrivers are of the types normally used by cabinetmakers, carpenters, sheet metal workers, production workers, mechanics, etc. The intention is to specify performance rather design detail.*

*Inclusion of dimensional data in the Standard is not intended to imply that all of the products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of stock production sizes.*

*Using a screwdriver as a pry bar or striking it with a hammer are clearly misuses of the tool, and nothing in this Standard shall be*

ASME B107.31M-1997 (R2002), Screwdriver, Cross Tip Gaging Standard

*This Standard specifies two types of penetration gaging of Phillips (PH) and Pozidriv (PZ) screwdrivers and supplements the ASME blade and bit standards.*

ASME B107.33M-2002, Socket Wrenches, Impact (Metric Series)

*This Standard is intended to cover the complete general and dimensional data for detachable socket wrenches for impact use.*
*Inclusion of dimensional data in the Standard is not intended to imply that all of the products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of stock production sizes.*
*All dimensions in this Standard are in millimeters.*

ASME B107.34M-2003, Socket Wrenches for Spark Plugs

*Provides performance and safety requirements for wire strippers, and the cutting and stripping functions of multi-purpose tools, for use on solid and stranded copper wire. Inclusion of dimensional data in this Standard does not mean that all pliers described herein are stock production sizes. Consumers should consult with manufacturers concerning lists of stock production sizes.This standard may be used as a guide by state authorities or other regulatory bodies in the formulation of laws or regulations. It is also intended for voluntary use by establishments that use or manufacture the tools covered.*

ASME B107.36M-2002, Pliers - Locking, Clamp and Tubing Pinch - Off

*This Standard covers dimensions and functional characteristics of locking clamp pliers and tubing pinch-off pliers suitable for clamping operations in assembly and repair work. Tubing pinch-off pliers are used to pinch off the flow of gas or other material flowing through rubber or soft copper tubing. Inclusion of dimensional and functional data in this Standard is not intended to imply that all products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of stock production sizes.*

ASME B107.37-2003, Pliers - Wire Cutters/Strippers

*This Standard provides performance and safety requirements for wire strippers, and the cutting and stripping functions of multi-purpose tools, for use on solid and stranded copper wire. Inclusion of dimensional data in this Standard does not mean that all pliers described herein are stock production sizes. Consumers should consult with manufacturers concerning lists of stock production sizes.This standard may be used as a guide by state authorities or other regulatory bodies in the formulation of laws or regulations. It is also intended for voluntary use by establishments that use or manufacture the tools covered.*

ASME B107.38M-1998 (R2004), Electronic Pliers

*Covers the dimensional and functional characteristics of electronic pliers suitable for gripping, holding, and/or manipulating small objects. Some pliers may also have cutting edges suitable for cutting small diameter wire. Inclusion of dimensional and functional data in this Standard is not intended to imply that all of the products described herein are stock production sizes. Consumers should consult with manufacturers concerning a list of stock production sizes.*

ASME B107.39-2002, Open End Wrenches (Inch and Metric Series)

*This Standard provides the general, dimensional, performance, and safety requirements for open end wrenches, including but not restricted to Engineer's, angled, and tappet. Inclusion of dimensional data in this Standard is not intended to imply that all of the products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of stock production sizes.*

ASME B107.40-2002, Flare Nut Wrenches (Inch and Metric Series)

*This Standard provides the general, dimensional, performance, and safety requirements for flare nut wrenches, including combination, offset slotted box and open end. Inclusion of dimensional data in this Standard is not intended to imply that all of the products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of stock production sizes.*

ASME B107.41M-2004, Nail Hammers – Safety Requirements

*This Standard provides performance and safety requirements for ball peen hammers. Ball peen hammers have a striking face on one end of the head for use in striking punches and chisels, and a ball peen on the opposite end for use in riveting, shaping, and straightening unhardened metals. This Standard is intended to serve as a guide in selecting, testing, and using the hand tools covered herein. It is not the purpose of this Standard to specify the details of manufacturing.*

ASME B107.42M-1997 (R2004), Hatchets – Safety Requirements

*This Standard provides safety requirements for the design, construction, testing, and use of hatchets. Hatchets have a striking face on one end of the head for use in driving common (unhardened) nails or striking wood products or both; and a blade or bit on the opposite end for use in cutting, notching, and shaping wood products or wallboard products, or both; cutting, spacing, and aligning soft roofing products; and pulling common (unhardened) nails when the tool is provided with a nail slot*

ASME B107.43-2002, Electronic Tester, Hand Torque Tools

*This Standard provides performance and safety requirements for safety requirements for splitting wedges that are specifically for use in splitting wood. It is intended to serve as a guide in selecting, testing, and using the hand tools covered. It is not the purpose of this of this Standard to specify the details of manufacturing.This Standard is also meant to serve as a guide in developing manuals and posters and for training personnel in safe practices.This Standard may be used as a guide by state authorities or other regulatory bodies in the formulation of laws or regulations. It is also intended for voluntary use by establishments that use or manufacture the tools covered. The methods employed to ensure compliance with this Standard shall be determined by the proper regulatory or administrative authority.*

ASME B107.43M-1998, Wood Splitting Wedges - Safety Requirements

*Provides safety requirements for the design, construction, testing, and use of splitting wedges made of steel that are intended specifically for use in splitting wood.*

ASME B107.44M-2002, Glaziers' Chisels and Wood Chisels - Safety Requirements

*This Standard provides performance and safety requirements for glaziers' chisels and wood chisels. It is intended to serve as a guide in selecting, testing, and using the hand tools covered. It is not the purpose of this Standard to specify the details of manufacturing.This Standard is also meant to serve as a guide in developing manuals and posters, and for training personnel to work safely.This Standard may be used as a guide by state authorities or other regulatory bodies in the formulation of laws or regulations. It is also intended for voluntary use by establishments that use or manufacture the tools covered. The methods employed to ensure compliance with this Standard shall be determined by the proper regulatory or administrative authority.*

ASME B107.45M-2002, Ripping Chisels and Flooring/Electricians' Chisels – Safety Requirements

*This Standard provides performance and safety requirements for ripping chisels and flooring/electrician's chisels. These chisels are intended for use in cutting wood and light prying, such as cutting the tongue of installed flooring sections and raising and removing floor planks. This Standard is intended to serve as a guide in selecting, testing, and using the tools covered. It is not the purpose of this Standard to specify the details of manufacturing.*

ASME B107.46M-2004, Stud, Screw and Pipe Extractors – Safety Requirements

*This Standard provides performance and safety requirements for ball peen hammers. Ball peen hammers have a striking face on one end of the head for use in striking punches and chisels, and a ball peen on the opposite end for use in riveting, shaping, and straightening unhardened metals. This Standard is intended to serve as a guide in selecting, testing, and using the hand tools covered herein. It is not the purpose of this Standard to specify the details of manufacturing.*

ASME B107.48-2005, Metal Chisels, Punches, and Drift Pins: Safety Requirements

*Provides performance and safety requirements for hand-held and handled metal chisels, punches, and drift pins. Chisels are intended specifically for use in cutting and shaping metal objects. Punches and drift pins are intended specifically for use in marking metal, for driving and removing such things as pins and rivets, and for aligning holes in different sections of material. Power driven chisels, punches, and drift pins are excluded from this Standard. This Standard is intended to serve as a guide in selecting, testing, and using the hand tools covered. It is not the purpose of this Standard to specify the details of manufacturing. Inclusion of dimensional data in this standard does not mean that all products described herein are stock production sizes. Consumers should consult with manufacturers concerning lists of stock production sizes. This standard may be used as a guide by state authorities or*

ASME B107.49M-2004, Nail Sets - Safety Requirements

*This Standard provides performance and safety requirements for nail sets that are intended primarily for setting unhardened finishing nails below the surface of the material being nailed.*

ASME B107.4M-2005, Driving and Spindle Ends for Portable Hand, Air, and Electric Tools

*Applies to portable power tools for drilling, grinding, polishing, sawing, and driving threaded fasteners and hand tools for driving threaded fasteners. Other tools not classified as percussion tools belong in this category and may be added by revision or addition through the usual procedure. This Standard includes dimensions and tolerances for both driving and driven elements where such coordination is important and not established by reference to the pertinent American National Standards. All dimensions are in inches and millimeters.*

ASME B107.50M-1998, Hand Tools – Brick Chisels and Brick Sets – Safety Requirements

*Provides safety requirements for the design, construction, testing, and use of brick chisels and brick sets.*

ASME B107.51-2001, Star Drills - Safety Requirements

*Provides safety requirements for the design, construction, testing and use of hand-held star drills. These hand-held star drills are intended for use in drilling holes in brick, tile, concrete, or stone.*
*Single copy price: $10.00*
*Order from: Silvana Rodriguez-Bhatti, ASME*
*Send comments (with copy to BSR) to: James Bird, M/S 20S2, ASME*

ASME B107.52M-1998, Nail-Puller Bars - Safety Requirements

*Provides safety requirements for the design, construction, testing and use of brick chisels and brick sets.*

ASME B107.53M-2004, Hand Tools – Ball Peen Hammers – Safety Requirements

*This Standard provides performance and safety requirements for ball peen hammers. Ball peen hammers have a striking face on one end of the head for use in striking punches and chisels, and a ball peen on the opposite end for use in riveting, shaping, and straightening unhardened metals. This Standard is intended to serve as a guide in selecting, testing, and using the hand tools covered herein. It is not the purpose of this Standard to specify the details of manufacturing.*

ASME B107.54-2001, Heavy Striking Tools - Safety Requirements

*Provides safety requirements for the design, construction, testing and use for: Blacksmiths'double -face sledges, hard drilling hammers,blacksmiths' cross peen sledges, wood chopper's maul, railroad spike maul, spalling hammers, stone sledge, bush hammers, boat mauls, lineman's or farriers' turning hammers.*
*Single copy price: $10.00*
*Order from: Silvana Rodriguez-Bhatti, ASME*
*Send comments (with copy to BSR) to: James Bird, M/S 20S2, ASME*

### ASME B107.55M-2002, Axes – Safety Requirements

*This Standard provides safety requirements for the design, construction, testing, and use of axes that are intended specifically for use in felling, trimming, and pruning trees; splitting and cutting wood; notching and shaping logs and timbers; driving wooden or plastic stakes; pulling unhardened nails when the tool is provided with a nail slot; or digging when the particular tool is provided with a digging blade.*

### ASME B107.56-1999 (R2005), Body Repair Hammers and Dolly Blocks: Safety Requirements

*Provides safety requirements for the design, construction, testing, and use of body repair hammers and dolly blocks, both of which are intended specifically for the reshaping of sheet metal panels.*

### ASME B107.57-2005, Bricklayers' Hammers & Prospecting Picks

*This Standard provides performance and safety requirements for bricklayers' hammers that are intended specifically for use in setting and cutting (splitting) bricks, masonry tile, chipping mortar from bricks, and also for prospecting picks that are intended specifically for use in pulling samples from the ground. It is intended to serve as a guide in selecting, testing, and using the hand tools covered. It is not the purpose of this Standard to specify the details of manufacturing. The Standard is also meant to serve as a guide in developing manuals and posters and for training personnel to work safely. This Standard may be used as a guide by state authorities or other regulatory bodies in the formation of laws or regulations. It is also intended for voluntary use by establishments that use or manufacture the tools covered. The methods employed to ensure compliance with this Standard shall be determined by the proper*

### ASME B107.58M-1998 (R2005), Riveting, Scaling, and Tinners' Setting Hammers – Safety Requirements

*Provides safety requirements for the design, construction, testing, and use of riveting, scaling and tinners' setting hammers described below. The names given are those generally recognized; styles are not limited to those named or illustrated (see figures 1, 2, and 3). - Riveting hammers: Intended specifically for driving, spreading, and setting unhardened rivets in hardened materials (also called tinners' or machinists' riveting hammers). - Scaling hammers: Intended specifically for removing scale, paint, welding flux, rust, or other similar flaking material from the surface of unhardened metal (also called chipping hammers). - Tinners' setting hammers: Intended specifically for closing, forming, and peening of sheet metal (also called peening hammers.*

### ASME B107.59-2002, Slugging and Striking Wrenches

*This Standard provides performance and safety requirements for slugging and striking wrenches that are intended for torquing of fasteners. It is intended to serve as a guide in selecting, testing, and using the hand tools covered herein. It is not the purpose of this Standard to specify the details of manufacturing.*

*This Standard is also meant to serve as a guide in developing manuals and posters and for training personnel to work safely.*

*This Standard may be used as a guide by state authorities or other regulatory bodies in the formulation of laws or regulations. It is also intended for voluntary use by establishments that use or manufacture the tools covered. The methods employed to ensure compliance with this standard shall be determined by the proper regulatory or administrative authority.*

### ASME B107.5M-2002, Socket Wrenches, Hand (Metric Series)

*This Standard provides dimensional, performance, and safety requirements for detachable socket wrenches with square drive for hand use. Inclusion of dimensional data in this Standard is not intended to imply that all f the products described herein are stock production sizes. Consumers are requested to consult with manufacturers concering lists of stock production sizes.*

### ASME B107.6-2002a, Combination Wrenches (Inch and Metric Series)

*This Standard provides dimensional, performance, and safety requirements for detachable socket wrenches with square drive for hand use. Inclusion of dimensional data in this Standard is not intended to imply that all of the products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of stock production sizes.*

### ASME B107.60-2004, Pry Bars

*This Standard provides performance and safety requirements for pry bars that are intended for separating, prying, ripping, lifting, scraping, and aligning applications.*

### ASME B107.8-2003, Adjustable Wrenches

*Provides performance and safety requirements for open end adjustable wrenches, with rack and worm adjustment, generally used on both hexagonal and square bolts and nuts. Inclusion of dimensional data in this Standard is not intended to imply that all products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning lists of production sizes.*

### ASME B107.9-2002, Wrenches, Box, Open End, Combination, and Flare Nut (Metric Series)

*This Standard provides dimensional, performance, and safety requirements for box wrenches. Inclusion of dimensional data in this Standard is not intended to imply that all of the products described herein are stock production sizes. Consumers are requested to consult with manufacturers concerning list of stock production sizes.*

### ASME B133.7M-1985 (R2001), Fuels, Gas Turbine

*Covers gas turbines designed to burn either gaseous or liquid, or both, with or without change over while under load.*

ASME B133.8M-1977 (R2001), Installation Sound Emission, Gas Turbine

*Gives methods and procedures for specifying the sound emissions of gas turbine installations for installations for industrial, pipeline, and utility applications. Included are practices for making field sound measurements and for reporting field data. This standard can be used by users and manufacturers to write specifications for procurement, and to determine compliance with specification after installation. Information is included, for guidance, to determine expected community reaction to noise.*

ASME B133.9-1994 (R2001), Measurement of Exhaust Emissions from Stationary Gas Turbine Engines

*Provides guidance in the measurement of exhaust emissions performance testing (source testing) of stationary gas turbines.*
*This Standard applies to engines that operate on natural gas and liquid distillate fuels. Much of this Standard also will apply to engines operated on special fuels such as alcohol, coal gas, residual oil, or process gas or liquid.*

^SME B16.1-2005, Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800

*This Standard for Classes 25, 125, and 250 Cast Iron Pipe Flanges and Flanged Fittings covers: Pressure-temperature ratings, sizes and method of designating openings of reducing fittings, marking, minimum requirements for materials, dimensions and tolerances, bolt, nut, and gasket dimensions, and test.*

ASME B16.10-2003, Face-to-Face and End-to-End Dimensions of Valves

*This Standard covers face-to-face and end-to-end dimensions of straightway valves, and center-to-face and center-to-end dimensions of angle valves. Its purpose is to assure installation interchangeability for valves of a given material, type, size, rating class, and end connection.*

ASME B16.11-2005, Forged Fittings, Socket-Welding and Threaded

*This standard covers ratings, dimensions, tolerances, marking and material requirements for forged fittings, both socket-welding and threaded, as illustrated in the Tables contained in the standard.*

ASME B16.12-1998 (R2006), Cast Iron Threaded Drainage Fittings

*This standard for cast iron threaded drainage fittings covers: size and method of designating openings in reducing fittings, marking, materials, dimensions and tolerances, threading, ribs, coatings, and face bevel.*

ASME B16.15-2006, Cast Bronze Threaded Fittings, Classes 125 and 250

*This Standard covers Classes 125 and 250 cast copper alloy threaded pipe fittings with provisions for substituting wrought copper alloys for plugs, bushings, caps and couplings in small sizes. This Standard includes: (a) pressure-temperature ratings; (b) size and method of designating openings of reducing pipe fittings; (c) marking requirements; (d) minimum requirements for casting quality and materials; (e) dimensions and tolerances in metric (SI) and U.S. customary units; (f) threading requirements; and (g) pressure test requirements*

ASME B16.20-1998 (R2004), Metallic Gaskets for Pipe Flanges – Ring Joint, Spiral Wounds and Jacketed

*This standard covers materials, dimensions, tolerances and markings for metal ring-joint gaskets, spiral-wound metal gaskets, metal-jacketed gaskets, and filler material.*

ASME B16.20a-2000, Metallic Gaskets for Pipe Flanges; Ring-Joint, Spiral-Wound, and Jacketed

*Covers materials, dimensions, tolerances, and markings for metal ring-joint gaskets, spiral-wound metal gaskets, metal-jacketed gaskets, and filler material. These gaskets are dimensionally suitable for use with flanges described in reference flange standards: American National Standard for Pipe Flanges and Flanged Fittings NPS 1/2 Through NPS 24, ANSI/ASME B16.5-1996, American National Standard for Large Diameter Steel Flanges NPS 26 Through NPS 60, ANSI/ASME B16.47-1996, and American National Standard for Valves and Wellhead Equipment, ANSI/API Spec 6A-1989. This standard covers spiral-wound metal gaskets and metal-jacketed gaskets for use with raised-face and flat-face flanges.*

ASME B16.21-2005, Nonmetallic Flat Gaskets For Pipe Flanges

*Covers types, sizes, materials, dimensions, tolerances, and markings for nonmetallic flat gaskets. These gaskets are dimensionally suitable for use with flanges described in the referenced flange standards.*

ASME B16.22-2001 (R2005), Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings

*Establishes specifications for wrought copper and wrought copper alloy, solder-joint, seamless fittings, designed for use with seamless copper tube conforming to ASTM B 88, B 280, and B 819, as well as fittings intended to be assembled with soldering materials conforming to ASTM B 32, brazing materials conforming to AWS A5.8, or with tapered pipe thread conforming to ASME B1.20.1.*

ASME B16.23-2002 (R2006), Cast Copper Alloy Solder Joint Drainage Fittings: DWV

*This standard establishes specifications for cast copper alloy solder joint drainage fittings, designed for use in drain, waste, and vent (DWV) systems. These fittings are designed for use with seamless copper tube conforming to ASTM B 306, Copper Drainage Tube (DWV), as well as fittings intended to be assembled with soldering materials conforming to ASME B1.20.2. This standard is allied with ASME B16.29, Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV.*

ASME B16.24-2006, Cast Copper Alloy Pipe Flanges and Flanged Fittings: Classes 150, 300, 600, 900, 1500, and 2500

*This standard covers cast copper alloy threaded-joint pipe flanges and blind pipe flanges having rating class designations 150, 300, 600, 900, 1500, and 2500. This standard also covers flanged fittings having rating class designations 150 and 300. It establishes requirements for: pressure-temperature ratings, sizes and methods of designating openings for reduced fittings, markings, materials, dimensions, bolting and gaskets, tolerances, and test. This standard also provides dimensional requirements for flanged ends of valves conforming to MSS SP-80.*

ASME B16.25-2003, Buttwelding Ends

*This standard covers the preparation of buttwelding ends of piping components to be joined into a piping system by welding. It includes requirements for welding bevels, for external and internal shaping of heavy-wall components, and for preparation of internal ends (including dimensions and tolerances). Coverage includes preparation for joints with the following: (a) no backing rings; (b) split or noncontinous backing rings; (c) solid or continuous backing rings (d) consumable insert rings (e) gas tungsten arc welding (GTAW) of the root pass. Details of preparation for any backing ring must be specified in ordering the component.*

ASME B16.26-2006, Cast Copper Alloy Fittings for Flared Copper Tubes

*This standard establishes specifications for cast copper alloy fittings and nuts for use with flared seamless copper tube conforming to ASTM B 88 (water and general plumbing systems). Included are requirements for: pressure rating, size, marking, material, dimensions, threading, and hydrostatic testing.*

ASME B16.29-2001, Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings – DWV

*Covers description, pitch (slope), abbreviations for end connections, sizes and methods of designating openings for reduced fittings, marking, materials, dimensions and tolerances.*

ASME B16.3-2006, Malleable Iron Threaded Fittings: Classes 150 and 300

*This Standard covers malleable iron threaded fittings, Classes 150 and 300. It also contains provisions for using steel for caps and couplings in class 150 for NPS 3/8 and smaller. This standard includes pressure-temperature ratings, size and method of designating openings of reducing fittings, marking, material, dimensions and tolerances, threading, and coatings.*

ASME B16.33-2002, Manually Operated Metallic Gas Valves for Use in Gas Piping Systems up to 125 psig

ASME B16.34-2004, Valves – Flanged, Threaded and Welding End

*This standard applies to new construction and covers pressure-temperature ratings, dimensions, tolerances, materials, nondestructive examination requirements, testing and marking for cast, forged and fabricated flanged, threaded, and welding end and wafer or flangeless valves of steel, nickel base alloys and other alloys as listed in table 1 of the standard. Wafer or flangeless valves, bolted or through-bolt types, that are installed between flanges or against a flange are treated as flanged-end valves. Alternative rules for NPS 2 1/2 and smaller valves are given in Annex G of the standard.*

ASME B16.36-2006, Orifice Flanges

*This Standard covers flanges that have orifice pressure differential connections. Coverage is limited to the following:*
*(a) welding neck flanges Classes 300, 400, 600, 900, 1500 and 2500 (b) slip-on and threaded Class 300.*

ASME B16.38-1985 (R2005), Large Metallic Valves for Gas Distribution (Manually Operated, NPS 2 1/2 to 12, 125 psig Maximum)

*This Standard covers only manually operated metallic valves in nominal pipe sizes 2-1/2 through 12, having the inlet and outlet on a common center line, which are suitable for controlling the flow of gas from open to fully closed, for use in distribution and service lines where the maximum gage pressure at which such distribution piping system may be operated in accordance with the Code of Federal Regulations (CFR), Title 49, Part 192, transportation of Natural and Other Gas by Pipeline; Minimum safety standards does not exceed 125 psi (8.6 bar). Valve seats, seals and stem packing may be nonmetallic.*

ASME B16.39-1998 (R2006), Malleable Iron Threaded Pipe Unions

*This standard for threaded malleable iron unions, Classes 150, 250, and 300, provides requirements for the following: design, pressure-temperature ratings, size, marking, materials, joints and seats, threads, hydrostatic strength, tensile strength, air pressure test, sampling, coatings, and dimensions.*

ASME B16.4-2006, Gray Iron Threaded Fittings

*This Standard for gray iron threaded fittings, Classes 125 and 250, covers pressure-temperature ratings, sizes and method of designating openings of reducing fittings, marking, material, dimensions and tolerances, threading, and coatings.*

ASME B16.40-2002, Gas Shut-Offs and Valves in Gas Distribution Systems, Manually Operated Thermoplastic

*Covers manually operated thermoplastic shutoffs and valves in sizes ½ through 6 which are suitable for use in thermoplastic distribution mains and service lines where the maximum pressure at which such distribution piping systems may be operated is in accordance with the Code of Federal Regulations (CFR) Title 49, Part 192, Transportation of Natural and Other Gas by Pipelines; Minimum Safety Standards, for temperature ranges of -20°F to 100°F (-29°C to 38°C). This standard sets forth the minimum capabilities, characteristics, and properties which a newly manufactured valve must possess in order to be considered suitable for use in piping systems indicated above with natural gas, manufactured gas, and liquefied petroleum gas.*

ASME B16.42-1998 (R2006), Ductile Iron Pipe Flanges and Flanged Fittings

*This standard covers minimum requirements for Class 150 and 300 cast ductile iron pipe flanges and flanged fittings. The requirements covered are as follows: pressure-temperature ratings, sizes and methods of designating openings, marking, materials, dimensions and tolerances, bolts, nuts, and gaskets, and tests.*

ASME B16.44-2002, Manually Operated Metallic Gas Valves for Use in House Piping Systems

*This Standard applies to new valve construction and covers quarter turn manually operated valves in sizes NPS ¼-4 and tubing sizes ¼-1 O.D. These valves are intended for indoor installation as gas shutoff valves when installed in above ground fuel gas piping downstream of the gas meter outlet and upstream of the inlet connection to a gas appliance. The valves covered by this standard are intended for service at temperatures between 32ºF (0ºC) and 125ºF (52ºC) at pressure ratings not exceed 5 psi (0.34 bar). When so designated by the manufacturer, these valves may be installed for service outdoors and/or at temperatures below 32ºF (0ºC) and/or above 125ºF (52ºC).*

ASME B16.45-1998 (R2006), Cast Iron Fittings for Sovent® Drainage Systems

*This standard for cast iron drainage fittings used on self-aerating, one-pipe Sovent drainage systems, covers the following: description, sizes and methods for designating openings for reducing fittings, marking, material, pitch, design, dimensions and tolerances, and tests.*

ASME B16.47-2006, Large Diameter Steel Flanges - NPS 26 Through NPS 60 Metric/Inch Standard

*This Standard covers pressure-temperature ratings, materials, dimensions, tolerances, marking and testing for pipe flanges in sizes NPS 26 through NPS 60. Included here are: Flanges with rating class designations 75, 150, 300, 400, 600, and 900 with requirements given in both metric and US customary units with diameter of bolts and flange bolt holes expressed in inch units. This Standard is limited to: - Flanges made from cast or forged materials and - Blind flanges made from cast, forged, or plate materials. Also included in this Standard are requirements and recommendations regarding flange bolting, flange gaskets and flange joints,*

ASME B16.48-2005, Steel Line Blanks

*Covers pressure-temperature ratings, materials, dimensions, tolerances, marketing, and testing for operating line blanks in sizes NPS 1/2 through NPS 24 for installation between ASME B16.5 flanges in the 150, 300, 600, 900, 1500, and 2500 pressure classes.*

ASME B16.49-2000, Factory-Made Wrought Steel Buttwelding Induction Bends for Transportation and Distribution Systems

*Covers design, material, manufacturing, testing, marking, and inspection requirements for factory-made pipeline bends of carbon steel materials having controlled chemistry and mechanical properties, produced by the induction bending process, with or without tangents.*

ASME B16.5-2003, Pipe Flanges and Flanged Fittings NPS 1/2 Through NPS 24

*Covers pressure - temperature ratings, materials, dimensions, tolerances, marking, testing, and method of designating openings for pipe flanges and flanged fittings.*

ASME B16.50-2001, Wrought Copper and Copper Alloy Braze-Joint Pressure Fittings

*Establishes requirements for wrought copper and wrought copper alloy braze-joint seamless fittings designed for use with seamless copper tube conforming to ASTM Standard Specification, B 88 (Water and General Plumbing System), B 280 (Air conditioning and Refrigeration Service), and B 819 (Medical Gas Systems). This Standard covers joints assembled with brazing materials conforming to ANSI/AWS A5.8. Provides requirements for fitting-ends suitable for brazing and covers pressure-temperature ratings, abbreviations for end connections, size and method of designating openings of fittings, marking, material, dimensions and tolerances, and testing.*

ASME B16.9-2003, Factory-Made Wrought Steel Buttwelding Fittings

*Covers overall dimensions, tolerances, ratings, testing, and markings for wrought factory-made buttwelding fittings in sizes NPS 1/2 through 48 (DN 15 through 1200).*

ASME B17.1-1967 (R2003), Keys and Keyseats

*This standard covers the size, type, and tolerances of parallel and taper keys and keyseats, and their relationship to shaft diameters and bore diameters. The sizes and tolerances are intended for single key application.*

ASME B17.2-1967 (R2003), Woodruff Keys and Keyseats

*This standard voers nomenclature, definitions, identification number, dimensions, and tolerances of woodruff keys and keyseats.*

### ASME B18.1.1-1972 (R2006), Small Solid Rivets (7/16 Inch Nominal Diameter and Smaller)

*This standard covers complete general and dimensional data for those types of small solid rivets recognized as "American National Standard". All other types of small solid rivets, within the limits of the diameters contained herein, are to be considered special. Also included is an appendix covering formulas on which dimensional data are based. It should be understood, however, that where questions arise concerning acceptance of product, the dimensions in the tables shall govern over recalculation by formula.*

### ASME B18.1.2-1972 (R2006), Large Rivets

*This standard covers complete general and dimensional data for those types of large solid rivets recognized as "American National Standard" together with dimensional data applicable to manufactured heads after driving, driven heads, and hold-on (dolly bar) and rivet set impressions. Also included are appendixes covering formulas on which dimensional data are based. It should be understood, however, that where questions arise concerning acceptance of product, the dimensions in the tables shall govern over recalculation by formula.*

### ASME B18.1.3M-1983 (R2006), Metric Small Solid Rivets

*This Standard covers complete general and dimensional data for those types of metric small solid rivets recognized as American National Standard. Included is an appendix covering formulas on which dimensional data are based. It should be understood, however, that where questions arise concerning acceptance of a product, the dimensions in the tables shall govern over recalculation by formula.*

### ASME B18.10-2006, Track Bolt and Nuts

*This Standard covers the complete general and dimensional data for inch series oval neck and elliptical neck track bolts and square nuts intended for use with these bolts, and recognized as American National Standard. Sizes in use but not recommended for new design are included in the appendices of this standard.*

### ASME B18.12-2001 (R2006), Glossary of Terms for Mechanical Fasteners

*This standard is a summary of nomenclature and terminology currently used to define and/or describe mechanical fasteners, related characteristics, and the manufacturing processes that produce these products. Utilization of these terms by manufacturers and consumers is intended to reduce or eliminate confusion and serve as a sound basis for communications.*

### ASME B18.13-1996 (R2003), Screw and Washer Assemblies – SEMS (Inch Series)

*Covers the general and dimensional data pertinent to the various types of screw and captive washer assemblies, otherwise known as sems.*

### ASME B18.13.1M-1998 (R2003), Screws and Washer Assemblies – SEMS (Metric Series)

*Covers the general and dimensional data pertinent to the various types of screw and captive washer assemblies, otherwise known as sems.*

### ASME B18.15-1985 (R2003), Forged Eyebolts

*Limited to dimensions and capacities for forged threaded eyebolts intended primarily for lifting applications, and covers the following types and styles: Type 1 (Style A and B) and Type 2 (Style A and B).*

### ASME B18.15M-1998 (R2004), Metric Lifting Eyes

*Covers dimensional and load requirements for forged metric lifting eyes and forged metric straight shank threaded lifting eyes, previously referred to as eyebolts, intended primarily for lifting applications. B18.15.M incorporates ANSI/ASME B18.15.1M-1998 & ANSI/ASME B18.15.2-1998*

### ASME B18.16M-2004, Prevailing-Torque Type Steel Metric Hex Nuts and Hex Flange Nuts

*This standard will cover the complete general, dimensional, mechanical, and performance data for metric prevailing-torque hex nuts and hext flange nuts of property class 5, 9, and 10 as defined in ASTM A563M.*

### ASME B18.18.1-2007, Inspection and Quality Assurance for General Purpose Fasteners

*This Standard outlines a Quality Assurance Plan for internally and externally threaded fasteners andaccessories or associated parts. Provisions are included for sampling plans, inspection frequencies, control procedures, and record keeping. Included in this plan are fasteners for general purpose applications, such as those where hand assembly is employed and cost is probably of prime consideration. This plan relies on judicious manufacturing controls and inspections by the producer and, should a dispute arise, provides an inspection plan for lot compliance after shipment.*
*This Standard will be used in conjunction with other accepted standards for product, testing, gaging, and material; therefore, those provisions, as well as, packaging are not included herein.*

### ASME B18.18.2M-1987 (R2005), Inspection and Quality Assurance For High-Volume Machine Assembly Fasteners

*This Standard outlines a Quality Assurance Plan for internally and externally threaded fasteners and accessories or associated parts. Provisions are included for sampling plans, inspection frequencies, control procedures, and record keeping. Included in this plan are fasteners such as those where a more detailed inspection would enhance mass assembly operation. The quality assurance plan for these fasteners relies primarily on increased final inspection rather than on documented in-process control.*
*This Standard will be used in conjunction with other accepted standards for product, testing, gaging,and material and, therefore, those provisions as well as packaging are not included herein.*

ASME B18.18.3M (R2005), Inspection and Quality Assurance for Special Purpose Fasteners

*This Standard outlines a Quality Assurance Plan for internally and externally threaded fasteners and accessories or associated parts. Provisions are included for sampling plans, inspection frequencies, control procedures, and record keeping. The basic structure of this plan outlines the quality assurance provisions for fasteners for special purpose applications requiring in-process controls. Included are fasteners produced by one manufacturing practice requiring records of in-process and final inspection which are maintained by the producer.This Standard will be used in conjunction with other accepted standards for product, testing, gaging,and material and, therefore, those provisions as well as packaging are not included herein.*

ASME B18.18.4M-1987 (R2005), Fasteners for Highly Specialized Engineered Applications, Inspection and Quality Assurance for

*Outlines a Quality Assurance Plan for internally and externally threaded fasteners and accessories or associated parts. Provisions are included for sampling plans, inspection frequencies, control procedures, and record keeping. The basic structure of this plan outlines the quality assurance provisions for fasteners for special purpose applications requiring in-process controls. Included are fasteners produced by one manufacturing practice requiring records of in-process and final inspection which are maintained by the producer. This Standard will be used in conjunction with other accepted standards for product, testing, gaging,and material and, therefore, those provisions as well as packaging are not included herein.*

ASME B18.18.5M-1998 (R2003), Inspection and Quality Assurance Plan Requiring In Process Inspection and Controls

*Outlines a Quality Assurance Plan for internally and externally threaded fasteners and accessories or associated parts. Provisions are included for sampling plans, inspection frequencies, control procedures, and record keeping. The basic structure of this plan outlines the quality assurance provisions for fasteners manufactured and processed using in-process controls. Included are fasteners produced by one manu-facturing practice requiring records of in-process inspection and tests which are maintained by the producer.This Standard will be used in conjunction with other accepted standards for product, testing, gaging, and material, and, therefore, those provisions as well as packaging are not included herein.*

ASME B18.18.6M-1998 (R2003), Quality Assurance Plan for Fasteners Produced in a Third Party Accreditation System

*This plan is for a quality system that has been certified by a third party process utilizing independent audits under the provisions of a third party accreditation program administered by a consensus standards organization. It is intended to serve as a Quality Assurance Plan for externally and internally threaded fasteners and accessories or associated parts. It is to be used in conjunction with other part-specific quality plans which have been agreed to between manufacturer and purchaser. The Basic Plan Outline is included in Fig. l. This Standard requires that manufacturers must be qualified under provisions of third party accreditation included in the referenced standards.*

ASME B18.18.7M-1998 (R2003), Quality Assurance Plan for Fasteners Produced in a Customer Approved Control Plan

*Based on the concept that a written control plan outlining the fastener manufacturing process and identification of its control points will provide an orderly procedure for controlling and minimizing process and product variation. Factors usually considered when developing a control plan include past history, machine capacity and capability, new or special customer requirement(s), and a PFMEA (potential failure mode and effects analysis). Typically the control plan identifies actions at each phase of the manufacturing process including receiving, in-process manufacturing, and out-going operations. Continuing versus periodic requirements are identified and strategies are provided for continued updating and improvement.*

ASME B18.2.1-1996 (R2005), Square and Hex Bolts and Screws (Inch Series)

*This standard covers the complete general and dimensional data for eight product types of inch series square and hex bolts recognized as American National Standard.*

ASME B18.2.1a-1999, Square and Hex Bolts and Screws (Inch Series)

*Covers the complete general and dimensional data of inch series square and hex bolts and screws. Heavy hex structural bolts are not covered in this standard.*

ASME B18.2.2-1987 (R2005), Square and Hex Nuts (Inch Series)

*This Standard is intended to cover the complete general and dimensional stata for various types of inch series square and hex nuts recognized as American National Standard.*

ASME B18.2.3.10M-1996 (R2003), Square Head Bolts (Metric Series)

*Covers the general and dimensional data for standard metric series square head bolts.*

ASME B18.2.3.1M-1999 (R2005), Metric Hex Cap Screws

*This Standard covers the complete general and dimensional data for metric series hex cap screws recognized as American National Standard.*

ASME B18.2.3.2M-2005, Metric Formed Hex Screws

*This standard covers the complete general and dimensional data for metric formed hex screws recognized as American National Standard. Formed hex screws are cold formed products with fully upset (non-trimmed) heads. Formed hex screws are standard only in sizes M5 thru M24, wiht lengths up to 150 mm, or 10 times nominal screw size, whichever is shorter. The inclusion of dimensional data in this standard is not intended to imply that all of the sizes in conjunction with the various options described herein are stock items. Purchasers should consult with suppliers concerning lists of stock production formed hex screws.*

ASME B18.2.3.3M-1979 (R2001), Screws, Metric Heavy Hex

*Covers the complete and general data for metric heavy hex screws.*

ASME B18.2.3.4M-2001 (R2006), Screws, Metric Hex Flange

*This Standard covers the complete dimensional and general data for metric series hex flange screws recognized as American National Standard. The inclusion of dimensional data in this Standard is not intended to imply that all products described are stock production items. Consumers should consult with suppliers concerning availability of products.*

ASME B18.2.3.5M-1979 (R2006), Bolts, Metric Hex

*This Standard covers the complete dimensional and general data for metric hex bolts recognized as American National Standard. The inclusion of dimensional data in this Standard is not intended to imply that all products described are stock production items. Consumers should consult with suppliers concerning availability of products.*

ASME B18.2.3.6M-1979 (R2006), Bolts, Metric Heavy Hex

*This Standard covers the complete dimensional and general data for metric heavy hex bolts recognized as American National Standard. The inclusion of dimensional data in this Standard is not intended to imply that all products described are stock production items. Consumers should consult with suppliers concerning availability of products.*

ASME B18.2.3.7M-1979 (R2006), Bolts, Metric Heavy Hex Structural

*This Standard covers the complete dimensional and general data for metric heavy hex structural bolts recognized as American National Standard. The inclusion of dimensional data in this Standard is not intended to imply that all products described are stock production items. Consumers should consult with suppliers concerning availability of products.*

ASME B18.2.3.9M-2001 (R2006), Metric Heavy Hex Flange Screws

*This Standard covers the complete dimensional and general data for metric series heavy hex flange screws recognized as American National Standard. The inclusion of dimensional data in this Standard is not intended to imply that all products described are stock production items. Consumers should consult with suppliers concerning availability of products.*

ASME B18.2.4.1M-2002, Hex Nuts, Style 1, Metric

*Covers the complete general and dimensional data for metric hex nuts, Style 1, recognized as American National Standard.*

ASME B18.2.4.2M-2005, Hex Nuts, Style 2, Metric

*This standard covers the complete general and dimensional data for metric hex nuts, Style 2, recognized as American National Standard. The inclusion of dimensional data in this standard is not intended to imply that all of the nut sizes in conjunction with the various options described herein are stock items. Purchasers should consult with suppliers concerning lists of stock production hex nuts, Style 2.*

ASME B18.2.4.3M-1979 (R2006), Hex Nuts, Slotted, Metric

*This Standard covers the complete dimensional and general data for metric slotted hex nuts recognized as American National Standard. The inclusion of dimensional data in this Standard is not intended to imply that all products described are stock production items. Consumers should consult with suppliers concerning availability of products.*

ASME B18.2.4.5M-1979 (R2003), Hex Jam Nuts, Metric

*Covers the complete general and dimensional data for metric hex jam nuts recognized as American National Standard.*

ASME B18.2.4.6M-1979 (R2003), Hex Nuts, Heavy, Metric

*Covers the complete general and dimensional data for metric heavy hex nuts recognized as American National Standard.*

ASME B18.2.6-2006, Fasteners for Use in Structural Applications

*This standard covers the complete general and dimensional data for five products in the inch series recognized as American National Standard. These five structural products include: Heavy Hex Structural Bolts: ASTM A325 or A490; Heavy Hex Nuts: ASTM A563; Hardened Steel Washers; Circular, Circular Clipped or Beveled: ASTM F436; Compressible Washer-Type Direct Tension Indicators: ASTM F959; Twist Off Type Tension Control Structural Bolts: Heavy Hex and Round: ASTM F1852*

ASME B18.2.7.1M-2002, Metric 12-Spline Flange Screws

*Covers the complete general and dimensional data for metric 12-spline flange screws recognized as American National Standard.*

ASME B18.2.8-1999 (R2005), Clearance Holes for Bolts, Screws and Studs

*This Standard covers the recommended clearance hole sizes for #O through 1.5 inches and M1.6 through M100 metric fasteners in three classes of clearance using a close-, normal-, and loose-fit category.*

ASME B18.21.1-1999 (R2005), Lock Washers (Inch Series)

*This Standard covers the dimensions, physical properties, and methods of testing for helical spring- and tooth-lock washers.*

ASME B18.21.2M-1999 (R2005), Lock Washers (Metric Series)

*This Standard covers the dimensions, physical properties, and methods of testing for helical spring- and tooth-lock washers.*

ASME B18.22.1-1965 (R2003), Plain Washers

*Covers two types of general purpose plain washers designated as Type A and Type B.*

ASME B18.24-2004, Part Identifying Number (PIN) Code System Standard for B18 Fastener Products

*This addenda to ASME B18.24, paragraph 1.1.3 in the scope will be incorporated into the*

*revision and consolidation of ANSI/ASME B18.24.1-1996, ANSI/ASME B18.24.1a-2002, ANSI/ASME B18.24.2-1998, ANSI/ASME B18.24.3-1998.*

ASME B18.24a-2006, Part Identifying Number (PIN) Code System Standard for B18 Fastener Products

*This Standard is intended to provide all users (manufacturers, distributors, design and configuration, parts control, inventory control, test and maintenance functions) with the capability to identify externally threaded, internally threaded, and nonthreaded fastener products by a preselected order of coding as specified herein. The B18 PIN is a self-contained code, with distinct identification linkage to individual ASME B18 fastener product standards. The PIN code concept provides for direct traceability back to the applicable B18 product standard. In case of conflict with this document and B18 product standard, the B18 product standard shall take precedence. This Standard is not intended for use as a substitute for the correct usage of the B18 standards for fastener selection and specification. The PIN code is intended as an alternative to the plain text product callout as*

ASME B18.25.1M-1996 (R2003), Square and Rectangular Keys and Keyways

*This Standard covers requirements for square and rectangular parallel keys and keyways intended for both alignment of shafts and hubs, and transmitting torque between the shafts and hubs.*

ASME B18.25.2M-1996 (R2003), Woodruff Keys & Keyways

*Covers requirements for square and rectangular parallel keeys and keyways intended for both alginment of shafts and hubs, and transmitting torque between the shafts and hubs.*

ASME B18.25.3M-1998 (R2003), Square and Rectangular Keys and Keyways - Width Tolerances and Deviations Greater than Basic Size

*Covers requirements square and rectangluar parallel keys and keyways intended for both alignment of shafts and hubs, and transmitting torque between shafts and hubs. Keys covered in this Standard have a relatively loose width tolerance.*

ASME B18.27-2005, Tapered and Reduced Cross Section Retaining Rings (Inch Series)

*This Standard covers complete general and dimensional data for tapered and reduced cross section retaining rings, which may be used with the nominal size shafts and housings listed in the grooves of the recommended dimensions listed.*

ASME B18.29.1-1993 (R2002), Helical Coil Screw Thread Inserts – Free Running and Screw Locking (Inch Series)

*Intended to delineate the dimensional data for the inch series helical coil screw thread insert and the threaded hole into which it is installed. Appendices that describe insert selection, STI (Screw Thread Insert) taps, gages and gaging, insert installation, and removal tooling are also included. The inclusion of dimensional data in this Standard is not intended to imply that all products described are stock sizes. Consumers should consult with manufacturers concerning availability.*

ASME B18.29.2M-2005, Helical Coil Screw Thread Inserts - Free Running and Screw Locking (Metric Series)

*This Standard delineates the dimensional, mechanical and performance data for the metric series helical coil screw thread insert and the threaded hole into which it is installed. Appendices that describe insert selection, STI (Screw Thread Insert) taps, insert installation, and removal tooling are also included.*

ASME B18.3-2003, Socket Cap, Shoulder, and Set Screws (Inch Series)

*Covers complete general and dimensional data for various types of hexagon and spline (fluted) socket cap screws, shoulder screws, setscrews, and hexagon and spline keys recognized as American National Standard. Also included are appendices that provide specifications for hexagon and spline socket gages and gaging, tables showing applicabilityof keys and bits to various socket screws types and sizes, drill and counterbore sizes for socket head cap screws, and formulas on which dimensional data are based. However, where questions arise concerning acceptance of product, the dimensions in the tables shall govern over recalculation by formula.*

ASME B18.3.1M-1986 (R2002), Screws, Socket Head Cap (Metric Series)

*Contains complete general and dimensional data for metric series hexagon socket head cap screws in sizes from 1.6 mm to 48 mm and for metric series spline socket head cap screw in sizes from 1.6 mm to 8 mm recognized as American National Standard. Also included are appendices covering drill and counterbore sizes (Appendix I), drilled head dimensions (Appendix II), formulas for dimensions (Appendix III), ISO dimensional variations (Appendix IV), part numbering system and preferred sizes for government use (Appendix V), and thread dimensions (Appendix VI).*

ASME B18.3.2M-1979 (R2003), Keys and Bits, Hexagon (Metric Series)

*Contains the complete dimensional, mechanical and performance requirements for Metric Series Hexagon Keys and Bits of nominal sizesfrom 0.7 mm to 36 mm recognized as "American National Standard. They are primarily intended to be used for tightening and loosening metric serieshexagon socket screw products but may also be suitable for use on other products having metric hexagon socket wrenching provisions.*

ASME B18.3.3M-1986 (R2002), Hexagon Socket Head Shoulder Screws (Metric Series)

*Contains complete dimensional, mechanical, and performance requirements for Metric Series Hexagon Socket Head Shoulder Screws with nominal shoulder diameters from 6.5 mm to 25 mm recognized as American National Standard. Also included are appendices covering formulas for dimensions, part numbering system and preferred sizes for government use, and thread dimensions. The inclusion of dimensional data in this Standard is not intended to imply that all of the products described are stock production sizes. Consumers should consult with manufacturers concerning lists of stock production sizes.*

ASME B18.3.4M-1986 (R2002), Screws, Hexagon Socket Button Head Cap (Metric Series)

*Contains the complete general and dimensional requirements for Metric Series Hexagon Socket Button Head Cap Screws of nominal sizes from 3mm to 16mm recognized as an American National Standard. Also included are appendices covering formulas for dimensions, part numbering system and preferred sizes for government use, and thread dimensions.*

ASME B18.3.5M-1986 (R2002), Hexagon Socket Flat Countersunk Head Cap Screws (Metric Series)

*Contains complete general and dimensional requirements for Metric Series Hexagon Socket Flat Countersunk Head Cap Screws of nominal sizes from 3mm to 20mm recognized as American National Standard. Also included are appendices covering formulas for dimensions, part numbering system and preferred sizes for government use, and thread dimensions. This product is designed and recommended for applications where a flush seating socket head screw is desired. Wrenchability is limited by the socket size and key engagement. Because of the head configuration, this product is not recommended where maximum fatigue resistance is required.*

ASME B18.3.6M-1986 (R2002), Screws, Hexagon Socket Set (Metric Series)

*Contains complete general and dimensional requirements for metric series socket set screws of nominal sizes from 1.6mm to 24mm recognized as American National Standard.*

*Also included are appendices covering formulas for dimensions (Appendix I), part numbering system and preferred sizes for government use (Appendix II), and thread dimensions (Appendix III). The inclusion of dimensional data in this Standard is not intended to imply that all of the products described are stock production sizes. Consumers should consult with manufacturers concerning lists of stock production sizes.*

ASME B18.30.1M-2000 (R2005), Metric Break Mandrel Open End Blind Rivets

*This Standard establishes the dimensional, mechanical, and performance requirements of open-end blind rivets with break mandrels (metric series)*

ASME B18.31.1M-2005, Metric Continuous and Double End Studs

*This standard covers the complete dimensional and general data for continuous thread and double end metric series studs recognized as American National Standard. The following configurations are covered: Continuous Thread Stud - Studs that are threaded over their complete length, Double End Stud (Clamping Type) - Studs with screw threads of the same length and configuration on each end, and Double End Stud (Tap End Type) - A stud designed to be installed in a tapped hole and usually with different threaded lengths on each end. The tap end studs covered by this standard have the same thread form on each end with the length of the tap end threads equal to approximately 1-1/2 times the nominal thread diameter.*

ASME B18.5-1990 (R2003), Round Head Bolts (Inch Series)

*Covers the complete general and dimensional data for various types of inch series bolts generally classified as round head bolts and recognized as American National Standard.*

ASME B18.5.2.1M-2006, Metric Round Head Short Square Neck Bolts

*This standard covers the general and dimensional data for metric series round head short square neck bolts recognized as "American National Standard" and intended primarily for applications in thin metals.*

ASME B18.5.2.2M-1982 (R2005), Bolts, Metric Round Head Square Neck

*This Standard covers the complete general and dimensional data for metric series round head square neck bolts recognized as American National Standard, and intended for general applications.*

ASME B18.5.2.3M-1990 (R2003), Round Head Square Neck Bolts With Large Head (Metric)

*Covers the complete general and dimensional data for metric series round head square neck bolts with large head recognized as American National Standard.*

ASME B18.6.1-1981 (R2003), Wood Screws (Inch Series)

*This standard covers the complete general and dimensional data for the various types of slotted and recessed head wood screws recognized as "American National Standard".*

ASME B18.6.2-1998 (R2005), Slotted Head Cap Screws, Square Head Set Screws, and Slotted Headless Set Screws

*This Standard covers the complete general and dimensional data for the various styles of slotted head cap screws and square head and slotted headless set screws recognized as American National Standard.*

ASME B18.6.3-2003, Slotted and Recessed Head Machine Screws and Machine Screw Nuts

*This standard is intended to cover the complete general and dimensional data for the various types of slotted and recessed head machine screws and machine screw nuts recognized as American National Standard.*

ASME B18.6.4 (R2005), Screws, Tapping and Metallic Drive, Inch Series, Thread Forming and Cutting

*This Standard covers the complete general and dimensional data for the various styles of slotted and recessed head tapping screws and metallic drive screws recognized as American National Standard.*

ASME B18.6.5M (a)-2000, Metric Thread Forming and Thread Cutting Tapping Screws

*Lists changes to screw size 4.2 X 1.4, for Types AB and B, maximum thickness of 3.22 and minimum thickness of 3.12.*

ASME B18.6.5M-1999 (R2005), Metric Thread Forming and Thread Cutting Tapping Screws

*This Standard covers the complete general and dimensional data for the various styles of slotted and recessed head metric tapping screws recognized as American National Standard.*

ASME B18.6.7M-1999 (R2005), Metric Machine Screws

*This Standard covers the complete general and dimensional data for metric flat countersunk, oval counersunk and pan slotted and recessed head machine screws, and metric hex and hex flange head machine screws recognized as American National Standard.*

ASME B18.7-1972 (R2005), Semi-Tubular Rivets, Full Tubular Rivets, Split Rivets and Rivet Caps, General Purpose

*This standard covers the complete general and dimensional data for semi-turbular rivets, full tubular rivets, split rivets and rivet caps for use in general purpose applications.*

ASME B18.7.1M-1984 (R2005), Metric General Purpose Semi-Tubular Rivets

*This standard covers the complete general and dimensional data for oval head semi-turbular rivets for use in general purpose applications.*

ASME B18.8.1-1994 (R2005), Clevis Pins and Cotter Pins (Inch Series)

*This Standard covers the complete dimensional and general data for clevis pins and cotter (split) pins recognized as American National Standard.*

ASME B18.8.2-2000 (R2005), Taper Pins, Dowel Pins, Straight Pins, Grooved Pins, and Spring Pins (Inch Series)

*This Standard is intended to cover the complete dimensional and general data for taper pins, dowel pins, straight pins, grooved pins, and spring pins recognized as American National Standard, which are widely used in general applications.*

ASME B18.8.200M-2005, Cotter Pins, Headless Clevis Pins, and Headed Clevis Pins (Metric Series)

*This Standard covers the complete dimensional and general data for metric series cotter (split) pins and two types, A and B, of headed and headless clevis pins intended for general applications and recognized as American National Standard. Type A clevis are without holes. Type B clevis pins specified herein are with holes intended for use with cotter pins; however, a means is provided to specify other hole sizes when required for use with other types of pins.*

ASME B18.9-1996 (R2003), Plow Bolts (Inch Series)

*Covers the complete general and dimensional data for inch series plow bolts recognized as American National Standard.*

ASME B20.1-2006, Safety Standard for Conveyors and Related Equipment

*This Standard applies to the design, construction, installation, maintenance, inspection, and operation of conveyors and conveying systems in relation to hazards.*

ASME B29.100-2002, Precision Power Transmission, Double-Pitch Power Transmission, and Double-Pitch Conveyor Roller Chains, Attachments and Sprockets

*The B29 Standards committee agreed to propose a draft standard to consolidate and revise the following three chain standards: ASME B29.1, ASME B29.3 & ASME B29.4. The new standard was designated ASME B29.100 and entitled Precision Power Transmission, Double - Pitch Power Transmission, and Double - Pitch Conveyor Roller Chains, Attachments And Sprockets.*

ASME B29.10M-1997 (R2002), Heavy Duty Offset Sidebar Transmission Roller Chains and Sprocket Teeth

*Covers the General Chain Dimensions, M.U.T.S., Strand Length, Measuring Load, Maximum and Minimum Controlling Link Dimensions for Interchangeable Chain Links, Chain Clearance Dimensions. This Standard also includes Sprocket Tooth Form Factors.*

ASME B29.11M-2001, Combination Chains, Attachments, and Sprocket Teeth

*Covers combinations chains which are a series of block links having barrels to contact the sprocket teeth, alternating with links composed of sidebars and pins that articulate in the barrels of the block link. Pins are fixed against rotation in sidebar pitch holes by mechanical locks, such as flats, or by interference fits, or both. Assembly of pins may be from either side or alternated, at the manufacturer's option.*

ASME B29.12M-1997 (R2004), Steel Bushed Rollerless Chains, Attachments, and Sprocket Teeth

*This standard covers nomenclature, general chain proportions and designations, chain and attachment dimensions for steel bushed rollerless chains, attachments and sprocket teeth*

ASME B29.14M-2001, “H” Type Mill Chains, Attachments, and Sprocket Teeth

*Covers "H" type mill chains which are a series of identical cast offset links having barrels to contact the sprocket teeth and pins that articulate in the barrels of the links. Pins are fixed in the sidebar pitch holes by either press fits and/or mechanical locks, such as flats, to prevent rotation of the pins in the sidebar pitch holes.*

ASME B29.15M-1997 (R2003), Steel Roller Type Conveyor Chains, Attachments, and Sprocket Teeth

*Covers the General Chain Dimensions, M.U.T.S., Dimensions for Chain Attachments, Strand Length, Measuring Load, Maximum and Minimum Controlling Link Dimensions for Interchangeable Chain Links. This standard also includes Maximum Eccentricity and Face Runout Tolerances for Sprockets Factors.*

ASME B29.17M-1998 (R2004), Hinge Type Flat Top Conveyor Chains and Sprocket Teeth

*This standard covers nomenclature, general chain proportions and designations, chain and attachment dimensions for Hinge-Type Flat Top Conveyor Chains and Sprocket Teeth.*

ASME B29.200-2001, Welded Steel Type Mill Chains, Welded Steel Drag Chains, Attachments and Sprocket Teeth

*Pertains to a series of identical welded offset links having barrels to contact the sprocket teeth, and pins which articulate in the barrels of the links. Pins are fixed in the sidebar pitch holes by either press fits and/or mechanical locks, such as flats, to prevent rotation of the pins in the sidebar pitch holes.*

ASME B29.21M-2003, 700 Class Welded Steel and Cast Chains, Attachments, and Sprockets for Water and Sewage Treatment Plants

*Developed to assure consistency with previous standards and does replace ANSI B29.13. It also contains a supplementary section which identifies Engineering Characteristics of 700 Class Welded Steel and Cast Chain including attachments and sprockets in common use for rectangular straight line collectors in water and sewage treatment tanks.*

ASME B29.22-2001, Drop Forged Rivetless Chains, Sprocket Teeth Drive Chain/Drive Dogs

*Pertains to Drop Forged Rivetless Chain, which has widespread use in many industries on trolley, scrapper flights, assembly and similar conveyors. Because materials do not tend to pack in its open structure, Drop Forged Rivetless Chain is used extensively for flight conveyors. Its design permits both horizontal and vertical operation over irregular routes, making it particularly acceptable for trolley conveyor service.*

ASME B29.23M-1985 (R2004), Flexible Chain Couplings

*Covers nomenclature, general chain proportions and designations, chain and attachment dimensions for Flexible Chain Couplings.*

ASME B29.24M-2002, Roller Load Chains for Overhead Hoists

*Covers specialized roller chains that are designed specifically as load chains for use in overhead hoists.*

ASME B29.26M-2001, Fatigue Testing Power Transmission Roller Chain

*Covers fatigue testing, in axial tension, of power transmission roller chains in ASME B29.1M and B29.3M, and nonstandard variants of those chains.*

ASME B29.27-2002, Single-Pitch and Dpuble-Pitch Hollow Pin Conveyor Chains and Attachments

*This standard covers the dimensional limits required for chain interchangeability on sprockets. It does not provide for interconnectability of chains or individual links from different manufacturers.*

ASME B29.2M-1982 (R2004), Inverted Tooth (Silent) Chains and Sprockets

*This standard covers nomenclature, general chain proportions and designations, chain and attachment dimensions for Inverted Tooth (silent) Chains and Sprockets*

ASME B29.300-1998, Agricultural, Detachable, and Pintle Chains, Attachments and Sprockets

*This consolidated standard has been designed to integrate the following three types of agricultural type chains and provide their Chain Properties, Minimum Ultimate Tensile Strength (M.U.T.S.), Attachments and Sprockets Information: 1. Steel Detachable Link Chains,Attachments, 2. Sprockets Agricultural Roller Chains, Attachments, and Sprockets, 3. Open Barrel Steel Pintle Type Chains Attachments, and Sprockets.*

ASME B29.300a-2004, Agricultural, Detachable, and Pintle Chains, Attachments and Sprockets

*This consolidated standard has been designed to integrate the following three types of agricultural type chains and provide their Chain Properties, Minimum Ultimate Tensile Strength (M.U.T.S.), Attachments and Sprockets Information: 1. Steel Detachable Link Chains,Attachments, 2. Sprockets Agricultural Roller Chains, Attachments, and Sprockets, 3. Open Barrel Steel Pintle Type Chains Attachments, and Sprockets.*

ASME B29.8-2002, Leaf Chain, Clevises, and Sheaves

*A leaf chain consist of a series of link plates alternately assembled with pins in such a way that the joint is free to articulate between adjoining pitches. The Clevises section gives recommended design dimensions of terminal clevises for use with Type B leaf chains. Limiting dimensions herein established are for the purpose of assuring acceptance of chains built in accordance with foregoing standards.*

ASME B30.1-2004, Jacks

*ASME B30.1 applies to general purpose, portable jacks. Jacks designed for automotive service, trip-lowered jacks, and those that are an integral part of other equipment are not included in the scope of this standard. Devices designed for static support rather than lifting are also not included.*

ASME B30.10-2005, Hooks

*Applies to all types of hooks (shown in Figs. 1 through 21) used in conjunction with equipment described in other volumes of the B30 Standard.*

ASME B30.11-2004, Monorails and Underhung Cranes

*B30.11 applies to underhung cranes and monorail systems where load-carrying members, such as end trucks or carriers (trolleys), travel either on the external or internal lower flange of a runway track section, single monrail track, crane bridge girder, or jib boom.*

ASME B30.12-2006, Handling Loads Suspended from Rotorcraft

*B30.12 applies to the handling of loads suspended from rotorcraft using a cargo sling, powered hoist, or other attaching means to lift, carry, pull, or tow a jettisonable load outside of the rotorcraft airframe.*

ASME B30.13-2003, Storage/Retrieval (S/R) Machines and Associated Equipment

*Applies to construction, installation, inspection, testing, maintenance, and operation of storage/retrieval machines and associated equipment, such as aisle transfer cars and aisle equipment, and interfaces with other material handling equipment covered under other standards.*

ASME B30.14-2004, Safety Standard for Side Boom Tractors

*B30.14 applies to the construction, installation, operation, inspection, testing, and maintenance of side boom tractors powered by an internal combustion engine used for pipe laying or lifting operations, utilizing a lifting boom, drum, wire rope, and/or hydraulic cylinders.*

ASME B30.16-2007, Overhead Hoists (Underhung)

*B30.16 includes provisions that apply to the construction, installation, operation, inspection, and maintenance of hand-chain operated chain hoists and electric and air-powered chain and wire rope hoists used for, but not limited to, vertical lifting and lowering of freely suspended, unguided loads.*

ASME B30.17-2006, Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist)

*B30.17 includes provisions that apply to the construction, installation, operation, inspection, and maintenance of hand-operated and power-driven overhead and gantry cranes that have a top-running single girder bridge, with one or more underhung hoists operating on the lower flange of the bridge girder, used for vertical lifting and lowering of freely suspended, unguided loads.*

ASME B30.18-2004, Stacker Cranes (Top or Under Running Bridge, Multiple Girder with Top or Under Running Trolley Hoist)

*Applies to the construction, installation, operation, inspection, and maintenance of hand-powered and power-driven overhead and gantry cranes that have a top-running or under-running multiple girder bridge with a vertically guided carriage, with or without a top-running or under-running trolley.*

ASME B30.19-2005, Cableways

*Applies to all load transporting, hoisting, and lowering cable-supported systems operating on and supported from track cable(s). The standard does not apply to logging skyline systems or excavating slackline systems.*

ASME B30.2-2005, Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist)

*B30.2 includes provisions that apply to the construction, installation, operation, inspection, and maintenance of hand-operated and power-driven overhead and gantry cranes that have a top running single-girder or multiple-girder bridge, with one or more top-running trolley hoists used for vertical lifting and lowering of freely suspended, unguided loads consisting of equipment and materials (see Figs. 1 through 5.) The requirements included in this Volume also apply to cranes having the same fundamental characteristics such as cantilever gantry cranes, semi-gantry cranes and wall cranes.*

ASME B30.20-2006, Below-the-Hook Lifting Devices

*B30.20 includes provisions that apply to the marking, construction, installation, inspection, testing, maintenance, and operation of below-the-hook lifting devices, other than slings, used for attaching loads to hoists, including: Structural and Mechanical Devices; Vacuum Lifting Devices; Close Proximity Operated Lifting Magnets; Remotely Operated Lifting Magnets; and Scrap and Material Handling Grapples*

ASME B30.21-2005, Manually Lever Operated Hoists

*B30.21 includes provisions which apply to the construction, installation, operation, inspection, and maintenance of ratchet and pawl and friction brake type manually lever operated chain, wire rope, and web strap hoists used for lifting, pulling, and tensioning applications.*

ASME B30.22-2005, Articulating Boom Cranes

*Includes provisions for cranes having articulating hydraulic cylinders which are powered by internal combustion engines or electric motors and are mounted on a mobile chassis or stationary installation.*

ASME B30.23-2005, Personnel Lifting Systems

*This volume establishes the design criteria, equipment characteristics, and operational procedures which are required when material handling equipment, as defined by the ASME B30 standard, is used to lift personnel.*

ASME B30.25-2003, Scrap and Material Handlers

*Applies to the construction, installation, operation, inspection, and maintenance of scrap handlers consisting of a base, a revolving upper structure with operator's station(s), and a front for lifting scrap or materials using attachments such as magnets and grapples, and any variations thereof in which the equipment retains the same fundamental characteristics.*

### ASME B30.26-2004, Safety Standard for Rigging Hardware

*B30.26 includes provisions that apply to the construction, installation, operation, inspection, and maintenance of detachable rigging hardware used for lifting purposes in conjunction with equipment described in other volumes of the B30 Standard. This hardware includes shackles, links, rings, swivels, turnbuckles, eyebolts, hoist rings, wire rope clips, wedge sockets, and rigging blocks. Use of the same hardware for purposes other than lifting is excluded from the provisions of this volume.*

### ASME B30.27-2005, Material Placement Systems

*Volume B30.27 includes provisions that apply to the construction,installation, operation, inspection, and maintenance of mobile material placing booms, mobile telescoping boom conveyors, separate placing booms, and material placement accessories. This Volume does not apply to the pumping elements of a concrete pump, conveyors, mortar conveying or spraying machines, or dry mix shotcreting machines.*

### ASME B30.3-2004, Construction Tower Cranes

*Applies to construction tower cranes powered by electric motors or internal combustion engines, including cranes that adjust operating radius by means of a boom luffing mechanism or by means of a trolley traversing a horizontal boom.*

### ASME B30.4-2003, Portal, Tower, and Pedestal Cranes

*Includes provisions which apply to the construction, installation, operation, inspection and maintenance of electric motor or internal-combustion engine powered portal, tower, and pedestal cranes.*

### ASME B30.5-2004, Mobile and Locomotive Cranes

*Applies to crawler, locomotive and wheel-mounted cranes, and any variations thereof which retain the same fundamental characteristics.*

### ASME B30.6-2003, Derricks

*Includes provisions which apply to the construction, installation, operation, inspection, testing, and maintenance of guy, stiffleg, basket, breast, gin pole, Chicago boom, shearleg, and A-frame derricks.*

### ASME B30.7-2006, Base Mounted Drum Hoists

*B30.7 applies to base-mounted drum hoists arranged for mounting on a foundation or other supporting structure for lifting or lowering loads, to derrick swingers, and to any variations which retain the same fundamental characteristics.*

### ASME B30.8-2004, Floating Cranes and Floating Derricks

*B30.8 applies to cranes and derricks mounted on barges or pontoons. The requirements of this volume are applicable only to floating cranes and floating derricks used for vertical lifting and lowering of freely suspended, unguided loads.*

### ASME B30.9-2006, Slings

*Volume B30.9 includes provisions that apply to the fabrication, attachment, use, inspection and maintenance of slings used for lifting purposes. Slings fabricated from alloy steel chain, wire rope, metal mesh, synthetic fiber rope, synthetic webbing, and synthetic wire yarns in a protective cover are addressed.*

### ASME B31.1-2001, Power Piping

*Prescribes minimum requirements for the design, materials, fabrication, erection, test, and inspection of power and auxiliary service piping systems for electric generation stations, industrial and institutional plants, central and district heating plants, and distinct heating systems.*

### ASME B31.11-2002, Slurry Transportation Piping Systems

*Prescribes requirements for the design, materials, construction, assembly, inspection, testing, operation, and maintenance of piping transporting aqueous slurries of nonhazardous materials, such as coal, mineral ores, concentrates, and other solid materials.*

### ASME B31.1a-2005, Power Piping

*This code prescribes minimum requirements for the design, materials, fabrication, erection, test, and inspection of power and auxiliary service piping systems for electric generation station, industrial and institutional plants, central and district heating plants, and district heating systems.*

### ASME B31.1b-2006, Power Piping

*This code prescribes minimum requirements for the design, materials, fabrication, erection, test, and inspection of power and auxiliary service piping systems for electric generation station, industrial and institutional plants, central and district heating plants, and district heating systems.*

### ASME B31.3-2006, Process Piping

*This Code prescribes requirements for materials and components, design, fabrication, assembly, erection, examination, inspection, and testing of piping typically found in petroleum refineries; chemical, pharmaceutical, textile, paper, semiconductor, and cryogenic plants; and related processing plants and terminals.*

### ASME B31.4-2006, Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols

*This Code prescribes requirements for the design, materials, construction, assembly, inspection, and testing of piping transporting liquids such as crude oil, condensate, natural gasoline, natural gas liquids, liquefied petroleum gas, carbon dioxide, liquid alcohol, liquid anhydrous ammonia, and liquid petroleum products between producers facilities, tank farms, natural gas processing plants, refineries, stations, ammonia plants, terminal (marine, rail, and truck), and other delivery and receiving points.*

### ASME B31.5-2006, Refrigeration Piping and Heat Transfer Components

*This Code prescribes requirements for the materials, design, fabrication, assembly, erection, test, and inspection of refrigerant, heat transfer components, and secondary coolant piping for temperatures as low as -320°F (-196°C), whether erected on the premises or factory assembled, except as specifically excluded in the standard.*

ASME B31.8-2003, Gas Transmission and Distribution Piping Systems

*This Code covers the design, fabrication, installation, inspection, and testing of pipeline facilities used for the transportation of gas. This Code also covers safety aspects of the operation and maintenance of those facilities.*

ASME B31.8S-2004, Managing System Integrity of Gas Pipelines

*This Standard applies to on-shore pipeline systems constructed with ferrous materials and that transport gas. Pipeline system means all parts of physical facilities through which gas is transported, including pipe, valves, appurtenances attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders and fabricated assemblies. The principles and processes embodied in integrity management are applicable to all pipeline systems. This Standard is specifically designed to provide the operator (as defined in section 13) with the information necessary to develop and implement an effective integrity management program utilizing proven industry practices and processes. The processes and approaches within this Standard are applicable to the entire pipeline system.*

ASME B31.9-2004, Building Services Piping Code for Pressure Piping

*Prescribes requirements for the design, materials, fabrication, installation, inspection, examination, and testing of piping systems for industrial, institutional, commercial, and public buildings, and multi-unit residences. It includes piping systems in the building or within the property limits.*

ASME B31G-1991 (R2004), Manual for Determining the Remaining Strength of Corroded Pipelines

*Includes all pipelines within the scope of the pipelines codes that are part of ASME B31 Code for Pressure Piping, i.e., ASME B31.4, Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols; ASME B31.8, Gas Transmission and Distribution Piping Systems; and ASME B31.11, Slurry Transportation Piping Systems. Parts 2, 3, and 4 are based on material included in ASME Guide for Gas Transmission and Distribution Piping Systems, 1983 Edition.This Manual is not applicable to new construction covered under B31 Code Sections. That is, it is not intended that this Manual be used to establish acceptance standards for pipe that may become corroded during fabrication and/or installation.This Manual is intended solely for the purpose of providing guideline information for the designer/owner/operator. Thus, the*

ASME B31Q-2006, Pipeline Personnel Qualification

*This standard establishes the requirements for developing and implementing an effective Pipeline Personnel Qualification Program utilizing accepted industry practices. The standard also offers guidance and examples of acceptable practices to meet selected requirements. The standard specifies the requirements for identifying covered tasks that impact the safety or integrity of pipelines, for qualifying individuals to perform those tasks, and for managing the qualifications of pipeline personnel.*

ASME B32.5-1977 (R2004), Tubular Metal Products Other Than Pipe, Preferred Metric Sizes for

*This Standard establishes preferred series of metric outside diameters, distances across flats, wall thicknesses and lengths for tubular metal products other than pipe. A companion standard, ANSI B32.6, establishes preferred metric equivalents for the most commonly used inch sizes.*

ASME B36.10M-2004, Welded and Seamless Wrought Steel Pipe

*Covers the standardization of dimensions of welded and seamless wrought steel pipe for high or low temperatures and pressures.*

ASME B36.19M-2004, Stainless Steel Pipe

*Covers the standardization of dimensions of welded and seamless wrought stainless steel pipe for high or low temperatures and pressures.*

ASME B4.1-1967 (R2004), Preferred Limits and Fits for Cylindrical Parts

*Presents definitions of terms applying to fits between plain (non-threaded cylindrical parts and makes recommendations on preferred sizes, allowances, tolerances, and fits for use wherever they are applicable.*

ASME B4.2-1978 (R2004), Preferred Metric Limits and Fits

*Describes the ISO system of limits and fits for mating parts as it is approved for general engineering usage in the United States of America.*

ASME B4.3-1978 (R2004), General Tolerances for Metric Dimensioned Products

*Shows how to specify the general tolerances for metric dimensions without tolerance designation.*

ASME B40.100-2005, Pressure Gauges and Gauge Attachments

*Provides design and testing criteria for a variety of pressure measuring devices, such as analog, dial-type gauges, mechanical separators utilizing diaphragms or bladders with a fill fluid, snubbers, pressure limiter valves, and digital gauges.*

ASME B40.2-2000, Diaphragm Seals

*Describes mechanical separators utilizing diaphragms or bladders together with a fill fluid to transmit pressure from the medium to the pressure element assembly of pressure gauges or other pressure-measuring instruments such as transducers, transmitters, and switches.*

ASME B40.200-2001, Thermometers, Direct Reading and Remote Reading

### ASME B40.200a-2003, Thermometers, Direct Reading and Remote Reading

*Confined to analog, liquid-in-glass Industrial type thermometers, for Industrial Applications that sense process temperature by means of the expansion of the liquid within the glass thermometer bulb. The liquid fill, based on the temperature to be measured may be mercury or organic liquid. This Standard does not include laboratory type ASTM Thermometers, ( Specification Designation: ASTM E-1 - 86)Note: Thermowell Standard ASME B40.9, does not include dimensional information or drawings for the internally tapered thermowell described in this Standard. This internally tapered thermowell has been in continuous use since 1927. The dimensional information listed is to be considered critical to insure interchangeability within the industry, for both new and existing thermometers.*

### ASME B40.4-2000, Filled System Thermometers

*Pertains to analog, dial-type filled system thermometers, utilizing elastic elements which enable the mechanically converted thermal energy to indicate temperature by means of a pointer moving over a scale.*

### ASME B40.5-2000, Snubbers

*Covers shock-resistant, environmentally hardened devices that are installed between the pressure source and the pressure-sensing element and are used to minimize the effect of pressure surges on positive and negative pressure-sensing instruments.*

### ASME B40.6-2001, Pressure Limiter Valves

*Pertains to devices that protect pressure-sensing instruments from pressure sources in the event of system pressure rising above the adjusted closing pressure of the device. These devices are not pressure regulators. Pressure limiter valves are designed only to prevent the passage of excessive pressure to downstream pressure-sensing instruments. Hereafter, pressure limiter valves may be referred to as "devices."*

### ASME B40.9-2001, Thermowells

*Covers metallic thermowells for thermometers and electrical temperature sensors. Thermowells manufactured from nonmetallic materials are beyond the scope of this document. Thermowells permit the use of thermometers and sensors at higher pressure than could be safely applied to an unprotected bulb. Thermowells facilitate the removal and reinstallation of thermometers and sensors without creating a temporary leak and without requiring process shutdown. Thermowells protect bulbs from excessive temperatures, excessive pressures, and corrosive attack by the process medium, and against structural damage caused by fluid velocity induced vibration.*

### ASME B46.1-2002, Surface Texture (Surface Roughness, Waviness, and Lay)

*Pertains to the geometric irregularities of surfaces. It defines surface texture and its constituents: roughness, waviness, and lay. It also defines parameters for specifying surface texture.*

### ASME B47.1-2007, Gage Blanks

*This Standard covers standard designs for the following:*
*(a) plain and thread plug gage blanks to 12.010 in. maximum gaging diameter; (b) plain and thread ring gage blanks to 12.260 in. maximum gaging diameter; (c) involute and serrated spline plug and ring gage blanks to 8.000 in. major diameter; (d) straight-sided spline plug and ring gage blanks to major diameters of 8.000 in. for plugs and 6.000 in. for rings; (e) machine taper plug and ring gage blanks to 5.000 in. gaging diameter; (f) adjustable snap gages to 12 in.; (g) adjustable length gages to any desired length; (h) master disks up to 8.010 in. in diameter. Recommended general designs covering taper plug and ring gages for special applications, flush-pin gages, and flat plug gages are also included.*
*This Standard is intended to deal only with the dimensions of blanks, frames, and fittings.*

### ASME B5.10-1994 (R2002, Machine Tapers (Self Holding and Steep Taper Series)

*Establishes (1) American standard practice for the slope of self-holding and steep machine tapers, (2) the detailed dimensions for this type of taper tool shank, (3) the corresponding dimensions for the taper socket in the spindle of the machine, including the dimensions of the keyways. This, it is hoped, will serve as a guide for future designing of machines and related equipment utilizing tapers that come within the ranges specified in the various tables.*

### ASME B5.11-1964 (R2002, Spindle Noses and Adjustable Adapters for Multiple Spindle Drilling Heads

*Provides the means for individual axis adjustment of drilling, reaming, and tapping tools, etc. in the spindles of single or multiple spindle heads*

### ASME B5.18-1972 (R2004), Spindle Noses and Tool Shanks for Milling Machines

*This Standard provides detailed drawings and dimensions for SPINDLENOSES AND TOOL SHANKS FOR MILLING MACHINES.*

### ASME B5.1M-1985 (R2004), T-Slots – Their Bolts, Nuts, and Tongues

*This Standard applies to T-slots as used on machine tools for the mounting of fixtures, attachments, and accessories; and to the bolts, nuts, and tongues used in screws such slots.*

### ASME B5.35-1983 (R2002), Machine Mounting Specifications for Abrasive Discs and Plate Mounted Wheels

*Covers practice for location and size of bolt holes for mounting abrasive discs and plate mounted wheels.*

ASME B5.40-1977 (R2002), Spindle Noses and Tool Shanks for Horizontal Boring Machines

*Establishes (1) the American practice for the construction of spindle noses for horizontal boring machines by showing a number of types for such construction, (2) the important dimensions for self-holding and steep machine tapers as well as drive keys, draw bolts, drift and keeper key slots, bolt circles for face mounting of milling cutters, etc., (3) the corresponding dimensions for the taper shanks for construction of tools (boring bars, arbors, etc.) to fit the spindle nose tapers.*

ASME B5.47-1972 (R2002), Milling Machine Arbor Assemblies

*This standard is confined to milling machine arbors. The reason for confining this standard to this specified mailing machine accessory is that through many years of development and general usage, there already exists good agreement on the structure and dimensions of milling machine arbors between competent manufacturers of such equipment here in the United States and abroad. This agreement is much better than for many other milling machine accessories and equipment. Already considerable interchangeability exists between the products of various suppliers of milling machine arbors.*

ASME B5.48-1977 (R2002), Ball Screws

*Covers definitions, classes of ball screws, recommended combinations of screw diameters and lead, recommended drawing format, and performance characteristics of ball screw and nut assemblies as applied to machine tools. The values stated in U.S. customary units are to be regarded as the standard. Metric values are converted from the customary values per recommendations of "ASME Guide SI-1, ASME Orientation and Guide for Use of SI (Metric) Units."*

ASME B5.49-1998 (R2004), Press Terms, Glossary of Mechanical

*This Standard provides a glossary of terms commonly used in the industries that manufacture or use mechanically and hydraulically powered presses.*

ASME B5.50-1994 (R2003), V Flange Tool Shanks for Machining Centers with Automatic Tool Changers

*This Standard pertains to the standardization of a basic tool holder shank and retention knob for numerically controlled machining centers with automatic tool changers. The requirements contained herein are intended to provide tool holder interchangeability between machining centers with automatic tool changers of various types. Dimensions for cone angle control are in accordance with the International Standard ISO-1947.*

ASME B5.51M-1979 (R2002), Preferred SI Units for Machine Tools

*Gives the preferred choice of selected SI units, multiples, submultiples and symbols for selected quantities for machine tool use. These preferred SI units, multiples, submultiples and symbols, are for use on engineering drawings, machine test documents, customer machine quotations, operator instruction plates, operator instruction manuals, machine tool specification catalogs and other related documents.*

ASME B5.52-2003, Presses, General Purpose, Single Point, Gap Type, Mechanical Power (Metric)

*This Standard applies to hydraulic and mechanical power presses having a one-piece frame that guides the slide and supports the bolster, adjustable bed, or horn. The frame is configured to provide unrestricted access to the front and sides of the die space. By means of dies or tooling attached to the slide and bolster or horn, these machines are used to shear, punch, form or assemble metal or other materials.*

ASME B5.54-2005, Performance Evaluation of Computer Numerically Controlled Machining Centers, Methods for

*Establishes methodology for specifying and testing the performance of CNC machining centers. In addition to clarifying the performance evaluation, this Standard facilitates performance comparisons between machines by unifying terminology, general machine classification, and the treatment of environmental effects. It provides a series of tests that should be used to perform acceptance testing (runoff) of new and reconditioned machines and could be used to verify continued capability of production machines, already in operation, through periodic testing. The set of acceptance tests and the specification limits for machine conformance shall be the subject of contractual agreement between the Supplier and the User. This standard is rather comprehensive; therefore for smaller and less expensive machines the conformance to specifications*

ASME B5.55M-1994 (R2002), Specification and Performance Standard, Power Press Brakes

*The requirements of this Standard apply to those power operated press brakes that are used to form metal by bending. This Standard specifically excludes machines referred to as hand brakes (leaf brakes), folding brakes, tangent benders, apron brakes (box and pan), and swivel bending brakes.*

ASME B5.56M-1994 (R2002), Specification and Performance Standard, Power Shears

*The requirements of this Standard apply to power shears used to cut metal by shearing, utilizing a fixed lower knife(s) and a non-rotary, moving upper knife(s). This Standard applies to those shears commonly referred to as squaring, guillotine, gap, plate, pivot blade (swing beam), and slitting (non-rotary). This Standard specifically excludes machines referred to as right angle, alligator, cut to length, crop, slitting (rotary), nibblers, portable hand tools, coil slitters, rotary blade slitters, iron workers, angle, bar, beam, channel, notching, rotary drum, flying, and billet shears.*

ASME B5.57-1998 (R2006), Methods for Performance Evaluation of Computer Numerically Controlled Lathes and Turning Centers

*This Standard establishes requirements and methods for specifying and testing the performance of CNC lathes and turning centers. In addition to clarifying the performance evaluation of lathes and turning centers, the Standard seeks to facilitate performance comparisons between machines by unifying terminalogy, general machine classifications, and the treatment of enviromental effects.*

ASME B5.60-2002, Workholding Chucks - Jaw Type Chucks

*The ASME B5.60 standard covers general information, description and definitions of Terms related to Jaw Type workholding Chucks.*

ASME B5.60a-2005, Workholding Chucks - Jaw Type Chucks (Addenda)

*The ASME B5.60 standard covers general information, description and definitions of Terms related to Jaw Type workholding Chucks.*

ASME B5.61-2003, Power Presses - General Purpose Single Action Straight Side Type

*This Standard applies to hydraulic and mechanical power presses commonly referred to by the metalworking industry as GENERAL PURPOSE, SINGLE ACTION, STRAIGHT SIDE TYPE POWER PRESSES that, by means of dies or tooling attached to the slide and bolster, are used to shear, punch, form or assemble metal or other materials.*

ASME B5.8-2001 (R2006), Chucks and Chuck Jaws

*This Standard applies to chucks for use on engine lathes, tool room lathes, and automatic lathes and fit American Standard Spindle Noses of ANSI-B5.9-1967. They may be used on other applications for which they are suitable (see pages 4 and 5 of ANSI-B5.9-1967). It is within the scope of this Standard to establish:*
*(a) duty classes*
*(b) standard chuck diameters*
*(c) top jaw interchangeability*
*(d) mounting interchangeability (USA-Standard Spindle Noses)*
*(e) draw-bar interchangeability for power chucks*
*(f) identification code for body, master jaws, top jaws dimensions, where interchangeability of chucks may be involved*
*(g) nomenclature*

ASME B5.9-1967 (R2004), Spindle Noses for Tool Room Lathes, Engine Lathes, Turret Lathes, and Automatic Lathes

*These spindlenoses are for use on engine lathes, tool room lathes, turret lathes and automatic lathes and may be used advantageously on other machines wherever chucks or fixtures must be mounted accurately and rigidly on revolving spindles. Complete dimensions for each size and type of nose, as well as for mating backs of chucks, face plates and fixtures, are given in the tables. Also given are dimensions of gages for checking the important dimensions on these spindlenoses and the backs of chucks, face platesand fixtures, to insure interchangeability between parts made by different manufacturers.*

ASME B73.1M-2001, Horizontal End Suction Centrifugal Pumps for Chemical Process, Specifications for

*Establishes requirements for centrifugal pumps of horizontal, end suction single stage, centerline discharge design.This Standard establishes requirements for centrifugal pumps of horizontal, end suction single stage, centerline discharge design. This standard was listed for public review in the 3/9/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ASME B73.2M-2003, Vertical In-Line Centrifugal Pumps for Chemical Process, Specifications for

*Covers motor driven centrifugal pumps of vertical shaft, single stage design with suction and discharge nozzles in line. It includes dimensional interchangeability requirements and certain design features to facilitate installation and maintenance. It is the intent of this Standard that pumps of the same standard dimension designation, from all sources of supply, shall be interchangeable with respect to mounting dimensions and size and location of suction and discharge nozzles*

ASME B73.3M-2003, Specification for Sealless Horizontal End Suction

*This Standard covers sealless centrifugal pumps of horizontal end suction single stage and centerline discharge design, This Standard includes, dimensional interchangeability requirements and certain design features to facilitate installation and maintenance. It is the intent of this Standard that pumps of the same standard dimensional designation from all sources of supply shall be interchangeable with respect to mounting dimensions, size, and location of suction and discharge nozzles, input shafts, baseplates, and foundation bolt holes.*

ASME B73.5M-1995 (R2001), Specification for Thermoplastic and Thermoset Polymer Material Horizontal End Suction Centrifugal Pumps for Chemical Process

*Covers contrifugal pumps of horizontal, end-suction single-stage, centerline discharge design, the components of which are made of thermoplastic and thermoset polymer materials either reinforced or nonreinforced. It includes dimensional interchangeability requirements and certain design features to facilitate installation and maintenance.*

ASME B89.1.10M-2001 (R2006), Dial Indicators (for Linear Measurements)

*This Standard is intended to provide the essential requirements for dial indicators as a basis for mutual understanding between manufacturers and consumers. Described herein are various types and groups of dial indicators used to measure a linear dimension of a variation from a reference dimension.*

ASME B89.1.13-2001 (R2006), Micrometers

*This Standard is intended to provide the essential requirements for micrometers as a basis for mutual understanding between manufacturers and consumers. Outside, inside, and depth micrometers are described in the Standard.*

ASME B89.1.17-2001, The Measurement of Threading Measuring Wires

*Establishes uniform practices for the measurement of thread measuring wires. The standard includes methods for the direct measurement of both master and working wires, and methods for the comparison measurement of working wires. The standard includes requirements for geometric qualities of thread measuring wires, the important characteristics of the comparison equipment, environmental conditions, and the means to ensure that measurements are made with an acceptable uncertainty level.Wires covered by the standard include inch-series 60-degree, 29-degree Acme, 7/45-degree Buttress, and metric 60-degree threads.This standard was listed for public review in the 4/20/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ASME B89.1.5-1998 (R2004), Measurement of Plain External Diameters for Use as Master Discs or Cylindrical Plug Gages

*Intended to establish uniform practices for the measurement of master discs or cylindrical plug gages to a given tolerance using vertical or horizontal comparators and laser instruments. The Standard includes requirements for geometric qualities of master discs or cylindrical plugs, the important characteristics of the comparison equipment, environmental conditions and the means to assure that measurements are made with an acceptable level of accuracy.*

ASME B89.1.6M-2002, Rev.2, Qualified Plain Internal Diameters for Use as Master Rings and Ring Gages, Measurement of

*This standard is intended to establish uniform practices for the measurement of master rings or ring gages using horizontal methods. The standard includes requirements for geometric qualities of master rings or ring gages, the important characteristics of the comparison equipment, environmental conditions, and the means to assure that measurements are made with an acceptable level of accuracy.*

ASME B89.1.9M-1984 (R2002), Precision Gage Blocks for Length Measurement (through 20 Inches and 500 Millimeters)

*Specifies the most important design and metrological characteristics of gage blocks with a rectangular or square cross-section and a nominal length 1h ranging from 0.5mm to 1,000 mm for metric sizes and 0.010 in to 40 in for inch sizes. It is not the intent of this Standard to preclude the use, by contractual agreement, of gage blocks of other shapes, grades or materials. Limit deviations and tolerances are stated for the calibration grade K and for the grades 00, 0, AS-1, and AS-2 for various measuring purposes. NOTE: To avoid confusing grades 1 and 2 with previous definitions, the prefix "AS", for "American Standard" should be used for all sets using the grade tolerances in this standard. This standard was listed for public review in the 1/12/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ASME B89.3.1-1972 (R2003), Out-of-Roundness, Measurement of

*This Standard covers the specification and measurement of out-of-roundness of a surface of revolution by the evaluation of a typical cross-sectional profile in terms of its radial deviations from a defined center.*

ASME B89.4.1-1997, Methods for Performance Evaluation of Coordinate Measuring Machines

*Establishes requirements and methods for specifying and testing the performance of coordinate measuring machines (CMMs).*

ASME B89.4.10-2000 (R2006), Methods for Performance Evaluation of Coordinate Measuring System Software

*The purpose of this document is to provide guidelines for evaluating the quality of solutions generated by CMS software and to define minimal documentation requirements for software providers. This Standard is concerned with testing the behavior of algorithm implementation, not the testing of algorithms themselves. It is not the intent of this document to endorse or rate any computational method or system.*

ASME B89.4.19-2006, Performance Evaluation of Laser Based Spherical Coordinate Measurement Systems

*Prescribes methods for the performance evaluation of laser based spherical coordinate measurement systems and provides a basis for performance comparisons among such systems. Definitions, environmental requirements, and test methods are included with emphasis on point-to-point length measurements. The specified test methods are appropriate for the performance evaluation of a majority of such instruments and are not intended to replace more complete tests that may be required for special applications. This Standard establishes requirements and methods for specifying and testing the performance of a class of spherical coordinate measurement systems called laser trackers1. A laser tracker is an instrument that directs the light from a ranging device to a retroreflecting target (called a retroreflector) by means of a two-axis rotary steering mechanism while*

ASME B89.4.1a, Part II-1998, Methods for Performance Evaluation of CMM's - Supplement to Appendix I

*Provides guidance on interim testing of largeCMMs, CMMs used in the duplex mode, and CMMs with high aspect ratios.*

ASME B89.4.1b-2001, Methods for Performance Evaluation of Coordinate Measuring Machines

*Establishes requirements and methods for specifying and testing the performance of coordinate measuring machines (CMMs) having three linear axes perpendicular to each other and up to one rotary axis positioned arbitrarily with respect to these linear axes. In addition to clarifying the performance evaluation of CMMs, this Standard seeks to facilitate performance comparisons among machines by unifying terminology, general machine classification, and the treatment of environmental effects.*

ASME B89.4.22-2004, Methods for Performance Evaluation of Articulated Arm Coordinate Measuring Machines

*Pertains to the performance evaluation of articulated arm CMM while any number of rotational joints can be evaluated, the Standard focuses on the more common configurations commercially available today, and is limited to seven joints.*

ASME B89.6.2-1973 (R2003), Temperature and Humidity Environment for Dimensional Measurement

*This standard is intended to fill industry's need for standardized methods ofa. Describing and testing temperature-controlled environments for dimensional measurements, andb. Assuring itself that temperature control is adequate for the calibration of measuringequipment, as well as the manufacture and acceptance of work pieces.*

ASME B89.7.2-1999 (R2004), Dimensional Measurement Planning

*Ensures correctness and acceptability of dimensional measurements.*

ASME B89.7.3.1-2001 (R2006), Guidelines for Decision Rules: Considering Measurement Uncertainty in Determining Confirmation to Specification

*These guidelines provide terminology and specify the content that must be addressed when stating a decision rule used for deciding the acceptance or rejection of a product according to specification.*

ASME B89.7.3.3-2002, Guidelines for Assessing the Reliability of Dimensional Measurement Uncertainty Statements

*The objective of this report is to provide guidance in assessing the reliability of a statement of measurement uncertainty in question, that is, in judging how well that stated uncertainty can be trusted to include the values that could reasonable be attributed to the measured quantity with which that stated uncertainty is associated.*

ASME B94.19-1997 (R2003), Milling Cutters and End Mills

*Covers high speed steel milling cutters and end mills of one piece construction as listed in Tables 1 to 62. It also includes general definitions, sizes and tolerances*

ASME B94.2-1995 (R2005), Reamers

*Covers the American National Standard for Reamers-nomenclature, definitions, types, sizes, and tolerances.*

ASME B94.33-1996 (R2005), Jig Bushings

*This standard covers the American National Standard practice for sizes, types, tolerances, and identification of Jig Bushings and locking devices used for securing the bushings in the jig or bushing plate. 2 PURPOSE 2.1 The purpose of this standard is to provide the necessary information for the design, procurement and installation of Jig Bushings.*

ASME B94.33.1-1997 (R2005), Metric Jig Bushings

*This Standard covers the American National Standard practice for sizes, types, tolerances and Identification of Metric Jig Bushing and locking devices used for securing the bushing in the jig or bushing plate.*

ASME B94.35-1972 (R2005), Drill Drivers – Split-Sleeve, Collet-Type

*This Standard covers the American National Standard practice for sizes, types, tolerances and identification of Drill Drivers, Split-Sleeve, Collet Type.*

ASME B94.49-1975 (R2005), Spade Drill Blades and Spade Drill Holders

*This Standard covers nomenclature, definitions, sizes and tolerances for spade drill blades and spade drill holders insofar as the holder locates and holds the spade drill blade. All dimensions are in inches. Conversion tables from inch to mm are given in App.A.*

ASME B94.50-1975 (R2003), Single-Point Cutting Tools, Basic Nomenclature and Definitions for

*Covers nomenclature, definitions, sizes and tolerances for spade drill blades and spade drill holders insofar as the holder locates and holds the spade drill blade.*

ASME B94.51M-1999 (R2005), Specifications for Band Saw Blades (Metal Cutting)

*This Standard provides a useful criterion of practice in production, distribution, and use of metal cutting band saw blades. It was developed to provide blades that will meet all normal requirements of consumers. Section 3, definitions, indicates the specific types in common usage and also defines the various elements. This Standard covers tooth shape, sizes, and tolerances for regular, skip tooth, and hook tooth band saw blades; and it also sets out the determination of: (a) band saw blade dimensions; (b) tooth form and set; (c) blade flatness and minimum hardness characteristics.*

ASME B94.52M-1999 (R2005), Specifications for Hacksaw Blades

*This Standard provides a useful criterion of practice in production, distribution and use of hacksaw products. It was developed to provide blades that will meet all normal requirements of consumers. Section 3 definitions indicates the specific types in common usage and also defines the various elements. This Standard covers tooth shape, sizes, and tolerances for hand and power hacksaw blades in all types of materials; and it also sets out the determination of: (A) Hacksaw blade dimensions in all types of steel (B) Tooth form and set and, (C) Blade straightness and minimum hardness characteristics.*

ASME B94.54-1999 (R2005), Specifications for Hole Saws, Hole Saw Arbors, and Hole Saw Accessories

*This Standard provides a useful criterion of practice in the production, distribution, and of high-speed steel, grit edge, and carbide-tipped nonadjustable hole saws and their accessories. This Standard covers definitions, standard sizes, dimensions, tolerances, tooth configuration, and quality requirements for the hole saws and their accessories covered by this Standard.*

ASME B94.55M-1985 (R2003), Tool Life Testing with Single-Point Turning Tools

*Establishes specifications for the following factors of tool life testing with single - point turning tools: workpiece, tool, cutting fluid, cutting conditions, tool wear and tool life, equipment, test procedures, recording and reporting and presentation of results.*

ASME B94.6-1984 (R2003), Knurling

*Covers knurling tools with standardized diametral pitches and includes dimensional relatinos with stock in the production of straight, diagonal, and diamond knurling on cylindrical surfaces having teeth of uniform pitch parallel to the axis of the cylinder or at ahelix angle not exceeding 45 deg. with axis of work. Such knurling is made by displacement of the material on the surface then rotated under pressure against a knurling cool.*

ASME B94.9-1999, Taps, Cut and Ground Threads

*Covers various designs of taps, nomenclature, and definitions, the standard system of marking, and dimensions and tolerance tables for Stand Straight Thread, Pipe-Taper Thread,*

*Pipe-Straight Thread, Pulley, Screw Thread Insert, and Thread Forming Taps.*

ASME BPE-2005, Bioprocessing Equipment

*This Standard provides the requirements applicable to the design of equipment used in the bioprocessing, pharmaceutical, and personal care product industries, including aspects related to sterility and cleanability, materials, dimensions and tolerances, surface finish, material joining, and seals.*

ASME BPVC Revision-2006, ASME Boiler and Pressure Vessel Code (5/19/06 Meeting)

*This Standard establishes rules relating to pressure integrity governing the construction of boilers, pressure vessels, transport tanks and nuclear components, as well as in service inspection of nuclear components and transport tanks.*

ASME BPVC Revision-2006, ASME Boiler and Pressure Vessel Code (2/17/06 Meeting)

*This Standard establishes safety rules covering the design, fabrication and inspection (during construction) of boilers, pressure vessels and nuclear power plant components and containment in order to afford protection of life and property and to provide a margin of deterioration in service so as to give a reasonably long, safe period of usefulness.*

ASME BTH-1-2005, Design of Below-the-Hook Lifting Devices

*This standard provides minimum structural and mechanical design and electrical component selection criteria for ASME B30.20 below-the-hook lifting devices.*

ASME CSD-1-2006, Controls and Safety Devices for Automatically Fired Boilers

*The rules of this Standard cover requirements for the assembly, installation, maintenance, and operation of controls and safety devices on automatically operated boilers directly fired with gas, oil, gas-oil, or electricity.*

ASME HPS-2003, High Pressure Systems

*Provides guidance relative to the design and application of high pressure components.*

ASME HST-1M-1999 (R2004), Performance Standard for Electric Chain Hoists

*Establishes performance requirements for electric chain hoists for vertical lifting service involving material handling of freely suspended (unguided) loads using load chain of the roller or welded link types with one of the following types of suspension:(1) lug;(2) hook or clevis;(3) trolley.*

ASME HST-2M-1999 (R2004), Performance Standard for Hand Chain Manually Operated Chain Hoists

*Establishes performance requirements for and chain manually operated chain hoists for vertical lifting service involving material handling of freely suspended (unguided) loads using welded link type load chain as a lifting medium with one of the following types of suspension:*

*(l) hook or clevis;*
*(2) trolley.*

ASME HST-3M-1999 (R2004), Performance Standard for Manually Lever-Operated Chain Hoists

*Establishes performance requirements for manually lever operated chain hoists used for lifting, pulling, and tensioning-type applications. The specifications and information contained in this Standard apply to manually lever operated chain hoists of the following types:*
*(l) ratchet and pawl operation with:*
*(a) roller-type load chain;*
*(b) welded link-type load chain.*

ASME HST-4M-1999 (R2004), Performance Standard for Overhead Electric Wire Rope Hoists

*Establishes performance requirements for electric wire rope hoists for vertical lifting service involving material handling of freely suspended (unguided) loads using wire rope with one of the following types of suspension:(1) lug;(2) hook;(3) trolley;(4) base or deck mounted (does not include base mounted drum hoists of the type covered by ASME B30.7);(5) wall or ceiling mounted (does not include base mounted drum hoists of the type covered by ASME B30.7).*

ASME HST-5M-1999 (R2004), Air Chain Hoists

*Establishes performance requirements for air powered chain hoists for vertical lifting service involving material handling of freely suspended (unguided) loads using load chain of the roller or welded link types with one of the following types of suspension:*
*(1) lug;*
*(2) hook or clevis;*
*(3) trolley.*

ASME HST-6M-1999 (R2004), Performance Standard for Air Wire Rope Hoists

*Establishes performance requirements for air wire rope hoists for vertical lifting service involving material handling of freely suspended (unguided) loads using wire rope as the lifting medium with one of the following types of suspensions:(1) lug;(2) hook or clevis;(3) trolley;(4) base or deck mounted (does not include base mounted drum hoists of the type covered by ASME B30.7);(5) wall or ceiling mounted (does not include base mounted drum hoists of the type covered by ASME B30.7).*

ASME MFC-10M-2000 (R2006), Method for Establishing Installation Effects on Flowmeters

*This Standard establishes methods for determining the influence of installation conditions or flow patterns on the performance of flowmeters in closed conduits (i.e., pipe, ducts, etc.). This Standard also addresses: (a) means and terminology for defining a reference condition for flow calibration of a particular flowmeter; and (b) guidelines for extrapolation and interpolation of installation effects to untested piping conditions. This Standard does not supersede or otherwise replace qualification tests or installation tests that are specified by other standards such as ISO 9951.*

ASME MFC-11M-2006, Measurement of Fluid Flow by Means of Coriolis Flowmeters

*This Standard (ASME MFC-11M) establishes common terminology, gives guidelines for the selection, installation, calibration, and operation of Coriolis flowmeters for the determination of mass flow, density, volume flow and other parameters. The content of this Standard is applied to the flow measurement of liquids, gases, mixtures of gases, multiphase flows, and miscible and immiscible mixtures of liquids.*

ASME MFC-12M-2006, Measurement of Fluid Flow in Closed Conduits Using Multiport Averaging Pitot Primary Elements

*Provides information on the use of multiport averaging Pitot head-type devices used to measure liquids and gases. The Standard applies when the conduits are full and the flow: has a fully developed profile; remains subsonic throughout the measurement section; is steady or varies only slowly with time and; is considered single-phase. A differential pressure transmitter or other pressure measuring device known as a secondary element must be used with a multiport averaging Pitot primary element to produce a flow rate measurement. Although multiport averaging Pitot primary elements are sometimes used in non-circular conduits such applications are beyond the scope of this Standard.*

ASME MFC-13M-2006, Measurement of Fluid Flow in Closed Conduits-Tracer Methods

*For steady state flow of fluid in a closed conduit, the only conserved parameter is the mass rate of flow, qm. If the mass density is known, the volume rate of flow qv can be deduced. The accuracy of flow rate measurement with the tracer methods is a function of how well the injected tracer material mixes with the flowing fluid. It is also a function of the accuracy and precision of the sensing devices and the (tracer methods) techniques used. Two tracer methods are used: a) The dilution method is based on a constant rate of tracer injection and the concentration of tracer found in the downstream conduit is a measure of the relative flow rates. b) The transit time method determines the flow rate by measuring the time it takes the tracer material to travel between two detector points or between the injection point and a detector point in the conduit. The advantages and disadvantages of*

ASME MFC-14M-2003, Measurement of Fluid Flow Using Small Bore Precision Orifice Meters

*Specifices the geometry and method of use for orifice meters of 6 mm to 40 mm line size when they are inserted in a conduit running full. It also gives necessary information for calculating flow rate and its associated uncertainty.*

ASME MFC-16M-1995 (R2006), Measurement of Fluid Flow in Closed Conduits by Means of Electromagnetic Flowmeters

*This Standard applies to AC and pulsed-DC type industrial electromagnetic flowmeters with either wetted or non-wetted electrodes, and to the application of these flowmeters to the measurement of the volumetric flowrate of electrically conducting and electrically homogeneous liquids or slurries flowing in a completely filled closed conduit. It specifically does not apply to insertion or medical type electromagnetic flowmeters. It also does not cover applications of industrial flowmeters involving nonconductive liquids or highly conductive liquids (i.e., liquid metals). This document contains a discussion of the theory and measurement technique of an electromagnetic flowmeter, a physical description of the various types available, application considerations, specifications as to what equipment markings should reside on the meter, and liquid calibration procedures.*

ASME MFC-18M-2001 (R2006), Measurement of Fluid Flow in Pipes Using Variable Area Meters

*Describes the common variable area flowmeter. This Standard does not attempt to standardize dimensions because the commercial products differ too widely. The variable area meter is manufactured in a variety of designs. This Standard addresses only those meters based on a vertical tapered tube of round or a modified round cross section. Specifically not addressed are the various vane type meters, meters with horizontal flow, or meters which use a spring deflection to oppose flow forces.*

ASME MFC-1M-2003, Measurement of Fluid Flow, Glossary of Terms Used in the

*This standard consists of a collection of definitions of those terms which pertain to the measurement of fluid flow in pipes. Only those terms of general usage have been included. Terms having unique meaning when applied to specific meters should be included in a glossary within the specific flow meter standard.*

ASME MFC-2M-1983 (R2006), Measurement Uncertainty for Fluid Flow in Closed Conduits

*This Standard presents a working outline detailing and illustrating the techniques for estimating measurement uncertainty for fluid flow in closed conduits. The statistical techniques and analytical concepts applied herein are applicable in most measurement processes. Section 2 provides examples of the mathematical model applied to the measurement of fluid flow. Each example includes a discussion of the elemental errors and examples of the statistical techniques. An effort has been made to use simple prose with a minimum of jargon. The notation and definitions are given in Appendix A and are consistent with IS0 3534, Statistics - Vocabulary and Symbols (1977).*

ASME MFC-3M-2004, Measurement of Fluid Flow in Pipes Using Orifice, Nozzle and Venturi

*This Standard specifies the geometry and method of use (installation and operating conditions) for pressure differential devices (ıncluding, but not limited to, orifice plates, flow nozzles, and venturi tubes) when installed in a closed conduit running full and used to determine the flow-rate of the fluid flowing in the conduit. This Standard applies to pressure differential devices in which the flow remains subsonic throughout the measuring section and where the fluid is considered as single-phase. The Standard is limited to single-phase Newtonian fluid flow in which the flow can be considered sufficiently free from pulsation effects. It gives information for calculating the flow-rate and the associated uncertainty when each of these devices is used within specified limits of pipe size and Reynolds number.*

ASME MFC-4M-1986 (R2003), Measurement of Gas Flow by Turbine Meters

*This standard applies to: 1) axial full-flow turbine meters with mechanical and/or electrical outputs whose rotating member is driven by a compressible fluid; 2) the measurement of gas by a turbine meter; the meter's construction, installation, operation, performance characteristics, data computation and presentation, calibration, field checking, and other related considerations of the meter.*

ASME MFC-5M-1985 (R2006), Measurement of Liquid Flow in Closed Conduits using Transit-Time Ultrasonic Flowmeters

*This Standard applies only to ultrasonic flowmeters that base their operation on the measurement of transit times of acoustic signals. Further, this Standard concerns only the application of such meters when used to measure the volumetric flow rate of a liquid exhibiting homogeneous acoustic properties and flowing in a completely filled closed conduit. Not covered by this Standard are ultrasonic flowmeters that derive volumetric flow rate from measurements of the deviation, scattering (Doppler flowmeter), or correlation of acoustic signals.*

ASME MFC-6M-1998 (R2005), Fluid Flow in Pipes Using Vortex Flow Meters, Measurement of

*This Standard:*
*(a) describes vortex shedding flowmeters in which alternating vortices are shedfromone or morebluff bodies installed in a closed circular conduit;*
*(b) describes how the frequency of the vortex pairs is a measure of the fluid velocity; how volume, mass, and standard volume flow rate is determined; and how the total fluid that has flowed through the meter in a*
*specified time interval can be measured;*
*(c) applies only to fluid flow that is steady or varies only slowly with time, is considered single-phased, and when the closed conduit is full;*
*(d) provides only generic information on vortex shedding flowmeters, including a glossary and a set of engineering equations useful in specifying performance;*
*(e) describes the physical components of*

ASME MFC-7M-1987 (R2006), Gas Flow by Means of Critical Flow Venturi Nozzles, Measurement of

*This Standard applies only to the steady flow of single-phase gases and deals with devices for which direct calibration experiments have been made, sufficient in number and quantity to enable inherent systems of applications to be based on their results and coefficients to be given with certain predictable limits of uncertainty. The critical flow venturi nozzles dealt with can only be used within limits that are specified, for example nozzle throat to inlet diameter ratio and Reynolds number. This Standard specifies the geometry and method of use (installation and operating conditions) of critical flow venturi nozzles inserted in a system to determine the mass flow rate of the gas flowing through the system. It also gives necessary information for calculating the flow rate and its associated uncertainty. This Standard applies only to venturi nozzles in which the flow is critical. Critical flow exists*

ASME MFC-8M-2001 (R2006), Fluid Flow in Closed Conduits – Connections for Pressure Signal Transmission Between Primary and Secondary Devices

*This Standard describes the practices and means which allow the pressures at a head type primary device to be conveyed to the secondary device in a flow measurement system without introducing unnecessary measurement uncertainties.*

ASME MFC-9M-1998 (R2006), Measurement of Liquid Flow in Closed Conduits by Weighting Method

*This Standard specifies a method of liquid flow rate measurement in closed conduits by measuring the mass of liquid delivered into a weighing tank in a known time interval. It deals in particular with the measuring apparatus, procedure, and method for calculating the flow rate and the uncertainties associated with the measurement. The method described may be applied to any liquid, provided that its vapor pressure is such that any escape of liquid from the weighing tank by vaporization is not sufficient to affect the required measurement accuracy. Closed weighing tanks and their application to the flow measurement of liquids of high vapor pressure are not considered in this Standard.*
*This Standard considers only the measurement techniques and does not address any possible hazards involved in handling the liquid involved. Theoretically, there is no limit to the*

ASME N509-2002, Nuclear Power Plant Air Cleaning Units and Components

*Covers requirements for the design, construction, and qualification and acceptance testing of the air-cleaning units and components which make up Engineered Safety Feature and other high efficiency air and gas treatment systems used in nuclear power plants.*

ASME NOG-1-2004, Overhead and Gantry Cranes (Top Running Bridge, Multiple Girder), Rules for Construction of

*Covers electric overhead and gantry multiple girder cranes with top running bridge cranes with top running bridge and trolley used at nuclear facilities and components of cranes at nuclear facilities.*

ASME NQA-1-2004, Quality Assurance Requirements for Nuclear Facility Applications

*This Standard reflects industry experience and current understanding of the quality assurance requirements necessary to achieve safe, reliable, and efficient utilization of nuclear energy, and management and processing of radioactive materials. The Standard focuses on the achievement of results, emphasizes the role of the individual and line management in the achievement of quality, and fosters the application of these requirements in a manner consistent with the relative importance of the item or activity.*

ASME NQA-1a-2005, Quality Assurance Requirements for Nuclear Facility Applications

*This Standard reflects industry experience and current understanding of the quality assurance requirements necessary to achieve safe, reliable, and efficient utilization of nuclear energy, and management and processing of radioactive materials. The Standard focuses on the achievement of results, emphasizes the role of the individual and line management in the achievement of quality, and fosters the application of these requirements in a manner consistent with the relative importance of the item or activity.*

ASME NUM-1-2004, Rules for Construction of Cranes, Monorails, and Hoists (with Bridge or Trolley or Hoist of the Underhung Type)

*Covers underhung cranes, top-running bridge and gantry cranes with trolleys, traveling wall cranes, jib cranes, monorail systems, overhead, and hoists with integral trolleys used in nuclear facilities.*

ASME OM Code-2004, Code for Operation and Maintenance of Nuclear Power Plants

*Establishes the requirements for preservice and in service testing and examination of certain components to assess their operational readiness in light water reactor power plants.*

ASME OM-S/G-2003, Standards and Guides for Operation and Maintenance of Nuclear Power Plants

*Provides standards and guidelines for preservice and in-service testing of components and systems in light water reactor power plants.*

ASME OM-S/Ga-2004, Standards and Guides for Operation and Maintenance of Nuclear Power Plants

*This Code establishes the requirements for preservice and inservice testing and examination of certain components to assess their operational readiness in light water reactor power plants.*

ASME OMa Code-2005, Code for Operation and Maintenance of Nuclear Power Plants

*This Code establishes the requirements for preservice and inservice testing and examination of certain components to assess their operational readiness in light water reactor power plants.*

ASME OMb Code-2006, Code for Operation and Maintenance of Nuclear Power Plants

*Establishes the requirements for preservice and inservice testing and examination of certain components to assess their operational readiness in light-water reactor nuclear power plants.*

ASME OMb-S/G-2005, Standards and Guides for Operation and Maintenance of Nuclear Power Plants

*This document provides standards and guidelines for preservice and inservice testing of components and systems in light water reactor power plants.*

ASME PALD-2005, Portable Automotive Lifting Devices

*The standardization of safety and performance requirements for portable automotive lifting equipment.*

ASME PCC-1-2005, Guidelines for Pressure Boundary Bolted Flange Joint Assembly

*The bolted flange joint assembly (BFJA) guidelines described in this document apply to pressure-boundary flanged joints with ring-type gaskets that are entirely within the circle enclosed by the bolt holes and with no contact outside the circle. By selection of those features suitable to the specific service or need, these guidelines may be used to develop effective joint assembly procedures for the broad range of sizes and service conditions normally encountered in the process industries.*

ASME PCC-2-2006, Repair of Pressure Equipment and Piping Standard

*This standard provides methods for repair of equipment and piping within the scope of ASME Pressure Technology Codes and Standards after it has been placed in service. These repair methods include relevant design, fabrication, examination and testing practices and may be temporary or permanent, depending on the circumstances. The methods provided in this standard address the repair of components when repair is deemed necessary based on appropriate inspection and flaw assessment. These inspection and flaw evaluation methods are not covered in this document, but are covered in other post construction codes and standards. Only technical procedures and information are provided; administrative or policy requirements are outside of the scope of this standard. This standard is intended to be referenced by other standards and codes, such as the National*

ASME PTC 1-2004, Performance Test Codes – General Instructions

*This document provides direction to users of Performance Test Codes. Code users shall consider it as part of each test. The objectives of this document are: 1. Define the purpose and scope of ASME Performance Test Codes; 2. List major industry applications where PTCs can be used; 3. Provide direction on the use of equipment Performance Test Codes concerning the planning, preparation, implementation, and reporting of test results.*

ASME PTC 10-1998 (R2003), Performance Test Code – Compressors and Exhausters

*To provide test procedures to determine the thermodynamic performance of axial or centrifugal compressors or exhausters doing work on a gas of known or measurable properties under specified conditions.*

ASME PTC 11-1984 (R2003), Fans

*This Code provides standard procedures for conducting and reporting tests on fans, including those of the centrifugal, axial, and mixed flow types. The principal quantities that can be determined are (a) fan mass flow rate, or alternatively, fan volume flow rate; (b) fan specific energy, or alternatively, fan pressure; and (c) fan input power. This Code provides the rules for testing fans to determine performance under actual operating conditions and additional rules for converting measured performance to that which would prevail under specified operating conditions.*

ASME PTC 12.1-2000 (R2005), Performance Test Code – Closed Feedwater Heaters

*This Standard provides procedures, direction and guidance for determining the performance of a closed feedwater heater with regard to several measures of performance. This Standard applies to all horizontal and vertical heaters except those with partial-pass drain cooling zones.*

ASME PTC 12.2-1998, Steam Surface Condensers

*Provides standard directions and rules for conducting and reporting performance tests of water-cooled steam surface condensers.*

ASME PTC 12.3-1997 (R2004), Deaerators

*Provides procedures for conducting tests and analyses to determine the performance of deaerating heaters and deaerators equipped with either shell-and-tube or direct-contact, vent-condensing sections.*

ASME PTC 12.4-1992 (R2004), Moisture Separator Reheaters

*This Code provides the procedures, direction, and guidance for the accurate testing of Moisture Separator Reheaters (MSR), which includes moisture separation and steam reheating components located between the high pressure and low pressure steam turbines. The purpose of the Code is to determine the performance of the MSR and to provide guidance in the evaluation of its performance effect on the turbine cycle heat rate.*

ASME PTC 12.5-2000 (R2005), Single Phase Heat Exchangers

*This Standard includes description of instruments, calculation techniques, and methods to determine the steady state performance of single-phase heat exchangers at both test conditions and reference conditions.*

ASME PTC 17-1973 (R2003), Performance Test Code – Reciprocating Internal-Combustion Engines

*Provides rules for testing, and for the computation & tabulation of the results of tests, for all types of reciprocating internal combustion engines, in order to determine power & fuel consumption*

ASME PTC 18-2002, Hydraulic Turbines and Pump - Turbines

*This Code defines procedures for field performance and acceptance testing of hydraulic turbines and pump-turbines operating with water in either the turbine or pump mode.*

ASME PTC 19.1-2005, Test Uncertainty

*The Scope of PTC 19.1 is to specify procedures for evaluation of uncertainties in test parameters and methods, and for propagation of those uncertainties into the uncertainty of a test result.*

ASME PTC 19.11-1997 (R2004), Steam and Water Sampling, Conditioning and Analysis in the Power Cycle

*This Standard provides information on methods and instrumentation for testing boiler make-up and feedwater, steam and condensate in relation to performance testing or monitoring of cycle chemistry, including sample selection, collection, conditioning and analysis, as well as data anlysis.*

ASME PTC 19.2-2004, Pressure Measurement Instruments and Apparatus – Part 2

*This Standard provides performance and safety requirements for ball peen hammers. Ball peen hammers have a striking face on one end of the head for use in striking punches and chisels, and a ball peen on the opposite end for use in riveting, shaping, and straightening unhardened metals. This Standard is intended to serve as a guide in selecting, testing, and using the hand tools covered herein. It is not the purpose of this Standard to specify the details of manufacturing.*

ASME PTC 19.22-1986 (R1998), Instruments and Apparatus – Digital Systems Techniques

*This document defines the scope and application of digital system techniques for implementing data acquisition, calculations and results presentation for use with ASME Performance Test Codes.*

ASME PTC 19.3-1974 (R2004), Performance Test Code – Temperature Measurement

*Provides information on instrumentation and procedures for the measurement of temperature.*

ASME PTC 19.5-2004, Flow Measurement

*The object of this Supplement is to define and describe the proper measurement of any flow required or recommended by any of the Performance Test Codes. Flow measurements performed as specified herein satisfy the requirements of all relevant ISO flow measurement standards in effect at the publication. This Supplement describes the techniques and methods if all flow measurements required of recommended by the Performance Test Codes. Newer flow measurement techniques of comparably high accuracy are included in order to provide alternative flow measurements for special situations in which deviations from the requirements of a code are agreed to be necessary. This is a supplementary document which does not supersede the mandatory requirements of any code unless such an agreement has been expressed in writing prior*

ASME PTC 2-2001, Definitions and Values

*Presents precise definitions of terms and exact values of constants employed in the various Performance Test Codes.*

ASME PTC 22-2005, Performance Test Code on Gas Turbines

*Provides for the testing of gas turbines supplied with gaseous or liquid fuels (or solid fuels converted to liquid or gas prior to entrance to the gas turbine). Tests of gas turbines with emission control and/or power augmentation devices, such as injection fluids and inlet air treatment, are included. It may be applied to gas turbines in combined cycle plants or with other heat recovery systems. This Code provides for comparative (back to back) tests designed to verify performance differentials of the gas turbine, primarily for testing before and after modifications, up rates, or overhauls.*

ASME PTC 23-2003, Atmospheric Water Cooling Equipment

*Provides uniform test methods for conducting and reporting thermal performance characteristics of wet mechanical draft, natural draft, wet-dry cooling towers, closed circuit evaporative (wet) coolers, and wet surface air-cooled steam condensers. This Code also provides directions and rules for conducting and reporting plume abatement of wet-dry cooling towers and water consumption of any cooling tower. This Code provides explicit test procedures to yield results of the highest levels of accuracy consistent with the best engineering knowledge and practice currently available. The purpose of this Code is to provide rules for monitoring thermal performance or for conducting acceptance tests on all of the cooling equipment referenced above. It provides rules for monitoring plume abatement and conducting plume-abatement acceptance tests on wet-dry cooling towers.*

ASME PTC 25-2001, Pressure Relief Devices

*Provides standards for conducting and reporting tests on reclosing and nonreclosing pressure relief devices normally used to terminate an abnormal internal or external rise in pressure above a predetermined design value in boilers, pressure vessels, and related piping equipment. This Code covers the methods and procedures to determine relieving capacity and additional operating characteristics which may be required for certification or other purposes by other codes.*

ASME PTC 29-2005, Speed Governing Systems for Hydraulic Turbine Generators Units

*The objective of this Code is to provide uniform test methods and procedures to determine the performance and operational characteristics of a hydraulic turbine speed governor. This Code may be used to conduct factory acceptance testing or to evaluate the current characteristics of an installed speed governor. Not all of the possible results that can be determined by application of this Code need be part of every test. Prior to testing, the parties to the test shall agree whether the Code shall be used in whole or in part to satisfy individual test objectives.*

ASME PTC 30-1991 (R2005), Air Cooled Heat Exchangers

*The object of this Code is to provide uniform methods and procedures for testing the thermodynamic and fluid mechanical performance of air cooled heat exchangers and for calculating adjustments to the test results to design conditions for comparison with the guarantee as defined in para. 5.9.4. Excluded from the scope of this Code are evaporative type coolers (wet cooling towers) and any cooling equipment that combines evaporative and convective air cooling (wet/dry type). This Code does apply to wet/dry type heat exchangers when, by mutual agreement, the heat exchanger can be operated and tested as a dry type unit.*

ASME PTC 36-2004, Measurement of Industrial Sound

*Includes measurement of procedures in a variety of acoustical environments including outdoor settings influenced by ambient sound. Generally, sound pressure levels and/or sound power levels in prescribed frequency bands are used to quantify sound emissions of industrial equipment.*

ASME PTC 39.1-2005, Steam Traps

*This Code covers steam traps which are devices used in removing condensate and non-condensibles from steam systems.*

ASME PTC 4-1998, Fired Steam Generators

*Provides standard test procedures, which can yield results giving the highest level of accuracy consistent with current engineering knowledge and practice.*

ASME PTC 4.2-1969 (R2003), Performance Test Code – Coal Pulverizers

*Establishes procedures for conducting performance tests to determine: 1.1.1 Capacity 1.1.2 Fineness of product 1.1.3 Raw coal feed 1.1.3.1 Grindability 1.1.3.2 Moisture 1.1.3.3 Sizing 1.1.4 Power Consumption 1.1.5 Effect of changes in raw coal characteristics on product fineness, pulverizer capacity, and power consumption. 1.1.6 Effect of changes in pulverizer component settings on product fineness, pulverizer capacity, and power consumption. 1.2 Scope. This Code applies to the pulverizing system as a whole, including all the component parts necessary to take the raw coal, hot air and tempering air at the system inlet, and deliver pulverized coal in proper mixture with air and/or flue gas at the desired temperature at the outlet of the system. This Code applies to the most commonly used systems. displacement compressors, uniformly accurate methods of tests are not available*

ASME PTC 4.4-1981 (R2002), Gas Turbine Heat Recovery Steam Generators

*The purpose of this Code is to establish procedures for the conduct and report of tests of heat recovery steam generators (HRSG) employed in combined cycle installations. Combined cycle, as used herein, shall be interpreted as a gas turbine exhausting into an HRSG, which may or may not be arranged for supplemental firing. This Code provides standard test procedures which will yield results having the highest level of accuracy consistent with current engineering knowledge and practice.*

ASME PTC 42-1988 (R2004), Wind Turbines

*Specifies the methods, procedures, and instrumentation for the field testing and reporting of wind-turbine performance. These procedures and practices were specifically compiled for wind turbines of 100 kW or more, but are applicable to all sizes.*

ASME PTC 46-1996, Overall Plant Performance

*Provides uniform test methods and procedures for the determination of the thermal performance and electrical output of heat-cycle electric power plants and cogeneration facilities. Provides explicit procedures for the determination of the following results: Corrected Net Power, Corrected Heat Rate, and Corrected Heat Input.*

ASME PTC 47-2006, Integrated Gasification Combined Cycle Plants

*This Code provides procedures for performance testing of integrated gasification combined cycle (IGCC) power plants to determine fuel gas flow and quality, thermal efficiency (heat rate), and power output at specified operating conditions. It also provides procedures to determine the flow and quality of cleaned fuel gas produced by the IGCC plant. If electric power is the only product of the IGCC plant, this code provides procedures for determining Corrected net power, Corrected heat rate, and Corrected heat input.*

ASME PTC 50-2002, Fuel Cell Power Systems Performance

*Provides test procedures, methods and definitions for the performance characterization of fuel cell power systems. Fuel cell power systems include all components required in the conversion of input fuel and oxidizer into output electrical and thermal energy. Performance characterization of fuel systems includes evaluating system energy inputs and electrical and thermal outputs to determine fuel-to-electrical energy conversion efficiency and where applicable the overall thermal effectiveness. These efficiencies will be determined to an absolute uncertainty of less than ±2% at a 95% confidence level. (For example, for a calculated efficiency of 40%, the true value lies between 38% and 42%.)*

ASME PTC 6-2004, Performance Test Code 6 on Steam Turbines

*This code may be used for testing of steam turbines operating either with a significant amount of superheat in the initial steam (typically fossil fueled units) or predominantly within the moisture region (typically nuclear fueled units). This code contains rules and procedures for the conduct and reporting of steam turbine testing, including mandatory requirements for pretest arrangements, instruments to be employed, their application and methods of measurement, testing techniques, and methods of calculation of test results. The performance parameters which may be determined from a Code test include: (a) heat rate, (b) generator output; (c) steam flow, (d) steam rate, (e) feedwater flow. It also contains procedures and techniques required to determine enthalpy valves within the moisture region and modifications necessary to permit testing within the restrictions of*

ASME PTC 6.2-2004, Steam Turbines in Combined Cycles

*This Code may be used for testing steam turbines in combined cycles with or without supplementary firing and in cogeneration applications. Within these categories of combined and cogeneration cycles, this Code is applicable to condensing and to non-condensing steam turbines, to reheat and to non-reheat steam turbines, and to induction/extraction steam turbines. The variety of cycles presents challenges in writing a code that addresses all issues encountered for all cycle configurations. PTC 6 is the appropriate code for testing steam turbines in nuclear and fossil-fired regenerative feedwater heater cycles. This Code is applicable only to turbines in cycles in which steam is the working fluid.*

ASME PTC 6A-2000, Performance Test Code – Steam Turbines, Appendix

*Facilitates the calculation and correction of turbine test results by furnishing numerical examples of the procedures outlined in the Test Code for Steam Turbines (PTC 6-1996). The feedwater heating cycles and gland leakoff systems have been simplified by avoiding unnecessarily long or repetitive calculations while still demonstrating the basic principles involved.*

ASME PTC 6R-1985 (R1997), Performance Test Code – Steam Turbines, Guidance for Evaluation of Measurement Uncertainty

*Provides guidance for parties to the test to establish the degree of uncertainty of the test results when there are deviations from the requirements of ANSI/ASME PTC 6.*

ASME PTC 6S-1988 (R2003), Performance Test Code – Steam Turbines, Simplified Procedures for Routine Tests

*The test procedures of this Report are intended for periodic turbine tests and do not supplant the Code (PTC 6) as the basic procedure for turbine acceptance tests. The Code is used for the accurate testing of steam turbines to obtain performance level with minimum uncertainty. Sections 3 through 5 of this Report present general recommendations for instrumentation and test planning. These recommendations are based on current industry practice for the periodic determination of turbine-cycle performance. Section 6 discusses interpretation of test results and shows typical plots of test data for analysis of turbine performance. Sections 7 through 12 present test procedures for selected types of turbine cycles. Each of these procedures contains specific recommendations for instrumentation and method for testing a selected turbine type.*

ASME PVHO-1-2002, Safety Standard for Pressure Vessels for Human Occupancy

*Provides requirements for the design, fabrication, inspection, testing, marking, and stamping of pressure vessels for human occupancy, hereafter called PHVOs or chambers. This Standard also provides requirements for the design, fabrication, inspection, testing, cleaning and certification of piping systems for PVHOs. A PVHO is a pressure vessel that encloses a human being within its pressure boundary while it is under internal or external pressure, regardless of the pressure magnitude. PVHOs include, but are not limited to, submersibles, diving bells, personnel transfer capsules, hyperbaric chambers, high altitude chambers and medical hyperbaric oxygen facilities. This does not include nuclear reactor containments, pressurized airplane and aerospace vehicle cabins, and caissons.*

ASME PVHO-2-2003, Safety Standard for Pressure Vessel for Human Occupancy In-Service Guidelines for PVHO Acrylic Windows

*Provides technical criteria and guidelines for the in-service inspection, care, repair or replacement, testing, and re-certification of PVHO acrylic windows in Pressure Vessels for Human Occupancy. It is intended to be used only with acrylic windows designed, constructed, tested and certified in accordance with the requirements of ANSI/ASME PVHO-1 Safety Standard for Pressure Vessels for Human Occupancy.*

ASME QEI-1-2004, Qualification of Elevator Inspectors

*Applies to the qualification and duties of inspectors and inspection supervisors engaged in the inspection and testing of equipment to determine compliance with the requirements of ASME A17.1, ASME A17.3, CAN/CSA B44.1/ASME A17.5, and ASME A18.1. It also includes requirements for accreditation of organizations that certify inspectors and inspection supervisors. This Standard does not cover personnel engaged in engineering and type testing as covered in Section 8.3 of ASME A17.1, Section 8 of ASME A18.1, and CAN/CSA B44.1/ASME 17.5, including inspection by laboratories in association with these tests.*

ASME QFO-1-1998 (R2006), Qualification of High Capacity Fossil Fuel Fired Plant Operators

*This Standard specifies the requirements leading to certification as a fossil combustion operator of a high capacity fossil fuel fired plant as appropriate to the Clean Air Act as amended in 1990, for a fossil fuel fired boiler with an input equal to or greater than 10E + 06 Btu/hr (10,550 E + 06 J/hr). It does not cover plants (boilers) exclusively firing: wood, wood residue, industrial waste, municipal waste, or combustion turbine exhaust. It provides a procedure for qualification, examination, and certification of the operator. Due to the diversity of size, operation, and process of the organizations and plants affected, this Standard does not identify which specific position(s) or which individual(s) will be certified.*

ASME QHO-1-2004, Qualification and Certification of Hazardous Waste Incinerator Operators

*This Standard covers the qualification and certification of operators of a hazardous waste incinerator.*

ASME QME-1-2002, Qualification of Active Mechanical Equipment for Nuclear Power Plants

*This proposed revision is for the addition of 2 new sections - QV Guide and QDR, and for the addition of SI units in parenthesis to the primary US Customary Units.*

ASME QRO-1-2005, Qualification and Certification of Resource Recovery Facility Operators

*This Standard covers the certification of persons who perform, or direct, operations of facilities that combust municipal solid waste (MSW.*

ASME RA-S-2006, Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications

*The purpose of this appendix is to provide guidance in determining when a change to a nuclear power plant PRA is PRA maintenance and when it is a PRA upgrade, and when peer review is advisable. PRA maintenance and PRA upgrade are defined in Section 2 of the Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications, ASME RA-Sb-2005. Within the context of Section 5, PRA Configuration Control, para 5.4 requires such a determination and further requires that a PRA upgrade be peer reviewed pursuant to the requirements of Section 6. There is no requirement for PRA maintenance to be peer reviewed.*

ASME RA-Sa-2003, Probabilistic Risk Assessment for Nuclear Power Plant Applications

*This Standard sets forth requirements for probabilistic risk assessments (PRAs) used to support risk-informed decisions for commercial light water reactor nuclear power plants, and prescribes a method for applying these requirements for specific applications (additional or revised requirements may be needed for other reactor designs).*

ASME RA-Sb-2005, Probabilistic Risk Assessment for Nuclear Power Plant Applications

*This Standard sets forth requirements for probabilistic risk assessments (PRAs) used to support risk-informed decisions for commercial light water reactor nuclear power plants, and prescribes a method for applying these requirements for specific applications (additional or revised requirements may be needed for other reactor designs).*

ASME RTP-1-2005, Reinforced Thermoset Plastic Corrosion Resistant Equipment

*This Standard applies to stationary vessels used for the storage, accumulation, or processing of corrosive or other substances at pressures not exceeding 15 psig external and/or 15 psig internal above any hydrostatic head.*

ASME STS-1-2006, Steel Stacks

*Mechanical design includes sizing of the gas passage, both in diameter and height, and the drop in gas temperature as heat is transferred through the stack wall. Methods for calculating draft, draft losses, and heat losses are given. Differential expansion of stack components is discussed. Design considerations for stack appurtenances are established.*

ASME TDP-1-2006, Recommended Practices for the Prevention of Water Damage to Steam Turbines Used for Electric Power Generation

*These recommended practices are concerned primarily with the prevention of water damage to steam turbines used for fossil fuel fired electric power generation. The practices cover design, operation, inspection, testing, and maintenance of those aspects of the following power plant systems and equipment concerned with the prevention of the induction of water into steam turbines and associated systems and equipment: (a) main steam system, piping, and drains; (b) reheat steam systems, piping, and drains; (c) reheat attemperating system; (d) turbine extraction systems, piping, and drains; (e) feedwater heaters, piping, and drains; (f) turbine drain system; (g) turbine steam seal system, piping, and drains; (h) main steam attemperator systems; (i) start-up systems; (j) condensor steam and water dumps; Any connection to the turbine is a potential source of water either by induction from external*

ASME V&V 10-2006, V&V 10 - Guide for Verification and Validation in Computational Solid Mechanics

*The purpose of this document is to provide the computational solid and structural mechanics community with a common language, a conceptual framework, and general guidance for implementing the processes of computational model V&V. To this end, the reader will find a glossary of terms, figures illustrating the recommended overall approach to V&V activities, and discussions of factors that should be considered in developing and executing a V&V program. To maximize the value to the engineering community, the PTC 60 committee chose to write from the perspective of V&V for high-consequence computational predictions of complex engineering systems. However, the guidance provided here is also appropriate for simpler applications, recognizing that smaller budgets and lower risks will reduce the scope of the V&V effort. Also, while the concepts and*

ASME Y14.1-2005, Decimal Inch Drawing Sheet Size and Format

*Defines decimal inch sheet sizes and formats for engineering drawings.*

ASME Y14.100-2004, Engineering Drawing Practices

*Establishes the essential requirements and reference documents applicable to the preparation and revision of engineering drawings and associated lists.*

ASME Y14.1M-2005, Metric Drawing Sheet Size and Format

*Defines metric sheet sizes and formats for engineering drawings.*

ASME Y14.24M-1999 (R2004), Types and Applications of Engineering Drawings

*This Standard defines the types of engineering drawings most frequently used to establish engineering requirements. It describes typical applications and minimum content requirements.*

ASME Y14.2M-1992 (R2003), Line Conventions and Lettering

*This Standard establishes the line and lettering practices for use in the preparation of engineering drawings, including the recognition of the requirements for CAD and manual preparation for their reduction and reproduction.*

ASME Y14.32.1M-1994 (R2005), Chassis Frames – Passenger Car and Light Truck – Ground Vehicle Practices

*Establishes minimum requirements for the preparation of engineering drawings for passenger car and light truck chassis frames. This Standard does not apply to heavy truck, trailer, tractor, and off-the-road vehicle chassis frames.*

ASME Y14.34M-1996 (R2002), Associated Lists

*Establishes the minimum requirements for the preparation and revision of parts lists, application lists, data lists, and index lists.*

ASME Y14.35M-1997 (R2003), Revision of Engineering Drawings and Associated Documents

*This Standard defines the practices for revising drawings and associated documentation and establishes methods for identification and recording revisions. The revision practices of this Standard apply to any form oforiginal drawing and associated documentation.*

ASME Y14.36M-1996 (R2002), Surface Texture Symbols

*Establishes the method to designate controls for surface texture of solid materials. It includes methods for controlling roughness, waviness, and lay by providing a set of symbols for use on drawings, specifications or other documents.*

ASME Y14.38-1999 (R2006), Abbreviations for Use on Drawings and in Text

*This standard provides abbreviations and acronyms for use on drawings and related documents.*

ASME Y14.38a-2002, Abbreviations and Acronyms

*This addenda updates the lists of abbreviations and acronyms.*

ASME Y14.3M-2003, Multiview and Sectional View Drawings

*This Standard establishes the requirements for creating orthographic views for item description. The topics covered include the multiview system of drawing, selection, and arrangement of orthographic views, auxiliary views, sectional views, details, and conventional drawing practices. Space geometry and space analysis and applications are included in the appendices for informational purposes.*

ASME Y14.41-2003, Product Definition Data Set Practices - Digital

*This Standard establishes requirements and reference documents applicable to the preparation and revision of product definition data using digital data sets, hereafter referred to as data sets.*

ASME Y14.42-2002, Digital Approval Systems

*Provides the minimum requirements for the development of a digital approval system for engineering documentation.*

ASME Y14.43-2003, Dimensioning and Tolerancing Principals for Gages and Fixtures

*Presents the design practices for dimensioning and tolerancing of gages and fixtures used for the verification of Maximum Material Condition (MMC) size envelopes and Virtual Condition boundaries generated by Geometric Tolerances controlled at Maximum Material Condition. These practices focus on the design of receiver-type gages, which collect attribute data when used for the verification of*

*workpieces dimensioned and toleranced in accordance with ASME Y14.5M-1994. For gaging and fixturing principles and practices, see Sections 2 through 6.*

ASME Y14.4M-1989 (R2004), Pictorial Drawing

*This Standard establishes definitions for and illustrates the uses of various kinds of three-dimensional view pictorial mechanical drawings. It also addresses the kinds of pictorial views commonly used on engineering drawings.*

ASME Y14.5.1M-1994 (R2004), Mathematical Definition of Dimensionins and Tolerancing Principles

*This Standard presents a mathematical definition of geometrical dimensioning and tolerancing consistent with the principles and practices of ASME Y14.5M-1994, enabling determination of actual values.*

ASME Y14.5M-1994 (R2004), Dimensioning and Tolerancing

*This Standard establishes certification requirements for a Geometric Dimensioning and Tolerancing Profes-sional (GDTP). Certification will be based upon the current edition of the Y14.5 Dimensioning and Toleranc-ing*

ASME Y14.6-2001, Screw Thread Representation

*Establishes requirements for the pictorial representation, specification, and dimensioning of screw threads on drawings.*

ASME Y14.8M-1996 (R2002), Castings and Forgings

*Covers definitions and terms and features unique to casting and forging technologies with recommendation for their uniform description and inclusion on engineering drawings and related documents.*

ASME Y32.18-1972 (R2003), Mechanical and Acoustical Elements as Used in Schematic Diagrams, Symbols for

*This document presents standard symbols and definitions that may be used in constructing schematic diagrams for mechanical and acoustical systems whose performances are describable by finite sets of scalar variables.*

ASME Y32.7-1972 (R2004), Railroad Maps and Profiles, Graphic Symbols for

*Provides graphic symbols for railroad maps and profiles.*

## ASNT (American Society for Non-Destructive Testing)

ANSI/ASNT CP-105-2006, ASNT Standard Training Outlines for Qualification of Nondestructive Testing Personnel

*An essential element in the effectiveness of nondestructive testing (NDT) is the qualification of the personnel who are responsible for and who perform nondestructive testing. Formal training is an important and necessary element in acquiring the skills necessary to effectively perform nondestructive tests. This standard specifies the body of knowledge to be used as part of a training program qualifying and certifying NDT personnel.*

ANSI/ASNT ILI-PQ-2005, In-Line Inspection Personnel Qualification and Certification Standard

*Provides a standard means for employers to qualify and certify nondestructive testing personnel using in-line inspection technologies on oil and gas pipelines to include levels of qualification, education, training, and experience requirements, examinations, certification, and recertification.*

## ASNT (American Society for Nondestructive Testing)

ANSI/ASNT CP-189-2006, Qualification and Certification of Nondestructive Testing Personnel

*This standard covers the qualification and certification of personnel whose specific tasks or jobs require appropriate knowledge of the technical principals underlying nondestructive testing (NDT) methods for which they have responsibilities within the scope of their employment. These specific tasks or jobs include, but are not limited to, performing, specifying, reviewing, monitoring, supervising, and evaluating NDT work.*

## ASQ (American Society for Quality)

ANSI/ASQ E4-2004, Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs

*Specifies requirements for a quality system to enable an organization to formulate policies and procedures to plan and implement sufficient and adequate quality management practices for environmental programs.This standard is applicable to any organization that wishes to:Implement, maintain and improve a quality system for environmental programs;Specify quality requirements when contracting for work;Assure itself of its conformance with its stated quality policy; andDemonstrate such conformance to others.All the requirements in this standard are intended to be incorporated into quality systems supporting environmental programs involving environmental data and environmental technology. The extent of the application will depend on the environmental policy of the organization, the nature of its environmental programs, and the conditions*

ANSI/ASQ Z1.13-1998, Quality Systems Guidelines for Research

*Aids in the development of a quality system for basic and applied research.*

ANSI/ASQ Z1.4-2003, Sampling Procedures and Tables for Inspection by Attributes

*Sampling Procedures and Tables for Inspection by Attributes is an acceptance sampling system to be used with switchingrules on a continuing stream of lots for AQL specified. It provides tightened, normal, and reduced plans to be applied forattributes inspection for percent*

*nonconforming or nonconformities per 100 units.*

ANSI/ASQ/ISO Q10005-2005, Quality Management Systems - Guidelines for Quality Plans

*This International Standard provides guidelines for the development, review, acceptance, application and revision of quality plans. It is applicable whether or not the organization has a management system in conformity with ISO 9001. This International Standard is applicable to quality plans for a process, product, project or contract, any product category (hardware, software, processed materials and services) and any industry.*

ANSI/ASQ/ISO Q10012-2003, Measurement management systems -Requirements for measurement processes and measuring equipment

*This International Standard includes both requirements and guidance for implementation of measurement management systems, and can be useful in improving measurement activities and the quality of products.*

ANSI/ASQC Z1.9-2003, Sampling Procedures and Tables for Inspection by Variables for Percent Nonconforming

*Sampling Procedures and Tables for Inspection by Variables for Percent Nonconforming is an acceptance sampling system to be used on a continuing stream of lots for AQL specified. It provides tightened, normal, and reduced plans to be used on measurements which are normally distributed. Variation may be measured by sample standard deviation, sample range, or known standard deviation. It is applicable only when the normality of the measurements is assured.*

ANSI/IEC/ASQ D1070-1997, Compliance Test Procedures for Steady State Reliability

*Specifies techniques for availability performance measures used in either steady-state availability or steady-state unavailability.*

ANSI/IEC/ASQ D1123-1997, Reliability Testing - Compliance Test Plans for Success Ratio

*Specifies procedures for applying and preparing compliance test plans for success ratio or failure ratio.*

ANSI/ISO/ASQ E14001-2004, Environmental Management Systems – Specification with Guidance for Use

*This International Standard specifies requirements for an environmental management system to enable an organization to develop and implement a policy and objectives which take into account legal requirements and other requirements to which the organization subscribes, and information about significant environmental aspects. It applies to those environmental aspects that the organization identifies as those which it can control and those which it can influence. It does not itself state specific environmental performance criteria.*

ANSI/ISO/ASQ E14004-2004, Environmental Management Systems – General Guidelines on Principles, Systems and Supporting Techniques

*This International Standard provides guidance on the establishment, implementation, maintenance and improvement of an environmental management system and its coordination with other management systems.*

ANSI/ISO/ASQ E14025-2006, Environmental labels and declarations - Type III environmental declarations - Principles and procedures

*This International Standard establishes the principles and specifies the procedures for developing Type III environmental declaration programmes and Type III environmental declarations. It specifically establishes the use of the ISO 14040 series of standards in the development of Type III environmental declaration programmes and Type III environmental declarations.*

ANSI/ISO/ASQ E14064-1-2006, Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

*ISO 14064 -1:2006 details principles and requirements for designing, developing, managing and reporting organization- or company-level GHG inventories. It includes requirements for determining GHG emission boundaries, quantifying an organization's GHG emissions and removals, and identifying specific company actions or activities aimed at improving GHG management. It also includes requirements and guidance on inventory quality management, reporting, internal auditing and the organization's responsibilities for verification activities.*

ANSI/ISO/ASQ E14064-2-2006, Greenhouse gases - Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements

*ISO 14064 -2:2006 specifies principles and requirements and provides guidance at the project level for quantification, monitoring and reporting of activities intended to cause greenhouse gas (GHG) emission reductions or removal enhancements. It includes requirements for planning a GHG project, identifying and selecting GHG sources, sinks and reservoirs relevant to the project and baseline scenario, monitoring, quantifying, documenting and reporting GHG project performance and managing data quality.*

ANSI/ISO/ASQ E14064-3-2006, Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions

*ISO 14064 -3:2006 details principles and requirements for verifying GHG inventories and validating or verifying GHG projects. It describes the process for GHG-related validation or verification and specifies components such as validation or verification planning, assessment procedures and the evaluation of organization or project GHG assertions. This part of ISO 14064 can be used by organizations or independent parties to validate or verify GHG assertions.*

ANSI/ISO/ASQ Q10002-2004, Quality Management - Customer Satisfaction - Guidelines for Complaints Handling in Organizations

*This International Standard provides guidance for the design and implementation of an effective and efficient complaints-handling process for all types of commercial or non-commercial activities, including those related to electronic commerce. It is intended to benefit an organization and its customers, complainants and other interested parties.*

ANSI/ISO/ASQ Q10006-2003, Quality Management Systems - Quality Management Systems - Guidelines for Quality Management in Projects

*This International Standard provides guidance on quality management in projects. It outlines quality management principles and practices, the implementation of which are important to, and have an impact on, the achievement of quality objectives in projects.*

ANSI/ISO/ASQ Q10014-2006, Quality management systems -Guidelines for realizing financial and economic benefits

*This International Standard is addressed to top management. It provides guidelines for realizing financial and economic benefits through the effective application of eight quality management principles derived from ISO 9000:2005. These principles are subsequently referred to as "management principles" within the body of this standard. The intent of this document is to provide top management with information to facilitate effective application of principles and selection of tools that enable success and sustainability of an organization. A self assessment is included as a gap analysis and prioritization tool (see Annex A.*

ANSI/ISO/ASQ Q10015-1999, Quality Management - Guidelines for Training

*Covers the development, implementation, maintenance, and improvement of strategies and systems for training that affect the quality of the products supplied by an organization. This International Standard applies to all types of organizations. It is not intended for use in contracts, regulations, or for certification. It does not add to, change, or otherwise modify requirements for the ISO 9000 series. This International Standard is not intended to be used by training providers delivering services to other organizations.*

*NOTE The main source of reference for training providers should be ISO 9004-2:1991 Quality Management and quality system elements-Part 2: Guidelines for services, until superseded by ISO 9004:2000 Training providers may use this International Standard when addressing the training needs of the their*

ANSI/ISO/ASQ Q9000-2005, Quality Management Systems - Fundamentals and Vocabulary

*This International Standard describes fundamentals of quality management systems, which form the subject of the ISO 9000 family, and defines related terms.*

ANSI/ISO/ASQ Q9001-2000, Quality Management Systems - Requirements

*Presents requirements for a quality management system. The application of this standard can be used by an organization to demonstrate its capability to meet customer requirements for products and/or services, and for assessment of that capability by internal and external parties. This standard was originally listed for public review in the May 7, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/ISO/ASQ Q9004-2000, Quality Management Systems - Guidelines for Performance Improvements

*Provides guidance on quality management, and the continual improvement of processes that contribute to the satisfaction of an organization's customers and interested parties. This International standard is based on quality management principles to provide understanding of quality management and its application to enhancing the internal performance of an organization. Consequently, it is not a guideline for implementing ISO 9001, and is not intended for certification, regulatory or contractual use. The selection of the appropriate quality-related processes described in this International standard and the extent to which these processes are adopted and applied by an organization depends upon factors such as the market being served, the operational processes and resource requirements. This standard was originally listed for public review in the May 7, 1999 issue*

ANSI/ISO/ASQ QE19011S-2004, Guidelines for Quality and/or Environmental Management Systems Auditing - US Version with Supplemental Guidance Added

*Provides additional guidance to users to augment the International Standard. In particular, additional guidance is provided for small organizations that may wish to consider its application to the full range of audit activities (i.e., first, second, and third-party audits) and for any users that wish to apply the standard to internal (first-party) audits and external supplier (second-party) audits. Since the definition of small organizations may vary, the concept of a small organization in this Supplement does not only relate to the size of the organization but also to the complexity of the management system, complexity of the product and processes, the organization's regulatory environment, and the effectiveness of communications within the organization. Therefore, the guidance given for small organizations may also apply to larger organizations with simple management*

ANSI/ISO/ASQC Q10007-2003, Quality Management Systems - Guidelines for Configuration Management

*The purpose of this International Standard is to enhance common understanding of the subject, to promote the use of configuration management, and to assist organizations applying configuration management to improve their performance. Configuration management can be used to meet the product identification and traceability requirements specified in ISO 9001.*

## ASSE (American Society of Safety Engineers)

ANSI A10.10-1990 (R2004), Safety Requirements for Temporary and Portable Space Heating Devices and Equipment

*Provides minimum safety requirements for the selection, installation, operation and maintenance of space heating devices and equipment of temporary and portable design. Covers the heater unit and its integral parts through to their connection for fuel, but does not cover separate supply tanks or valving.*

ANSI A10.11-1989 (R1998), Safety Requirements for Safety Nets

*Establishes safety requirements for the selection, installation, and use of personnel and debris nets during construction, repair, and demolition operations.*

ANSI A10.12-1998 (R2005), Safety Requirements for Excavation

*Establishes standards for the prevention of deaths, injuries and damage during or related to excavation operations.*

ANSI A10.13-2001, Safety Requirements for Steel Erection

*Establishes safety requirements for the erection, handling, fitting, fastening, reinforcing and dismantling of structural steel, plate steel, steel joist, and metal deck at a final, in-place field site during construction, maintenance, and dismantling operations.*

ANSI A10.15-1995 (R2005), Safety Requirements for Dredging

*Applies to the operation, inspection, and maintenance of any vessel fitted with machinery for the purpose of removing or relocating of material from or in a body of water.*

ANSI A10.16-1995 (R2001), Construction and Demolition Operations - Safety Requirements for Tunnels, Shafts, and Caissons

*Establishes safety requirements pertaining to the construction of tunnels, shafts, and caissons. The requirements set forth in this standard cover environmental control; related facilities; fire prevention; hoisting; haulage; and electrical, drilling and blasting, and compressed-air work. This standard is not intended for application to mining or quarrying operations.*

ANSI A10.17-1997, Safe Operating Practices for Hot Mix Asphalt (HMA) Construction

*Applies to hot mix asphalt operations for construction and resurfacing. This standard was administratively withdrawn, and is being resubmitted as a new standard.*

### ANSI A10.17-2006, Safe Operating Practices for Hot Mix (HMA) Construction

*Applies to those operations involving hot mix asphalt (bituminous) mixtures and materials for construction and resurfacing. Safe work practices are included for the protection of workers and the public and are to be considered the vital safety requirements for designers, manufacturers and installers of such equipment and materials.*

### ANSI A10.20-2005, Safety Requirements for Ceramic Tile, Terrazo, and Marble Work

*Establishes safety requirements for construction operations and equipment used in the handling and installation of ceramic tile, terrazzo, and marble. The types of construction are not listed. The standard is intended to apply to buildings of all kinds and to heavy construction, such as work in tunnels.*

### ANSI A10.22-2007, Safety Requirements for Rope-Guided and Nonguided Workers' Hoists for Construction and Demolition Operations

*This standard establishes minimum safety requirements for temporary personnel hoisting systems used for the transportation of persons to and from working elevations during normal construction and demolition operations, including maintenance, and is restricted to use in special situations.*

### ANSI A10.24-2006, Roofing - Safety Requirements for Low-Sloped Roofs

*Establishes safe operating practices for the installation, maintenance and removal of membrane roofing that is seamed or seamless on low-sloped roofs with a maximum slope of four (4) and twelve (12). These types of roofs include but are not necessarily limited to hot and cold built-up roofing, single-ply roofing, polyurethane foam (PUF) roofing, liquid-type roofing (Hypalon, polyurethane, etc.), modified bitumen's. NOTE: This standard does not apply to composition or wood shingles, slate, tile and metal roofs that are normally installed on roofs with slopes four (4) and twelve (12) or greater.*

### ANSI A10.27-1998 (R2005), Safety Requirements for Hot Mix Asphalt Facilities

*Provides recommendations concerning the design, manufacture, operating processes, and equipment associated with the production of hot asphalt mixing (HMA) facilities. Included are raw material handling and storage, equipment operation to produce asphalt mixtures and the delivery of mixes into vehicles for transport to users. Routine maintenance housekeeping and allied functions are included.*

### ANSI A10.28-1998 (R2004), Work Platforms Suspended from Cranes or Derricks – Safety Requirements

*Applies to platforms suspended from the load lines of cranes or derricks in order to (1) perform work at elevations that cannot normally be reached by other types of scaffolds or aerial work platforms or (2) transport personnel to elevations where other means of access are unsafe or impractical because of design or worksite conditions. Safe use of such equipment is dependent upon the user following all provisions contained herein. A competent person shall perform a job analysis on all equipment to be used to suspend platforms from cranes and derricks including the platforms. A copy of the job analysis shall be maintained at the jobsite.*

### ANSI A10.3-2006, Safety Requirements for Powder-Actuated Fastening Systems

*This standard provides safety requirements for a powder-actuated fastening system (tool or machine) that propels a stud, pin, fastener, or other object for the purpose of affixing it, by penetration, to hard structural material. (such as floors, walls, ceilings and framing members). This standard does not apply to devices designed for attaching object to soft construction materials (such as wood, plaster, tar, and dry wallboard) or very hard or brittle construction materials (such as cast iron, glazed tile, hardened steel, glass, natural rock, hollow tile, and most brick). This standard also does not apply to stud welding equipment.*

### ANSI A10.31-2006, Safety Requirements, Definitions, and Specifications for Digger Derricks for Construction and Demolition Operations

*This standard applies to special multi-purpose vehicle-mounted machines, commonly known as digger derricks. These machines are primarily designed to accomodate components that dig holes, set poles and position materials and apparaties.*

### ANSI A10.32-2004, Personal Fall Protection Safety Requirements for Construction, Demolition Operations

*Establishes performance criteria for personal fall protection equipment and systems and provides guidelines, recommendations for their use and inspection. It includes, but is not limited to: fall arrest, restraint, positioning, climbing, descending, rescue, escape and training activities.*

### ANSI A10.33-1992 (R2004), Safety and Health Program Requirements for Multi-Employer Projects

*Sets forth the minimum elements and activities of a program that defines the duties and responsibilites of construction project where a single Project Constructor supervises and controls the project.*

### ANSI A10.34-2001 (R2005), Protection of the Public on and Adjacent to Construction Sites

*This standard provides the recommended elements and activities on construction projects to provide protection for the Public.*

### ANSI A10.38-2000, Basic Elements of a Program to Provide a Safe and Healthful Work Environment

*Establishes the minimum elements of a program for protecting the safety and health of employees involved in construction activities.*

### ANSI A10.39-1996 (R2005), Construction Safety and Health Audit Program

*Identifies the minimum performance elements that when properly utilized will allow for a competent evaluation of a construction safety and health program. Further, it will identify those areas where systems, records and performance elements are required in order to produce a quality audit.*

ANSI A10.4-2004, Safety Requirements for Personnel Hoists and Employee Elevators

*Applies to the design, construction, installation, operating, testing, maintenance, alterations and repair of hoists and elevators that : (1) are not an integral part of buildings, (2) are installed inside or outside buildings or structures during construction, alteration, demolition or operation and (3) are used to raise and lower workers and other personnel connected with or related to the structure. These personnel hoists and employee elevators may also be used for transporting materials.*

ANSI A10.42-2000, Rigging Qualifications and Responsibilities in the Construction Industry

*This standard establishes minimum criteria of knowledge and performance requirements for a qualified rigger in the construction industry. It is designed to assist in achieving reasonable safety of all persons and materials during the process of or as the result of rigging, lifting, or movement of loads.*

ANSI A10.7-1998 (R2005), Commercial Explosives and Blasting Agents - Safety Requirements for Transportation, Storage, Handling and Use

*Provides the construction industry with reasonable minimum recommendations for establishing and maintaining a level of health and safety with regard to the transportation, storage, handling, and use of commercial explosives and blasting agents.*

ANSI A10.8-2001, Safety Requirements for Scaffolding

*Establishes safety requirements for the construction, operation, maintenance, and use of scafflods used in the construction, demolition and maintenance of buildings and structures.*

ANSI A10.9-1997, Concrete and Masonry Work Safety Requirements

*Establishes safety requirements pertaining to concrete construction and masonry work in construction. Covers all on-site concrete construction and masonry work including design, erection, operation, and maintenance of aggregate processing plants, concrete mixing plants, and conveyances. Also contains safety requirements pertinent to the specialty concrete operations of prestressing by pretensioning or post tensioning, lift-slab construction, tilt-up construction, and slip forms.*

ANSI A10.9-1997 (R2004), Concrete and Masonry Work Safety Requirements

*Establishes safety requirements pertaining to concrete construction and masonry work in construction. Covers all on-site concrete construction and masonry work including design, erection, operation, and maintenance of aggregate processing plants, concrete mixing plants, and conveyances. Also contains safety requirements pertinent to the specialty concrete operations of prestressing by pretensioning or post tensioning, lift-slab construction, tilt-up construction, and slip forms.*

ANSI A1264.1-2007, Safety Requirements for Workplace Walking/Working Surfaces and Their Access; Workplace, Floor, Wall and Roof Openings; Stairs and Guardrails Systems

*This standard sets forth safety requirements in industrial and workplace situations for protecting persons in areas/places where danger exists of persons or object falling through floor, roof or wall openings, or from platforms, runways, ramps, and fixed stairs, or roof edges in normal, temporary, and emergency conditions.*

ANSI A1264.2-2006, Provision of Slip Resistance on Walking/Working Surfaces

*Sets forth provisions for protecting persons where there is potential for slipping and falling as a result of surface characteristics or conditions.*

ANSI Z117.1-2003, Safety Requirements for Confined Spaces

*Provides minimum safety requirements to be followed while entering, exiting and working in confined spaces at normal atmospheric pressure.*

ANSI Z244.1-2003, Lock Out/Tag Out of Energy Sources, Safety Requirements for the

*Establishes requirements and performance objectives for procedures, techniques, designs and methods that protect personnel where injury can occur as a result of the unexpected release of hazardous energy. Unexpected release of hazardous energy can include any unintended motion, energization, start-up or release of stored energy, deliberate or otherwise, from the perspective of the person(s) at risk.*

ANSI Z359.1-1992 (R1999), Safety Requirements for Personal Fall Arrest Systems, Subsystems, and Components

*Establishes requirements for the performance, design, marking, qualification, instruction, training, inspection, use, maintenance, and removal from service of connectors, full body harnesses, lanyards, energy absorbers, anchorage connectors, fall arresters, vertical lifelines, and self-retracting lanyards comprising personal fall arrest systems for users within the capacity range of 130 to 310 pounds (59 to 140 kg).*

ANSI Z390.1-2006, Accepted Practices for Hydrogen Sulfide (H2S) Safety Training Programs

*This standard sets forth accepted practices for hydrogen sulfide (H2S) safety training and instruction of affected personnel.*

ANSI Z490.1-2001, Accepted Practices for Safety, Health, and Environmental Training

*Establishes voluntary criteria for safety, health, and environmental training programs, including development, delivery, evaluation and program management. The purpose of this Standard is to provide accepted practices for safety, health, and environmental training. This Standard is recommended for voluntary application by training providers of safety, health, and environmental training. If any of the provisions of this Standard are deemed to not be applicable, the other requirements or recommendations of the Standard shall still apply. This Standard applies to all safety, health, or environmental training, whether separate or a portion of other training. This standard was listed for public review in the 7/14/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/ASSE A10.5-2006, Safety Requirements for Material Hoists

*This standard applies to material hoists used to raise or lower materials during construction, alteration or demolition. It is not applicable to the temporary use of permanently installed personnel elevators as material hoists.*

ANSI/ASSE A10.6-2006, Safety and Health Program Requirements for Demolition Operations

*This standard applies to the demolition of buildings and other structures.*

ANSI/ASSE Z15.1-2006, Safe Practices for Motor Vehicle Operations

*This standard sets forth practices for the safe operation of motor vehicles and operations.*

ANSI/ASSE Z590.2-2003, Criteria For Establishing the Scope and Functions of the Professional Safety Position

*Establishes the scope and functions of the professional safety position to consolidate in a clear and consistent manner an objective assessment of the position.*

## ASSE (American Society of Sanitary Engineering)

ANSI/ASSE 1001-2001, Pipe-Applied Atmospheric-Type Vacuum Breakers

*Applies to devices classified as atmospheric type vacuum breakers that are single pipe-applied (does not apply to tank ball cocks or similar devices that depend on float operated valves to control flow). The purpose of these devices is to provide protection of the potable water supply against pollutants or contaminants that enter the system due to backsiphonage through the outlet. Under backsiphonage conditions, a small amount of water is permitted to exit through the air ports. The device shall: 1) Be installed downstream of the last control valve; 2) Not be subjected to backpressure 3) Not be subjected to more than twelve (12) hours of continuous water pressure; and 4) Be installed with its critical level (CL) not less than 150 mm (6 inches) above the flood lever rim of the fixture or appliances served; or deck mounted/equipment mounted atmospheric vacuum breakers shall be installed*

ANSI/ASSE 1003-2001, Performance Requirements for Water Pressure Reducing Valves

*The purpose of a water pressure reducing valve is to reduce static and flowing pressures in water distribution systems. Devices covered by this standard are self-contained, direct acting, single diaphragm types. Devices shall be permitted to have an integral strainer, separate strainer connected to the valve inlet, or be without strainer. Devices shall be permitted to be with or without an integral by-pass relief valve.*

ANSI/ASSE 1008-2006, Performance Requirements for Reisdential Food Waste Disposer Units

*This standard applies to residential food waste disposers intended for installation in the residential kitchen sink outlet. They are designed to reduce edible food waste intended for human or animal consumption to particle sizes for discharge into the residential plumbing drainage system.*

ANSI/ASSE 1010-2004, Performance Requirements for Water Hammer Arresters

*This standard applies only to those devices classified as water hammer arresters having a permanently sealed cushion of water or gas isolated from the water way, and designed to provide continuous protection, without maintenance, against detrimental surge pressures within the water distribution system.*

ANSI/ASSE 1011-2004, Hose Connection Vacuum Breakers

*Hose Connection Vacuum Breakers shall provide protection of the potable water supply against pollutants or contaminants that can enter the system through backpressure equal to from an elevated hose equal to ar leass than 10.0 feet (3.0 meters) in height [4.3 psi (29.9 kPa)] and backsiphonage through the hose threaded outlets.*

ANSI/ASSE 1012-2002, Performance Requirements for Backflow Preventer with Intermediate Atmospheric Vent

*Backflow Preventers with Intermediate atmospheric Vent are installed in the plumbing to prevent backflow in potable water supply lines due to the creation of back pressure or back-siphonage in which reversal of the normal direction of flow could cause or allow pollutants to enter the potable water supply system. The devices covered by this standard are those which have functional capabilities for preventing both backsiphonage and back pressure backflow in the water supply lines, and which can operate under continuous or intermittent pressure conditions. These devices have tow independently operating check valves separated by an intermediate chamber with a means for automatically venting it to the atmosphere. The check valves re force loaded to a normally closed position and the venting means is force loaded to a normally open position.*

ANSI/ASSE 1013-2005, Performance Requirements for Reduced Pressure Principle Backflow Preventers and Reduced Pressure Fire Protection Principle Backflow Preventers

*The purpose of an RP and an RPF is to keep contaminated water from flowing back into a potable water distribution system. They consist of 2 independently-acting check valves separated by an intermediate chamber in which there is an hydraulically operated relief means for venting to atmosphere. These assemblies are designed to operate under continuous pressure conditions. This standard also applies to Manifold RPs That consist of two or more complete RPs in parallel.*

ANSI/ASSE 1014-2005, Performance Requirements for Backflow Prevention Devices for Hand-Held Showers

*These devices provide backflow protection against backsiphonage and backpressure in handhled showers. They are separate devices are or integral with wall or deck mounted tub fillers, flexible hoses, or components that are attached to shower arms.*

ANSI/ASSE 1015-2005, Performance Requirements for Double Check Backflow Prevention Assemblies and Double Check Fire Protection Backflow Prevention Assemblies

*The purpose of a DC and a DCF is to keep contaminated water from flowing back into a potable water distribution system. They consist of 2 independently-acting check valves, 2 shut-off valves and test cocks . These assemblies are designed to operate under continuous or intermittent pressure conditions. This standard also applies to Manifold DCs That consist of two or more complete DCs in parallel.*

ANSI/ASSE 1016-2005, Performance Requirements for Automatic Compensating Valves for Individual Showers and Showers in Tub/Shower Combinations

*Automatic compensating valves for individual showers and tub/shower combinations are intended to control the water temperature to wall mounted shower heads either in individual shower or tub/shower combination fixtures to reduce the risk of scalding and thermal shock. They are installed at the point-of-use, where the bather has access to flow and final temperature control mechanisms, and where the water temperature cannot be adjusted downstream of the device.*

ANSI/ASSE 1017-1999, Performance Requirements for Temperature Actuated Mixing Valves for Primary Domestic Use

*Covers temperature actuated mixing valves for primary domestic hot water applications, used for controlling water temperatures across the normal range of domestic usage from 37.8 degree celcius (100 degree F) to 60 degree celcius (140 degree F).*

ANSI/ASSE 1018-2002, Trap Seal Primer Valves - Potable Water Supplied

*Devices covered by this standard are designed primarily to supply water to drain traps which have infrequent use and in which water evaporation would allow sewer gas to enter the premises. This type of device is located in the domestic water distribution system and is designed to supply potable water to a drain trap to maintain the water seal. A means for the prevention of backsiphonage shall be incorporated as part of the device.*

ANSI/ASSE 1019-2004, Performance Requirements for Vacuum Breaker Wall Hydrant, Freeze Resistant Automatic Draining Type

*This standard establishes design and performance requirements for water-supply system, wall hydrant devices. These devices shall supply potable water to hose connections without danger of freezing, and shall have a permanent means, including atmospheric vent(s) by to prevent backflow due to backsiphonage, backpressure, or both.*

ANSI/ASSE 1020-2004, Pressure Vacuum Breakers Assembly

*Pressure Vacuum Breaker Assemblies are for installation in water supply lines to prevent the entrance of non-potable material into the potable water supply by backsiphonage only. It is not for use in any system where backpressure can be applied to the device.*

ANSI/ASSE 1022-2003, Performance Requirements for Backflow Preventers for Beverage Dispensing Equioment

*This standard covers a backflow prevention device designed to protect the potable water supply serving beverage dispensing equipment. These devices are intended for use under continuous or intermittent pressure conditions. These devices shall consist of two independently acting check valves biased to a normally closed position. An atmospheric port shall be located between the check valves and shall be biased to a normally open position. The port shall vent liquids, gases, or both, under backflow conditions.*

ANSI/ASSE 1024-2004, Dual Check Valve Type Backflow Preventers

*This standard applies to devices classified as dual check backflow preventers. The purpose of this device is to keep polluted water from flowing back into the potable water system, when pressure is temporarily higher in the polluted part of the system than in the potable water piping. The devices are intended to protect the potable water supply from low hazard pollution at residential service lines and individual outlets; and are intended for cold water service under continuous or intermittent pressure conditions.*

ANSI/ASSE 1035-2002, Laboratory Faucet Backflow Preventer

*Laboratory Faucet Backflow Preventers are designed to protect the potable water supply from pollutants or contaminants entering the system due to back siphonage or back pressure. They are designed for installation on laboratory faucets on the discharge side of the last shutoff valve. They are not for use under constant pressure conditions. They consist of two independently acting check valves, biased to a normally closed position, and between the check valves a means for automatically venting to atmosphere, biased to normally open position.*

## ANSI/ASSE 1044-2002, Trap Seal Primer Devices - Drainage Types and Electronic Design Types

*Devices covered by this performance standard are designed primarily to supply water to floor drain traps which have infrequent use and in which water evaporation would allow sewer gas to enter the premises. The type of device covered by this standard is designed to supply water to a drain trap to provide and maintain its water seal using a supply from a fixture drainline, ballcock, or flushometer valve tailpiece or an electronic primer device. The rate of water flow to the trap shall be permitted to be fixed or adjustable. The devices are of four (4) types: Those which are installed on waste line tail pieces from fixtures, such as lavatories, sinks and similar fixtures where grease is not normally generated; those which are used in conjunction with ballcock assemblies; those which receive flow from flushometer valves; and those electronics devices which discharge water automatically*

## ANSI/ASSE 1047-2005, Reduced Pressure Detector Assembly Backflow Preventer

*RPDfs keep contaminated water from fire protection systems from flowing back into a potable water distribution system when the pressure in the fire sprinkler system is higher than the pressure in the potable water system. They detect low rates of flow up to 2 GPM within the sprinkler system caused by leakage or unauthorized use. They consists of 2 check valves separated by an intermediate chamber with venting to atmosphere, and a bypass line. This standard applies to Manifold RPDFs that consist of 2 or more complete RPDFs in parallel.*

## ANSI/ASSE 1048-2005, Double Check Detector Assembly Backflow Preventor

*DCDFs keep contaminated water from fire protection systems from flowing back into a potable water distribution system when the pressure in the fire sprinkler system is higher than the pressure in the potable water system. They detect low rates of flow up to 2 GPM within the sprinkler system caused by leakage or unauthorized use. They consists of 2 check valves, 2 shutoff valves and test cocks and a bypass line. This standard applies to Manifold DCDFs that consist of 2 or more complete DCDFs in parallel.*

## ANSI/ASSE 1051-1998, Air Admittance Valves for Plumbing Drainage Systems

*Establishes physical requirements, basic performance requirements and test procedures for type A and type B Air Admittance Valves (AAV) used in plumbing drainage systems.*

## ANSI/ASSE 1052-2004, Performance Requirements for Hose Connection Backflow Preventers

*This standard establishes design requirements, basic performance requirements and test procedures for hose connection backflow preventers. This device is designed to be installed on the discharge side of a hose threaded outlet on a potable water system. This two-check device protects against backflow, due to backsiphonage or low-head backpressure, and is field testable to certify protection under the high hazard conditions present at a hose threaded outlet. This device shall only be used on systems where the low-head backpressure does not exceed that generated by an elevated hose equal to or less than 10 feet (3.0 m) in height. These devices shall not be subjected to continuous water pressure.*

## ANSI/ASSE 1056-2002, Back Siphonage Backflow Vacuum Breakers

*Spill Resistant Vacuum Breakers (herein referred to as "device") are installed in the potable water supply lines to prevent the backflow of non-potable water supply caused by back-siphonage only. They are not for use in any system where back pressure is applied to the device. When the system is pressurized the vent closes to prevent a flow through the upstream check valve, and to eliminate vent spillage. This standard applies only to those devices classified as Spill Resistant Vacuum Breakers - SVB. These devices are designed for installation in those portions of the domestic potable water systems that are normally under continuous pressure conditions. The device includes one (1) check valve force-loaded closed and an air inlet vent valve force loaded open to atmosphere, positioned downstream of the check valve, and located between and including two (2) tightly closing shut-off valves*

## ANSI/ASSE 1060-2006, Performance Requirements for Outdoor Enclosures for Fluid Conveying Equipment

*This standard details the requirements of outdoor enclosures for fluid conveying components installed in freezing and non-freezing locations. They protect backflow prevention assemblies, water/gas meters, control valves, pressure reducing valves, air release valves, pumps, and other components installed outdoors from freezing and/or for system security. They provide positive drainage, security, and accessibility for monitoring, testing, repairing and replacing of the components.*

## ANSI/ASSE 1061-2006, Performance Requirements for Removable and Non-removable Push-Fit Fittings

*The purpose of this standard is to establish minimum performance requirements for removable and non-removable push-fit fittings that employ a quick assembly push-fit connector, as well as push-fit connectors integrated into plumbing devices (herein referred to as the “fitting”). The fittings described in this standard are intended for use in domestic and commercial applications, for both potable water distribution systems and hydronic heating systems.*

## ANSI/ASSE 1062-2006, Performance Requirements for Temperature Actuated, Flow Reduction Valves for Individual Supply Fittings

*This standard applies to Temperature Actuated, Flow Reduction Valves for Individual Supply Fittings which react to high temperature water. They are operated either mechanically or electrically, and are installed in-line with or integrated into supply fittings. They automatically reduce flow within 5 seconds to 0.25 GPM (0.95 L/m) or less at 80.0 psi (551.6 kPa) in response to outlet temperatures greater than a preset actuation temperature not to exceed 120.0 °F (48.9 °C) so as to limit exposure to high temperature water discharged from an individual supply fitting.*

ANSI/ASSE 1064-2006, Performance Requirements for Backflow Prevention Assembly Field Test Kits

*This standard covers the performance requirements, and accuracy of a portable backflow prevention assembly field test kits used in testing the performance of backflow prevention assemblies. This standard is confined to analog dial type and digital instrumentation. They indicate the operation of a backflow prevention assembly to preestablished testing procedures. They include all gauges, hoses, valves and fittings as required for testing purposes.*

ANSI/ASSE 1069-2005, Performance Requirements for Automatic Temperature Control Mixing Valves

*These devices control the water temperature to individual or multiple fixtures to reduce the risk of scalding and thermal shock. Shutoffs downstream of the device are permitted. They are installed where the bather does not have access to the temperature adjustment means, and where there is no further mixing of water downstream.*

ANSI/ASSE 1070-2004, Water Temperature Limiting Devices

*Water Temperature Limiting Devices shall control and limit the water temperature to fittings for fixtures such as sinks, lavatories or bathtubs and are intended to reduce the risk of scalding.*

ANSI/ASSE 6000-2006, Professional Qualifications Standard for Medical Gas Personnel

*This standard includes the educational and training requirements to become certified as a medical gas system installer, inspector, verifier, maintenance person or instructor, or as a bulk system installer or instructor.*

ANSI/ASSE Series 5000-2006, Professional Qualifications Standard for Backflow Prevention Assembly Testers, Repairers and Surveyors

*Education, training and performance requirements for personnel involved in the testing, repairing and surveying of backflow prevention assemblies. It includes test procedures, trouble-shooting guides, report forms, flow charts and schematics.*

## ASTM (ASTM International)

ANSi/ASTM D5802-1995 (R2001), Test Method for Sorption of Bibulous Paper Products (Sorptive Rate and Capacity Using Gravimetric Principles)

ANSI/ISO 14040-1997, Environmental Management – Life Cycle Assessment – Principles and Framework

*This stanard specifies the general framework, principles and requirements for conducting and reporting life cycle assessment studies. This standard does not describe the life cycle assessment techniques in detail.*

ANSI/ISO/IEC 17025-2005, General Requirements for the Competence of Testing and Calibration Laboratories

*Specifies the general requirements for the competence of testing and calibration laboratories to carry out tests and/or calibrations, including sampling. This standard covers testing and calibration performed using standard methods, nonstandard methods, and laboratory-developed methods. This standard is being adopted jointly by ASQ, ASTM, and NCSL International.*

ASTM C1025-2000 (R2005), Test Method for Modulus of Rupture in Bending of Electrode Graphite

ASTM C1039-2000 (R2005), Test Methods for Apparent Porosity, Apparent Specific Gravity, and Bulk Density of Graphite Electrodes

ASTM C1179-2000 (R2005), Test Method for Oxidation Mass Loss of Manufactured Carbon and Graphite Materials in Air

ASTM C559-2000 (R2005), Test Method for Bulk Density by Physical Measurements of Manufactured Carbon and Graphite Articles

ASTM C560-2005, Test Methods for Chemical Analysis of Graphite

ASTM C561-2000 (R2005), Test Method for Ash in a Graphite Sample

ASTM C562-2000 (R2005), Test Method for Moisture in a Graphite Sample

ASTM C581-2003, Practice for Determining Chemical Resistance of Thermosetting Resins Used in Glass-Fiber-Reinforced Structures Intended for Liquid Service

ASTM C611-2005, Test Method for Electrical Resistivity of Manufactured Carbon and Graphite Articles at Room Temperature

ASTM C625-2000 (R2005), Practice for Reporting Irradiation Results on Graphite

ASTM C651-2000 (R2005), Test Method for Flexural Strength of Manufactured Carbon and Graphite Articles Using Four-Point Loading at Room Temperature

ASTM C662-2005, Specification for Impervious Graphite Pipe and Threading

ASTM C695-2000 (R2005), Test Method for Compressive Strength of Carbon and Graphite

ASTM C709-2006, Terminology Relating to Manufactured Carbon and Graphite

ASTM C714-2005, Test Method for Thermal Diffusivity of Carbon and Graphite by a Thermal Pulse Method

ASTM C747-2005, Test Method for Moduli of Elasticity and Fundamental Frequencies of Carbon and Graphite Materials by Sonic Resonance

ASTM C748-2005, Test Method for Rockwell Hardness of Graphite Materials

ASTM C749-1992 (R2002), Test Method for Tensile Stress-Strain of Carbon and Graphite

ASTM C769-2005, Test Method for Sonic Velocity in Manufactured Carbon and Graphite Materials for Use in Obtaining an Approximate Young S Modulus

ASTM C781-2002, Practice for Testing Graphite and Boronated Graphite Components for High-temperature Gas-cooled Nuclear Reactors

ASTM C783-2000 (R2005), Practice for Core Sampling of Graphite Electrodes

ASTM C808-2000 (R2005), Guideline for Reporting Friction and Wear Test Results of Manufactured Carbon and Graphite Bearing and Seal Materials

ASTM C816-2005, Test Method for Sulfur in Graphite by Combustion-iodometric Titration Method

ASTM C838-2001 (R2005), Test Method for Bulk Density of As-Manufactured Carbon and Graphite Shapes

ASTM D1000-1999, Test Methods for Pressure-Sensitive Adhesive-Coated Tapes Used for Electrical and Electronic Applications

ASTM D1015-2005, Test Method for Freezing Points of High-purity Hydrocarbons

*(no abstract provided by developer)*

ASTM D1016-2005, Test Method for Purity of Hydrocarbons from Freezing Points

*(no abstract provided by developer)*

ASTM D1018-2000 (R2005), Test Method for Hydrogen in Petroleum Fractions

*(no abstract provided by developer)*

ASTM D1025-1991 (R2004), Test Method for Nonvolatile Residue of Polymerization Grade Butadiene (05.01)

*(no abstract provided by developer)*

ASTM D1030-1999, Test Method for Fiber Analysis of Paper and Paperboard

ASTM D1039-1999 (R2004), Method of Testing Glass-Bonded Mica Used as Electrical Insulation (10.01)

*(no abstract provided by developer)*

ASTM D1047-1995 (R2001), Specification for Poly(Vinyl Cholride) Jacket for Wire and Cable (10.01)

ASTM D1082-2000 (R2005), Test Method for Dissipation Factor and Permitivity (Dielectric Constant) of Mica

ASTM D1091-2000 (R2005), Test Methods for Phosphorus in Lubricating Oils and Additives (05.01)

*(no abstract provided by developer)*

ASTM D1092-2005, Test Method for Apparent Viscosity of Lubricating Greases

*(no abstract provided by developer)*

ASTM D1093-2004, Acidity of Distillation Residues or Hydrocarbon Liquids, Method of Test for

ASTM D1094-2001 (R2005), Test Method for Water Reaction of Aviation Fuels

ASTM D115-2002, Test method for Varnishes Used for Electrical Insulation (10.01)

*(no abstract provided by developer)*

ASTM D1157-1991 (R2004), Test Method for Total Inhibitor Content (TBC) of Light Hydrocarbons

*(no abstract provided by developer)*

ASTM D1159-2001, Bromine Number of Petroleum Distillates and Commercial Aliphatic Olefins by Electrometric Titration, Test Method for (05.01)

*(no abstract provided by developer)*

ASTM D1160-2006, Test Method for Distillation of Petroleum Products at Reduced Pressures (05.01)

*(no abstract provided by developer)*

ASTM D1168-1999 (R2003), Test Methods for Hydrocarbon Waxes Used for Electrical Insulating

ASTM D1193-1999, Specification for Reagent Water

ASTM D1217-1993 (R2004), Test Method for Density and Relative Density (Specific Gravity) of Liquids by Bingham Pycnometer (05.01)

*D2069*

ASTM D1218-2002, Refractive Index and Refractive Dispersion of Hydrocarbon Liquids, Method of Test for (05.01, 10.03)

*(no abstract provided by developer)*

ASTM D1223-1993 (R1998), Test Method for Specular Gloss of Paper and Paperboard at 75 Degrees

ASTM D1224-1992 (R2001), Test Method for Zinc and Cadmium in Paper

ASTM D1250-2003, Guide for Petroleum Measurement Tables

*(no abstract provided by developer)*

ASTM D1263-1994 (R2005), Test Method for Leakage Tendencies of Automotive Wheel Bearing Greases

*(no abstract provided by developer)*

ASTM D1264-2003, Test Method for Determining the Water Washout Characteristics of Lubricating Greases

ASTM D1265-2005, Practice for Sampling Liquefied Petroleum (LP) Gases, Manual Method

*(no abstract provided by developer)*

ASTM D1266-1998 (R2003), Test Method for Sulfur in Petroleum Products (Lamp Method) (05.01)

ASTM D1267-2002, Vapor Pressure of Liquefied Petroleum (LP) Gases (LP-Gas Method, Method of Test for (05.01, 05.05)

*(no abstract provided by developer)*

ASTM D127-2005, Test Method for Drop Melting Point of Petroleum Wax Including Petrolatum

*(no abstract provided by developer)*

ASTM D128-1998 (R2003), Analysis of Lubricating Grease, Methods of (05.01)

*(no abstract provided by developer)*

ASTM D129-2000 (R2005), Test Method for Sulfur in Petroleum Products (General Bomb Method)

*(no abstract provided by developer)*

ASTM D1298-1999 (R2005), Test Method for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method

*(no abstract provided by developer)*

ASTM D130-2004, Test Method for Detection of Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test

ASTM D1305-1999 (R2004), Specification for Electrical Insulating Paper and Paperboard Sulfate Kraft Layer Type

ASTM D1318-2000 (R2005), Test Method for Sodium in Residual Fuel Oil (Flame Photometric Method)

ASTM D1319-2003, Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption, Test Method for (05.01)

*(no abstract provided by developer)*

ASTM D1321-2004, Needle Penetration of Petroleum Waxes, Method of Test for (05.01, 15.09)

ASTM D1322-1997 (R2002), Smoke Point of Aviation Turbine Fuels, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D1351-2002, Specification for Thermoplastic Polyethylene Insulation for Electrical Wire and Cable

ASTM D1389-2006, Test Method for Proof-Voltage Testing of Thin Solid Electrical Insulating Materials

ASTM D1394-1996, Specification for Transferring Information between Clinical Instruments and Computer Systems

ASTM D1401-2002, Test Method for Water Separability of Petroleum Oils and Synthetic Fluids (05.01)

*(no abstract provided by developer)*

ASTM D1403-2002, Test Method for Cone Penetration of Lubricating Grease Using One-Quarter and One-Half Scale Cone Equipment (05.01)

*(no abstract provided by developer)*

ASTM D1404-1999 (R2004), Estimation of Deleterious Particles in Lubricating Grease, Method for (05.01)

*(no abstract provided by developer)*

ASTM D1405-2006, Test Method for Estimation of Net Heat of Combustion of Aviation Fuels

*(no abstract provided by developer)*

ASTM D1458-2001, Test Methods for Fully Cured Silicone Rubber-Coated Glass Fabric and Tapes for Electrical Insulation

ASTM D1459-1993 (R2003), Specification for Silicone Varnished Glass Cloth and Tape for Electrical Insulation

*(no abstract provided by developer)*

ASTM D1465-2004, Test Method for Blocking and Picking Points of Petroleum Wax

ASTM D1478-2002, Test Method for Low-Temperature Torque of Ball Bearing Greases (05.01)

*(no abstract provided by developer)*

ASTM D1480-2002, Test Method for Density and Relative Density (Specific Gravity) of Viscous Materials by Bingham Pycnometer (05.01)

*(no abstract provided by developer)*

ASTM D1481-2002, Test Method for Density and Relative Density (Specific Gravity) of Viscous Materials by Lipkin Bicapillary Pycnometer (05.01)

*(no abstract provided by developer)*

ASTM D149-1997a (R2004), Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies (10.01)

*(no abstract provided by developer)*

ASTM D1494-2001, Test Method for Diffuse Light Transmission Factor of Reinforced Plastic Panels (08.01, 08.04)

*(no abstract provided by developer)*

ASTM D150-1998 (R2004), Test Methods for AC Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials

ASTM D1500-2004a, Test Method for ASTM Color of Petroleum Products (05.01)

*(no abstract provided by developer)*

ASTM D1523-2000 (R2006), Specification for Synthetic Rubber Insulation for Wire and Cable, 90 C Operation

*(no abstract provided by developer)*

ASTM D1527-2005, Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe, Schedules 40 and 80

ASTM D1531-2006, Test Methods for Relative Permittivity (Dielectric Constant) and Dissipation Factor by Fluid Displacement Procedures (10.01)

*(no abstract provided by developer)*

ASTM D1550-94 (R2005), Standard ASTM Butadiene Measurement Tables

ASTM D1552-2003, Sulfur in Petroleum Products (High-Temperature Method), Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D156-2002, Test Method for Saybolt Color of Petroleum Products (Saybolt Chromometer Method) (05.01)

*(no abstract provided by developer)*

ASTM D1598-1997, Test Method for Time-to-Failure of Plastic Pipe under Constant Internal Pressure

ASTM D1599-1999 (R2005), Test Method for Short-Time Hydraulic Failure Pressure of Plastic Pipe, Tubing, and Fittings

ASTM D1655-2006b, Specification for Aviation Turbine Fuels

*(no abstract provided by developer)*

ASTM D1657-2002, Test Method for Density or Relative Density of Light Hydrocarbons by Pressure Thermohydrometer

ASTM D1662-1992 (R2002), Active Sulfur in Cutting Fluids, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D1675-2003, Test Methods for Polytetrafluoroethylene Tubing (10.01)

*(no abstract provided by developer)*

ASTM D1676-2003, Methods of Testing Film-Insulated Magnet Wire (10.01)

*(no abstract provided by developer)*

ASTM D1677-2002, Methods for Sampling and Testing Untreated Mica Paper Used for Electrical Insulation

ASTM D1711-2002, Terminology Relating to Electrical Insulation (10.01)

*(no abstract provided by developer)*

ASTM D1742-2006, Oil Separation from Lubricating Grease during Storage, Test Method for (05.01)

*(no abstract provided by developer)*

ASTM D1743-2005, Test Method for Determining Corrosion Preventive Properties of Lubricating Greases

*(no abstract provided by developer)*

ASTM D1747-1999 (R2004), Test Method for Refractive Index of Viscous Materials (05.01)

*(no abstract provided by developer)*

ASTM D1748-2002, Rust Protection by Metal Preservatives in the Humidity Cabinet, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D1749-1993 (R2002), Practice for Interlaboratory Evaluation of Test Methods Used with Paper and Paper Products

ASTM D176-2000, Test Methods for Solid Filling and Treating Compounds Used for Electrical Insulation

ASTM D1785-2006, Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120

ASTM D1796-2004, Test Method for Water and Sediment in Fuel Oils by the Centrifuge Method (Laboratory Procedure)

*(no abstract provided by developer)*

ASTM D1825-2003, Practice for Etching and Cleaning Copper-Clad Electrical Insulating Materials and Thermosetting Laminates for Electrical Testing

ASTM D1830-1999 (R2005), Test Method for Thermal Endurance of Flexible Sheet Materials Used for Electrical Insulation by the Curved Electrode Method (10.01)

*(no abstract provided by developer)*

ASTM D1831-2001 (R2006), Test Method for Roll Stability of Lubricating Grease

*(no abstract provided by developer)*

ASTM D1832-2004, Test Method for Peroxide Number of Petroleum Wax (05.01, 15.09)

*(no abstract provided by developer)*

ASTM D1833-87 (R1999), Odor of Petroleum Wax, Method of Test for (05.01, 15.09)

*(no abstract provided by developer)*

ASTM D1835-2005, Specification for Liquefied Petroleum LP Gases

*(no abstract provided by developer)*

ASTM D1837-2002a, Test Method for Volatility of Liquefied Petroleum (LP) Gases (05.01)

*(no abstract provided by developer)*

ASTM D1838-2006, Test Method for Copper Strip Corrosion by Liquefied Petroleum (LP) Gases

*(no abstract provided by developer)*

ASTM D1839-1991 (R2005), Test Method for Amyl Nitrate in Diesel Fuels by Spectrophotometry (05.01)

*(no abstract provided by developer)*

ASTM D1840-2004, Naphthalene Hydrocarbons in Aviation Turbine Fuels by Ultraviolet Spectrophotometry, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D1867-2001, Specification for Copper-Clad Thermosetting Laminates for Printed Wiring

ASTM D1868-93 (R98), Test Method for Detection and Measurement of Partial Discharge (Corona) Pulses in Evaluation of Insulation Systems

ASTM D187-1994 (R2004), Burning Quality of Kerosine, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D189-2006, Test Method for Conradson Carbon Residue of Petroleum Products

*(no abstract provided by developer)*

ASTM D1931-1999 (R2004), Specification for Fully Cured Silicone Rubber-coated Glass Fabric and Tapes for Electrical Insulation

*(no abstract provided by developer)*

ASTM D1932-2004, Test Method for Thermal Endurance of Flexible Electrical Insulating Varnishes

ASTM D2001-1992 (R2002), Test Method for Depentanization of Gasoline and Naphthas (05.01)

*(no abstract provided by developer)*

ASTM D2002-1993 (R1998), Test Method for Isolation of Representative Saturates Fraction from Low-Olefinic Petroleum Naphthas (05.01)

*(no abstract provided by developer)*

ASTM D2003-1993 (R1998), Test Method for Isolation of Representative Saturates Fraction from High-Olefinic Petroleum Naphthas (05.01)

*(no abstract provided by developer)*

ASTM D2007-2003, Test Method for Characteristic Groups in Rubber Extender and Processing Oils and other Petroleum Derived Oils by the Clay-Gel Absorption Chromatographic Method (05.01)

*(no abstract provided by developer)*

ASTM D2008-1991 (R2006), Test Method for Ultraviolet ABSorbance and ABSorptivity of Petroleum Products

*(no abstract provided by developer)*

ASTM D2019-1997 (R2002), Test Method for Dirt in Paper and Paperboard

ASTM D202-1992 (R2002), Methods of Sampling and Testing Untreated Paper Used for Electrical Insulation (10.01)

*(no abstract provided by developer)*

ASTM D2020-1999 (R2003), Test Methods for Mildew (Fungus) Resistance of Paper and Paperboard

ASTM D2043-1994 (R2002), Test Method for Silver Tarnishing by Paper

ASTM D2068-2004, Test Method for Filter Blocking Tendency of Distillate Fuel Oils (05.01)

*(no abstract provided by developer)*

ASTM D2070-1991 (R2006), Test Method for Thermal Stability of Hydraulic Oils

*(no abstract provided by developer)*

ASTM D2104-2003, Specification for Polyethylene (PE) Plastic Pipe, Schedule 40

ASTM D2105-2001, Test Method for Longitudinal Tensile Properties of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Tube

*Check previous designation*

ASTM D2122-1996 (R2004), Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings

ASTM D2131-1997 (R2003), Classification for Natural Muscovite Mica Splittings

ASTM D2132-2003, Test Method for Dust-and-Fog Tracking and Erosion Resistance of Electrical Insulating Materials

ASTM D2143-2000, Test Method for Cyclic Pressure Strength of Reinforced, Thermosetting Plastic Pipe

ASTM D2148-2002, Test Methods for Bondable Silicone Rubber Tapes Used for Electrical Insulation (10.01)

*(no abstract provided by developer)*

ASTM D2149-1997 (R2004), Test Method for Permittivity (Dielectric Constant) and Dissipation Factor of Solid Ceramic Dielectrics at Frequencies to 10 MHz and Temperature to 500 Deg C

ASTM D2152-1995, Test Method for Adequacy of Fusion of Extruded Poly (Vinyl Chloride) (PVC) Pipe and Molded Fittings by Acetone Immersion

ASTM D2156-1994 (R2004), Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels

*(no abstract provided by developer)*

ASTM D2157-1994 (R2004), Test Method for Effect of Air Supply on Smoke Density in Flue Gases from Burning Distillate Fuels

*(no abstract provided by developer)*

ASTM D2158-2005, Test Method for Residues in Liquefied Petroleum (LP) Gases

*(no abstract provided by developer)*

ASTM D2159-1993 (R1998), Naphthenes in Saturates Fractions by Refractivity Intercept, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D2161-2004, Conversion of Kinematic Viscosity to Saybolt Universal Viscosity or to Saybolt Furol Viscosity, Method for (05.01, 10.03)

*(no abstract provided by developer)*

ASTM D2162-2006, Test Method for Basic Calibration of Master Viscometers and Viscosity Oil Standards

*(no abstract provided by developer)*

ASTM D217-2002, Cone Penetration of Lubricating Grease, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D2175-1997 (R2002), Test Method for Book Bulk and Book Bulking Number of Paper

ASTM D2175-93 (R1997), Test Method for Book Bulk and Book Bulking Number of Paper

ASTM D2176-1997 (R2002), Test Method for Folding Endurance of Paper by the M.I.T. Tester

ASTM D2177-1999 (R2003), Test Method for Ink Absorption of Blotting Paper

ASTM D2219-2002, Poly(Vinyl Chloride) Insulation for Wire and Cable, 60°C Operation, Specification for (10.01)

*(no abstract provided by developer)*

ASTM D2220-2002, Poly(Vinyl Chloride) Insulation for Wire and Cable, 75°C Operation, Specification for (10.01)

*(no abstract provided by developer)*

ASTM D2235-2004, Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings

ASTM D2239-2003, Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter

ASTM D2241-2005, Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)

ASTM D2265-2006, Test Method for Dropping Point of Lubricating Grease Over Wide Temperature Range

*(no abstract provided by developer)*

ASTM D2266-2001, Test Method for Wear Preventive Characteristics of Lubricating Grease (Four-Ball Method) (05.01)

ASTM D2268-1993 (R2003), Analysis of High-Purity n-Heptane and Isooctane by Capillary Gas Chromatography, Method for (05.01)

*(no abstract provided by developer)*

ASTM D2269-1999 (R2005), Test Method for Evaluation of White Mineral Oils by Ultraviolet Absorption

*(no abstract provided by developer)*

ASTM D2270-2004, Method for Calculating Viscosity Index from Kinematic Viscosity at 40° and 100°C (05.01)

*(no abstract provided by developer)*

ASTM D2272-2002, Standard Test Method for Oxidation Stability of Steam Turbine Oils by Rotating Pressure Vessel

ASTM D2273-2005, Test Method for Trace Sediment in Lubricating Oils

*(no abstract provided by developer)*

ASTM D2274-2004, Oxidation Stability of Distillate Fuel Oil (Accelerated Method), Test for (05.01)

*(no abstract provided by developer)*

ASTM D2275-2001, Test Method for Voltage Endurance of Solid Electrical Insulating Materials Subjected to Partial Discharges (Corona) on the Surface (10.01)

*(no abstract provided by developer)*

ASTM D2276-2006, Test Method for Particulate Contaminant in Aviation Fuel by Line Sampling

*(no abstract provided by developer)*

ASTM D2282-1999 (R2006), Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (SDR-PR)

ASTM D229-2001, Test Methods for Rigid Sheet and Plate Materials Used for Electrical Insulation

ASTM D2290-2004, Test Method for Apparent Tensile Strength of Ring or Tubular Plastics and Reinforced Plastics by Split Disk Method

ASTM D2301-1999 (R2004), Specification for Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape

ASTM D2303-1997 (R2004), Test Methods for Liquid-Contaminant, Inclined-Plane Tracking and Erosion of Insulating Materials

ASTM D2304-1997 (R2002), Test Method for Thermal Endurance of Rigid Electrical Insulating Materials

ASTM D2305-2002, Test Methods for Polymeric Films Used for Electrical Insulation (94-4, Item 2) (10.01)

*(no abstract provided by developer)*

ASTM D2307-2006, Test Method for Thermal Endurance of Film-Insulated Round Magnet Wire

*(no abstract provided by developer)*

ASTM D2308-2002, Specification for Thermoplastic Polyethylene Jacket for Electrical Wire and Cable

ASTM D2310-2006, Classification for Machine-Made "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe

*Check previous designation*

ASTM D2318-1998 (R2004), Test Method for Quinoline-Insoluble (QI) Content of Tar and Pitch

ASTM D2319-1998 (R2004), Test Method for Softening Point of Pitch (Cube-In-Air Method)

ASTM D2320-1998 (R2004), Test Method for Density (relative Density) of Solid Pitch

ASTM D2321-2005, Practice for Underground Installation of Thermoplastic Pipe for Sewers and other Gravity-Flow Applications

ASTM D2384-2001 (R2004), Test Methods for Traces of Volatile Chlorides in Butane-Butene Mixtures

ASTM D2386-2005a, Test Method for Freezing Point of Aviation Fuels

*(no abstract provided by developer)*

ASTM D2392-1996 (R2006), Test Method for Color of Dyed Aviation Gasolines

ASTM D240-2002, Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D2400-1999 (R2004), Specification for Varnished Glass-Polyester Cloth Used for Electrical Insulation (10.01)

*(no abstract provided by developer)*

ASTM D2412-2002, Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading

ASTM D2413-2000 (R2005), Test Methods for Preparation and Electrical Testing of Insulating Paper and Board Impregnated with a Liquid Dielectric

ASTM D2415-1998 (R2004), Test Method for Ash in Coal Tars and Pitches

ASTM D2416-84 (R2004), Test Method for Coking Value of Tar and Pitch (Modified Conradson)

ASTM D2420-96 (R2001), Test Method for Hydrogen Sulfide in Liquefied Petroleum (LP) Gases (Lead Acetate Method) (05.01)

*(no abstract provided by developer)*

ASTM D2421-2002, Interconversion of Analysis of C5 and Lighter Hydrocarbons to Gas-Volume, Liquid-Volume, or Weight Basis (05.01)

*(no abstract provided by developer)*

ASTM D2422-1997 (R2002), Viscosity System for Industrial Fluid Lubricants, Practice for (05.01)

*(no abstract provided by developer)*

ASTM D2423-1985 (R2002), Test Method for Surface Wax on Waxed Paper or Paperboard (05.01, 15.09)

*(no abstract provided by developer)*

ASTM D2425-2004, Chemical Composition of Gases by Mass Spectrometry, Test Method for (05.01)

*(no abstract provided by developer)*

ASTM D2426-93 (R2004), Test Method for Butadiene Dimer and Styrene in Butadiene Concentrates by Gas Chromatography

*(no abstract provided by developer)*

ASTM D2427-2006, Test Method for Determination of C2 Through C5 Hydrocarbons in Gasolines by Gas Chromatography

*(no abstract provided by developer)*

ASTM D2443-1996, Methods of Testing Lacing Twines and Tapes Used as Harnesses in Electrical Equipment

ASTM D2444-1999 (R2005), Test Method for Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)

ASTM D2447-2003, Specification for Polyethylene (PE) Plastic Pipe, Schedules 40 and 80, Based on Outside Diameter

ASTM D2464-2006, Specification for Threaded Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80

ASTM D2466-2006, Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40

ASTM D2467-2006, Specification for Socket-Type Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80

ASTM D2482-1998 (R2002), Test Method for Surface Strength of Paper (Wax Pick Method)

ASTM D2484-2006, Specification for Polyester Film Pressure-Sensitive Electrical Insulating Tape

*(no abstract provided by developer)*

ASTM D2500-2005, Test Method for Cloud Point of Petroleum Products

*(no abstract provided by developer)*

ASTM D2501-1991 (R2005), Test Method for Calculation of Viscosity-Gravity Constant (VGC) of Petroleum Oils

*(no abstract provided by developer)*

ASTM D2502-2004, Method for Estimation of Molecular Weight of Petroleum Oils from Viscosity Measurements (05.01)

*(no abstract provided by developer)*

ASTM D2503-1992 (R2002), Molecular Weight of Hydrocarbons by Thermoelectric Measurement of Vapor Pressure, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D2504-1988 (R2004), Test Method for Noncondensable Gases in C3 and Lighter Hydrocarbon Products by Gas Chromatography

*(no abstract provided by developer)*

ASTM D2505-1988 (R2004), Test Method for Ethylene, Other Hydrocarbons, and Carbon Dioxide in High-Purity Ethylene by Gas Chromatography

*(no abstract provided by developer)*

ASTM D2509-2003, Test Method for Measurement of Load-Carrying Capacity of Lubricating Grease (Timken Method) (05.01)

*(no abstract provided by developer)*

ASTM D2510-2004 (R2006), Test Method for Adhesion of Solid Film Lubricants

*(no abstract provided by developer)*

ASTM D2511-83 (R2004), Test Method for Thermal Shock Sensitivity of Solid Film Lubricants

*(no abstract provided by developer)*

ASTM D2513-2006b, Specification for Thermoplastic Gas Pressure Pipe Tubing and Fittings

ASTM D2517-2006, Specification for Reinforced Epoxy Resin Gas Pressure Pipe and Fittings

*(no abstract provided by developer)*

ASTM D2518-1999 (R2004), Specification for Woven Glass Fabrics for Electrical Insulation (10.02)

*(no abstract provided by developer)*

ASTM D2519-2002, Test Method for Bond Strength of Electrical Insulating Varnishes by the Helical Coil Test

ASTM D2520-2001, Test Methods for Complex Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials at Microwave Frequencies and Temperature to 1, 650°C (10.02)

*(no abstract provided by developer)*

ASTM D2532-2004, Viscosity and Viscosity Change after Standing at Low Temperature of Aircraft Turbine Lubricants, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D2533-1997, Vapor-Liquid Ratio of Gasoline, Method of Test for (05.01)

ASTM D2534-88 (R2004), Coefficient of Kinetic Friction for Wax Coatings, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D2549-2002, Method for Separation of Representative Aromatics and Nonaromatics Fractions of High-Boiling Oils by Elution Chromatography (05.01)

*(no abstract provided by developer)*

ASTM D2564-2004, Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems

ASTM D257-1999 (R2005), Test Methods for DC Resistance or Conductance of Insulating Materials

ASTM D2593-1993 (R2004), Test Method for Butadiene Purity and Hydrocarbon Impurities by Gas Chromatography

*(no abstract provided by developer)*

ASTM D2595-1997 (R2002), Evaporation Loss of Lubricating Greases over Wide-Temperature Range, Method of Test for (05.01)

ASTM D2596-1997 (R2002), Method for Measurement of Extreme-Pressure Properties of Lubricating Greases (Four-Ball Method) (05.01)

*(no abstract provided by developer)*

ASTM D2597-1994 (R2004), Analysis of Natural Gas-Liquid Mixtures by Gas Chromatography, Method for (05.02)

*(no abstract provided by developer)*

ASTM D2598-2002, Practice for Calculation of Certain Physical Properties of Liquefied Petroleum (LP) Gases from Compositional Analysis (05.02)

*(no abstract provided by developer)*

ASTM D2603-2001, Test Method for Sonic Shear Stability of Polymer-Containing Oils (05.02)

*(no abstract provided by developer)*

ASTM D2609-1996a, Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe

ASTM D2609-2002, Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe

ASTM D2619-1995 (R2002), Hydrolytic Stability of Hydraulic Fluids (Beverage Bottle Test Method), Test Method for (05.02)

*(no abstract provided by developer)*

ASTM D2622-2005, Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry

*(no abstract provided by developer)*

ASTM D2624-2006, Test Methods for Electrical Conductivity of Aviation and Distillate Fuels

*(no abstract provided by developer)*

ASTM D2625-1994 (R2004), Test Method for Endurance (Wear) Life and Load-Carrying Capacity of Solid Film Lubricants (Falex Pin and Vee Method)

*(no abstract provided by developer)*

ASTM D2633-2002, Methods of Testing Thermoplastic Insulations and Jackets for Wire and Cable

ASTM D2638-2006, Test Method for Real Density of Calcined Petroleum Coke by Helium Pycnometer

ASTM D2649-2004, Corrosion Characteristics of Dry Sold Film Lubricants, Method for Determining (05.02)

*(no abstract provided by developer)*

ASTM D2650-2004, Test Method for Chemical Composition of Gases by Mass Spectrometry

*(no abstract provided by developer)*

ASTM D2655-2000 (R2006), Specification for Crosslinked Polyethylene Insulation for Wire and Cable Rated 0 to 2000 V

*(no abstract provided by developer)*

ASTM D2656-2006, Specification for Crosslinked Polyethylene Insulation for Wire and Cable Rated 2001 to 35 000 V

*(no abstract provided by developer)*

ASTM D2657-2003, Practice for Heat Joining of Polyolefin Pipe and Fittings

ASTM D2661-2006, Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings

ASTM D2662-1996, Specification for Polybutylene (PB) Plastic Pipe (SDR-PR) Based on Controlled Inside Diameter

ASTM D2665-2002, Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings

ASTM D2666-1996, Specification for Polybutylene (PB) Plastic Tubing

ASTM D2669-2006, Test Method for Apparent Viscosity of Petroleum Waxes Compounded with Additives Hot Melts

ASTM D2670-1994 (R2004), Measuring Wear Properties of Fluid Lubricants (Falex Method), Method for (05.02)

*(no abstract provided by developer)*

ASTM D2671-2000, Test Methods for Heat-Shrinkable Tubing for Electrical Use (10.02)

*(no abstract provided by developer)*

ASTM D2672-1996a (R2003), Specification for Joints for IPS PVC Pipe Using Solvent Cement

ASTM D2680-2001, Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Composite Sewer Piping

ASTM D2683-2004, Specification for Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing

ASTM D2686-2006, Specification for Polytetrafluoroethylene-backed Pressure-Sensitive Electrical Insulating Tape

*(no abstract provided by developer)*

ASTM D2699-2005, Test Method for Research Octane Number of Spark-ignition Engine Fuel

*(no abstract provided by developer)*

ASTM D2700-2006, Test Method for Motor Octane Number of Spark-Ignition Engine Fuel

*(no abstract provided by developer)*

ASTM D2709-2006, Test Method for Water and Sediment in Middle Distillate Fuels by Centrifuge

ASTM D2710-1999 (R2004), Bromine Index of Petroleum Hydrocarbons by Electrometric Titration, Test Method for (05.02)

*(no abstract provided by developer)*

ASTM D2711-2001a, Demulsibility Characteristics of Lubricating Oils, Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D2712-1991 (R2004), Test Method for Hydrocarbon Traces in Propylene Concentrates by Gas Chromatography (05.02)

*(no abstract provided by developer)*

ASTM D2713-2001, Test Method for Dryness of Propane (Valve Freeze Method)

ASTM D2714-1994 (R2004), Calibration and Operation of the Alpha Model LFW-1 Friction and Wear Testing Machine, Method for (05.02)

*(no abstract provided by developer)*

ASTM D2715-1992 (R2002), Measurement of Volatilization Rates of Lubricants in Vacuum, Method for (05.02)

*(no abstract provided by developer)*

ASTM D2717-1995 (R2005), Test Method for Thermal Conductivity of Liquids

*(no abstract provided by developer)*

ASTM D2729-2003, Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings

ASTM D2737-2003, Specification for Polyethylene (PE) Plastic Tubing

ASTM D2749-2002, Symbols for Dimensions of Plastic Pipe Fittings

ASTM D2751-2005, Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings

ASTM D2754-1999 (R2004), Specification for High-Temperature Glass Cloth Pressure-Sensitive Electrical Tape

ASTM D2756-2002, Test Method for Weight Loss of Electrical Insulating Varnishes

ASTM D2764-1997 (R2004), Test Method for Dimethylformamide-Insoluble(Dmf-I) Content of Tar and Pitch

*Check previous designation*

ASTM D2764-1999, Test Method for Dimethylformamide-Insoluble (DMF-I) Content of Tar and Pitch

ASTM D2766-1995 (R2005), Test Method for Specific Heat of Liquids and Solids

*(no abstract provided by developer)*

ASTM D2768-1995 (R2001), Specification for General-Purpose Ethylene-Propylene Rubber Jacket for Wire and Cable (10.02)

ASTM D2770-2001, Specification for Ozone-Resisting Ethylene-Propylene Rubber Integral Insulation and Jacket for Wire and Cable

ASTM D2774-2001, Practice for Underground Installation of Thermoplastic Pressure Piping

ASTM D2779-1992 (R2002), Estimation of Solubility of Gases in Petroleum Liquids, Method for (05.02)

*(no abstract provided by developer)*

ASTM D2782-2002, Measurement of Extreme-Pressure Properties of Lubricating Fluids (Timken Method), Method for (05.02)

*(no abstract provided by developer)*

ASTM D2783-2003, Test Method for Measurement of Extreme-pressure Properties of Lubricating Fluids Four-ball Method

*(no abstract provided by developer)*

ASTM D2784-2006, Test Method for Sulfur in Liquefied Petroleum Gases (Oxy-Hydrogen Burner or Lamp)

*(no abstract provided by developer)*

ASTM D2786-1996 (R2006), Test Method for Hydrocarbon Types Analysis of Gas-Oil Saturate Fractions by High Ionizing Voltage Mass Spectrometry (05.02)

*(no abstract provided by developer)*

ASTM D2789-1996 (R2005), Test Method for Hydrocarbon Types in Low Olefinic Gasoline by Mass Spectrometry

*(no abstract provided by developer)*

ASTM D2802-2003, Specification for Ozone-Resistant Ethylene-Propylene Rubber Insulation for Wire and Cable

ASTM D2837-2004, Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials

ASTM D2846/D2846M-2006, Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems

ASTM D2852-1995 (R2002) , Specification for Styrene-Rubber (SR) Plastic Drain Pipe and Fittings

ASTM D2855-1996, Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings

ASTM D2859-2006, Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials

ASTM D2861-1998 (R2004), Test Methods for Flexible Composites of Copper Foil with Dielectric Film or Treated Fabrics

ASTM D2865-2006, Practice for Calibration of Standards and Equipment for Electrical Insulating Materials Testing

*(no abstract provided by developer)*

ASTM D287-1992, API Gravity of Crude Petroleum Products (Hydrometer Method), Method of Test for (05.01, 10.03)

*(no abstract provided by developer)*

ASTM D287-1994 (R2006), Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)

*(no abstract provided by developer)*

ASTM D2878-1995 (R2005), Test Method for Estimating Apparent Vapor Pressures and Molecular Weights of Lubricating Oils

*(no abstract provided by developer)*

ASTM D2879-1997 (R2002), Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D2880-2003, Gas Turbine Fuel Oils, Specification for (05.02)

*(no abstract provided by developer)*

ASTM D2881-2003, Classification of Metal Working Fluids and Related Materials

ASTM D2883-1995 (R2005), Test Method for Reaction Threshold Temperature of Liquid and Solid Materials

*(no abstract provided by developer)*

ASTM D2884-1987 (R2002), Test Method for Yield Stress of Heterogeneous Propellants by the Cone Penetration Method (05.02)

*(no abstract provided by developer)*

ASTM D2885-2003, Research and Motor Method Octane Ratings Using On-Line Analyzers, Test Method for (05.04)

*(no abstract provided by developer)*

ASTM D2887-2006a, Test Method for Boiling Range Distribution of Petroleum Fractions by Gas Chromatography

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ASTM D2889-1995 (R2005), Test Method for Calculation of True Vapor Pressures of Petroleum Distillate Fuels

*(no abstract provided by developer)*

ASTM D2890-1992 (R2003), Method for Calculation of Liquid Heat Capacity of Petroleum Distillate Fuels (05.02)

*(no abstract provided by developer)*

ASTM D2892-2005, Test Method for Distillation of Crude Petroleum (15-theoretical Plate Column)

ASTM D2893-2004, Test Method for Oxidation Characteristics of Extreme Pressure Lubricating Oils

ASTM D2896-2006, Test Method for Base Number of Petroleum Products by Potentiometric Perchloric Acid Titration

*(no abstract provided by developer)*

ASTM D2902-2000 (R2006), Specification for Fluoropolymer Resin Heat-shrinkable Tubing for Electrical Insulation

*(no abstract provided by developer)*

ASTM D2903-2003, Specification for Crosslinked Chlorinated Polyolefin Heat-Shrinkable Tubing for Electrical Insulation

ASTM D2924-2001 (R2006), Reinforced Thermosetting-Resin Pipe, Test Method for External Pressure Resistance of (08.04)

*(no abstract provided by developer)*

ASTM D2925-2001, Test Method for Beam Deflection of "fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin) Pipe Under Full Bore Flow

ASTM D2949-2000, Specification for 3.25-in. Outside Diameter Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings

ASTM D295-1999 (R2004), Method of Testing Varnish Cotton Fabrics Used for Electrical Insulation

*(no abstract provided by developer)*

ASTM D2962-1997 (R2002), Method for Calculating Volume-Temperature Correction for Coal-Tar Pitches

*Check previous designation*

ASTM D2981-1994 (R2004), Measuring the Wear Life of Bonded Solid Film Lubricants in Oscillating Motion, Test Method for (05.02)

*(no abstract provided by developer)*

ASTM D2982-1998 (R2004), Detecting Glycol-Base Antifreeze in Used Lubricating Oils, Method of Test for

ASTM D2983-2004, Low-Temperature Viscosity of Automotive Test Fluid Lubricants Measured by Brookfield Viscometer, Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D2992-2006, Practice for Obtaining Hydrostatic or Pressure Design Basis for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Fittings

*(no abstract provided by developer)*

ASTM D2996-2001, Specification for Filament-Wound "Fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin) Pipe (08.04)

*(no abstract provided by developer)*

ASTM D2997-2001, Specification for Centrifugally Cast "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe

ASTM D3000-1996, Specification for Polybutylene (PB) Plastic Pipe (SDR-PR) Based on Outside Diameter

ASTM D3004-2002, Specification for Extruded Thermosetting and Thermoplastic Semi-Conducting Conductor and Insulation Shields (10.02)

*(no abstract provided by developer)*

ASTM D3005-1999 (R2004), Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape

ASTM D3006-1999 (R2004), Specification for Polyethylene Plastic Pressure-Sensitive Electrical Insulating Tape

ASTM D3032-2004, Hookup Wire Insulation, Test Method for (10.02)

*(no abstract provided by developer)*

ASTM D3034-2006, Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings

ASTM D3035-2006, Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter

ASTM D3056-2005, Test Method for Gel Time of Solventless Varnishes

ASTM D3104-1997, Test Method for Softening Point of Pitches (Mettler Softening Point Method)

*Check previous designation*

ASTM D3104-1999, Test Method for Softening Point of Pitches (Mettler Softening Point Method)

ASTM D3115-1995 (R2005), Test Method for Explosive Reactivity of Lubricants with Aerospace Alloys Under High Shear

*(no abstract provided by developer)*

ASTM D3117-2002, Test Method for Wax Appearance Point of Distillate Fuels (05.02)

*(no abstract provided by developer)*

ASTM D3120-2006, Test Method for Trace Quantities of Sulfur in Light Liquid Petroleum Hydrocarbons by Oxidative Microcoulometry

*(no abstract provided by developer)*

ASTM D3122-1995 (R2002), Specification for Solvent Cements for Styrene-Rubber Plastic Pipe and Fittings

ASTM D3138-2004, Specification for Solvent Cements for Transition Joints between Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Non-Pressure Piping Components

ASTM D3139-1996A, Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals

ASTM D3140-1996, Practice for Flaring Polyolefin Pipe and Tubing

ASTM D3144-2000 (R2006), Specification for Crosslinked Poly(Vinylidene Fluoride) Heat-Shrinkable Tubing for Electrical Insulation

*(no abstract provided by developer)*

ASTM D3145-2003, Test Method for Thermal Endurance of Electrical Insulating Varnishes by the Helical Coil Method

ASTM D3149-2006, Specification for Crosslinked Polyolefin Heat-Shrinkable Tubing for Electrical Insulation

ASTM D3150-2000 (R2006), Specification for Crosslinked and Noncrosslinked Poly(Vinyl Chloride) Heat-Shrinkable Tubing for Electrical Insulation

*(no abstract provided by developer)*

ASTM D3151-88 (R98), Test Method for Thermal Failure of Solid Electrical Insulating Materials Under Electric Stress

ASTM D3212-1996 (R2003), Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals

ASTM D3214-1997, Test Methods for Coating Powders and Their Coatings Used for Electrical Insulation

ASTM D322-1997 (R2002), Test Method for Gasoline Diluent in Used Gasoline Engine Oils by Distillation

ASTM D3227-2004, Mercaptan Sulfur in Gasoline, Kerosine, Aviation Turbine, and Distillate Fuels (Potentiometric Method), Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D3228-2005, Test Method for Total Nitrogen in Lubricating Oils and Fuel Oils by Modified Kjeldahl Method

*(no abstract provided by developer)*

ASTM D323-2006, Test Method for Vapor Pressure of Petroleum Products (Reid Method)

*(no abstract provided by developer)*

ASTM D3230-2006, Test Method for Salts in Crude Oil Electrometric Method

*(no abstract provided by developer)*

ASTM D3231-2002, Phosphorus in Gasoline, Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D3233-1993 (R2003), Measurement of Extreme Pressure Properties of Fluid Lubricants (Falex Methods), Methods for (05.02)

*(no abstract provided by developer)*

ASTM D3235-2006, Test Method for Solvent Extractables in Petroleum Waxes

*(no abstract provided by developer)*

ASTM D3236-88 (R2004), Apparent Viscosity of Hot Melt Adhesives and Coating Materials, Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D3237-2006, Test Method for Lead in Gasoline by Atomic ABSorption Spectroscopy

ASTM D3238-1995 (R2005), Carbon Distribution and Structural Group Analysis of Petroleum Oils by the n-d-M Method, Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D3239-1996 (R2006) , Test Method for Aromatic Types Analysis of Gas-Oil Aromatic Fractions by High Ionizing Voltage Mass Spectrometry (05.02)

*(no abstract provided by developer)*

ASTM D3240-2005, Test Method for Undissolved Water in Aviation Turbine Fuels

*(no abstract provided by developer)*

ASTM D3241-2006, Test Method for Thermal Oxidation Stability of Aviation Turbine Fuels (JFTOT Procedure)

*(no abstract provided by developer)*

ASTM D3242-2005, Test Method for Acidity in Aviation Turbine Fuel

*(no abstract provided by developer)*

ASTM D3244-1997 (R2002), Practice for Utilization of Test Data to Determine Conformance with Specifications

ASTM D3245-2003, Test Method for Pumpability of Industrial Fuel Oils (05.02)

*(no abstract provided by developer)*

ASTM D3246-2005, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry

*(no abstract provided by developer)*

ASTM D3251-2004, Test Method for Thermal-Aging Characteristics of Electrical Insulating Varnishes Applied Over Film-Insulated Magnet Wire (10.02)

*(no abstract provided by developer)*

ASTM D3261-1997, Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing

ASTM D3262-2004, Specification for Reinforced Plastic Mortar Sewer Pipe (08.04)

*(no abstract provided by developer)*

ASTM D3262-2006, Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe

*(no abstract provided by developer)*

ASTM D3285-1993 (R2005), Test Method for Water Absorptiveness of Nonbibulous Paper and Paperboard (COBB TEST)

ASTM D3288-2003, Test Methods for Magnet-Wire Enamels (10.02)

*(no abstract provided by developer)*

ASTM D3299-2000, Specification for Filament-Wound Glass Fiber Reinforced Thermoset Resin Chemical-Resistant Tanks (08.04)

*(no abstract provided by developer)*

ASTM D3309-1996 (R2002), Specification for Polybutylene (PB) Plastic Hot-Water Distribution Systems

ASTM D3311-2006a, Specification for Drain, Waste, and Vent (DWV) Plastic Fittings Patterns

ASTM D3312-2000, Test Method for Percent Reactive Monomer in Solventless Varnishes

ASTM D3336-2005, Test Method for Life of Lubricating Greases in Ball Bearings at Elevated Temperatures

*(no abstract provided by developer)*

ASTM D3338-2005, Test Method for Estimation of Net Heat of Combustion of Aviation Fuels

*(no abstract provided by developer)*

ASTM D3339-2004, Total Acid Number by Semi-Micro Color Indicator Titration, Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D3340-1998 (R2003), Test Method for Lithium and Sodium in Lubricating Greases by Flame Photometer (05.02)

*(no abstract provided by developer)*

ASTM D3341-2005, Test Method for Lead in Gasoline --iodine Monochloride Method

ASTM D3342-1990 (R2006), Test Method for Dispersion Stability of New Unused Rolling Oil Dispersions in Water

*(no abstract provided by developer)*

ASTM D3343-2005, Test Method for Estimation of Hydrogen Content of Aviation Fuels

*(no abstract provided by developer)*

ASTM D3344-1990 (R2005), Test Method for Total Wax Content of Corrugated Paperboard

ASTM D3348-1998 (R2003), Specification for Rapid Field Test for Trace Lead in Unleaded Gasoline (Colorimetric Method) (05.02)

*(no abstract provided by developer)*

ASTM D3349-2006, Test Method for ABSorption Coefficient of Ethylene Polymer Material Pigmented with Carbon Black

*(no abstract provided by developer)*

ASTM D3353-200x, Test Methods for Fibrous-Insulated Magnet Wire

ASTM D3376-2000 (R2005), Test Methods of Sampling and Testing Pulps to be Used in the Manufacture of Electrical Insulation

*This standard was listed for public review in the 8/11/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ASTM D3377-2000, Test Method for Weight Loss of Solventless Varnishes

ASTM D3380-2003, Test Method for Relative Permittivity (dielectric Constant) and Dissipation Factor of Plastic-based Microwave Circuit Substrates

ASTM D3382-1995 (R2001), Test Methods for Measurement of Energy and Integrated Charge Transfer Due to Partial Discharges (Corona) Using Bridge Techniques (10.02)

*(no abstract provided by developer)*

ASTM D3386-2005, Test Method for Coefficient of Linear Thermal Expansion of Electrical Insulating Materials

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ASTM D3394-1994 (R2005), Methods of Sampling and Electrical Insulating Board (10.02)

*(no abstract provided by developer)*

ASTM D341-2004, Viscosity – Temperature Charts for Liquid Petroleum Products (05.01)

*(no abstract provided by developer)*

ASTM D3426-1995 (R2004), Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials Using Impulse Waves (10.02)

*(no abstract provided by developer)*

ASTM D3427-2006, Test Method for Air Release Properties of Petroleum Oils

*(no abstract provided by developer)*

ASTM D3429-1987 (R2002), Solubility of Fixed Gases in Low-Boiling Liquids, Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D3461-1997 (R2002), Test Method for Softening Point of Asphalt and Pitch (Mettler Cup-And-Ball Method)

*Check previous designation*

ASTM D348-2000, Test Methods for Rigid Tubes Used for Electrical Insulation

ASTM D3485-2002, Specification for Smooth-Wall Coilable Polyethylene (PE) Conduit (Duct) for Preassembled Wire and Cable

ASTM D349-1999 (R2004), Test Methods for Laminated Round Rods Used for Electrical Insulation

ASTM D350-2001, Test Methods for Flexible Treated Sleeving Used for Electrical Insulation

ASTM D351-1997 (R2003), Classification for Natural Muscovite Block Mica and Thins Based on Visual Quality

ASTM D3517-2006, Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pressure Pipe

*(no abstract provided by developer)*

ASTM D3519-1988 (R2002), Foam in Aqueous Media (Blender Test), Test Method for (05.02)

*(no abstract provided by developer)*

ASTM D352-1997 (R2003), Test Methods for Pasted Mica Used in Electrical Insulation

ASTM D3520-2004, Test Method for Quenching Time of Heat-treating Fluids - Magnetic Quenchometer Method

*(no abstract provided by developer)*

ASTM D3521-1986 (R2002), Corrugated Board, Test for Surface Wax Coating on (05.02)

*(no abstract provided by developer)*

ASTM D3522-1986 (R2002), Corrugated Board Facing, Test for Applied Coating Wax and Impregnating Wax in (05.02)

*(no abstract provided by developer)*

ASTM D3523-1992 (R2002), Liquids and Solids (Differential Mackey Test), Test for Spontaneous Heating Values of (05.02)

*(no abstract provided by developer)*

ASTM D3524-2004, Test Method for Diesel Fuel Diluent in Used Diesel Engine Oils by Gas Chromatography

*(no abstract provided by developer)*

ASTM D3525-2004, Gasoline Diluent in Used Gasoline Engine Oils by Gas Chromatography, Test for (05.02)

*(no abstract provided by developer)*

ASTM D3527-2002, Test Method for Life Performance of Automotive Wheel Bearing Greases

ASTM D3554-2001, Specification for Track-Resistant Black Thermoplastic High-Density Polyethylene Insulation for Wire and Cable

ASTM D3555-2001, Specification for Track-Resistant Black Crosslinked Thermosetting Polyethylene Insulation for Wire and Cable

ASTM D3567-1997 (R2006), Practice for Determining Dimensions of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin) Pipe and Fittings

*(no abstract provided by developer)*

ASTM D3601-1988 (R2002), Foam in Aqueous Media (Bottle Test), Test Method for (05.02)

*(no abstract provided by developer)*

ASTM D3603-1993 (R2002), Test Method for Rust-Preventing Characteristics of Steam Turbine Oil in the Presence of Water (Horizontal Disk Method)

ASTM D3605-2005, Test Method for Trace Metals in Gas Turbine Fuels by Atomic ABSorption and Flame Emission Spectroscopy

ASTM D3606-2006, Test Method for Determination of Benzene and Toluene in Finished Motor and Aviation Gasoline by Gas Chromatography

*(no abstract provided by developer)*

ASTM D3607-1997 (R2002), Removing Volatile Contaminants from Used Engine Oils by Stripping (05.02)

ASTM D3636-2006, Practice for Sampling and Judging Quality of Solid Electrical Insulating Materials

*(no abstract provided by developer)*

ASTM D3638-93 (R1998), Test Method for Comparative Tracking Index of Electrical Insulating Materials

ASTM D3664-2004, Specification for Biaxially Oriented Polyethylene Terephthalate Film for Capacitors in Electrical Equipment

ASTM D3678-2001, Specification for Rigid Poly(Vinyl Chloride) (PVC) Interior Profile Extrusions (08.04)

*(no abstract provided by developer)*

ASTM D3679-2006, Specification for Rigid Poly(Vinyl Chloride) (PVC) Siding

*This specification establishes requirements and test methods for the materials, dimensions, warp, shrinkage, impact strength, expansion, appearance, and windload resistance of extruded single-wall siding manufactured from rigid (unplasticized) PVC compound. Methods of indicating compliance with this specification are also provided*

ASTM D3681-2006, Test Method for Chemical Resistance of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe in a Deflected Condition

*(no abstract provided by developer)*

ASTM D3699-2006, Specification for Kerosine

ASTM D3700-2001, Hydrocarbon Fluid Samples Using a Floating Piston Cylinder, Test for Obtaining (05.02)

*(no abstract provided by developer)*

ASTM D3701-2001 (R2006), Test Method for Hydrogen Content of Aviation Turbine Fuels by Low Resolution Nuclear Magnetic Resonance Spectrometry (05.02)

*(no abstract provided by developer)*

ASTM D3702-1994 (R2004), Wear Rate of Materials in Unlubricated Rubbing Contact Using a Thrust Washer Testing Machine, Test for (05.02)

*(no abstract provided by developer)*

ASTM D3703-1999 (R2004), Peroxide Number of Aviation Turbine Fuels, Test for (05.02)

*(no abstract provided by developer)*

ASTM D3704-1996 (R2006), Test Method for Wear Preventive Properties of Lubricating Greases Using the Falex Block on Ring Test Machine in Oscillating Motion

*(no abstract provided by developer)*

ASTM D3705-1998 (R2003), Standard Test Method for Misting Properties of Lubricating Fluids

ASTM D3707-1989 (R2005), Test Method for Storage Stability of Water-in-Oil Emulsions by the Oven Test Method

*(no abstract provided by developer)*

ASTM D3708-1988 (R2005), Test Method for Weight of Wax Applied During Curtain Coating Operation

*(no abstract provided by developer)*

ASTM D3709-1989 (R2005), Test Method for Stability of Water-in-Oil Emulsions Under Low to Ambient Temperature Cycling Conditions

*(no abstract provided by developer)*

ASTM D3710-1995 (R2004), Test Method for Boiling Range Distribution of Gasoline and Gasoline Fractions by Gas Chromatography

*(no abstract provided by developer)*

ASTM D3711-1995 (R2005), Test Method for Deposition Tendencies of Liquids in Thin Films and Vapors

*(no abstract provided by developer)*

ASTM D3712-2005, Test Method of Analysis of Oil-soluble Petroleum Sulfonates by Liquid Chromatography

ASTM D372-2000 (R2005), Test Methods for Rigid Tubes Used for Electrical Insulation

ASTM D374-1994 (R2004), Test Methods for Thickness of Solid Electrical Insulation (10.01)

*(no abstract provided by developer)*

ASTM D374M-1999 (R2005), Test Methods for Thickness of Solid Electrical Insulation (Metric) (10.01)

*(no abstract provided by developer)*

ASTM D3753-2005, Specification for Glass Fiber-Reinforced Polyester Manholes

ASTM D3754-2006, Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer and Industrial Pressure Pipe

*1.1 This specification covers machine-made fiberglass pipe, 8 in. (200 mm) through 144 in. (3700 mm), for use in pressure systems for conveying sanitary sewage, storm water, and many industrial wastes, and corrosive fluids. Both glass-fiber-reinforced thermosetting-resin pipe (RTRP) and glass-fiber-reinforced polymer mortar pipe (RPMP) are fiberglass pipes. This standard is suited primarily for pipes to be installed in buried applications, although it may be used to the extent applicable for other installations such as, but not limited to, sliplining and rehabilitation of existing pipelines.*

ASTM D3755-1997 (R2004), Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Electrical Insulating Materials Under Direct-voltage Stress

ASTM D3756-1997 (R2004), Test Method for Evaluation of Resistance to Electrical Breakdown by Treeing in Solid Dielectric Materials Using Diverging Fields

ASTM D3764-2006, Practice for Validation of Process Stream Analyzer Systems

*(no abstract provided by developer)*

ASTM D381-2004, Existent Gum in Fuels by Jet Evaporation, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D3825-1990 (R2005), Test Method for Dynamic Surface Tension by the Fast-Bubble Technique

*(no abstract provided by developer)*

ASTM D3827-1997 (R2002), Solubility of Gases in Petroleum and Other Organic Liquids, Method for Estimation of (05.02)

*(no abstract provided by developer)*

ASTM D3828-2005, Test Methods for Flash Point by Small Scale Closed Cup Tester

ASTM D3829-2002, Predicting the Borderline Pumping Temperature of Engine Oil, Test for (05.02)

*(no abstract provided by developer)*

ASTM D3831-2001 (R2006), Manganese in Gasoline by Atomic Absorption Spectrometry, Test for (05.02)

*(no abstract provided by developer)*

ASTM D3839-2002, Practice for Underground Installation of Flexible Reinforced Thermosetting Resin Pipe and Reinforced Plastic Mortar Pipe (08.04)

*(no abstract provided by developer)*

ASTM D3840-2001 (R2005), Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Fittings for Nonpressure Applications

*(no abstract provided by developer)*

ASTM D3841-2001, Specification for Glass Fiber-Reinforced Polyester Plastic Panels (08.04)

ASTM D3850-1994 (R2005), Test Method for Rapid Thermal Degradation of Solid Electrical Insulating Materials by Thermogravimetric Method (TGA)

*(no abstract provided by developer)*

ASTM D3874-2003, Test Method for Ignition of Materials by Hot Wire Sources

ASTM D3944-1988 (R2005), Test Method for Solidification Point of Petroleum Wax

*(no abstract provided by developer)*

ASTM D3946-1992 (R97), Bioresistance of Water-Soluble Metal-Working Fluids (05.02)

*(no abstract provided by developer)*

ASTM D3948-2005, Test Method for Determining Water Separation Characteristics of Aviation Turbine Fuels by Portable Separometer

*(no abstract provided by developer)*

ASTM D3949-1999 (R2004), Specification for Coated Glass Fabrics Used for Electrical Insulation (10.02)

*(no abstract provided by developer)*

ASTM D3955-2004, Specification for Electrical Insulating Varnishes (10.02)

*(no abstract provided by developer)*

ASTM D396-2006, Specification for Fuel Oils

*(no abstract provided by developer)*

ASTM D3982-2003, Specification for Contact Molded Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Duct and Hoods

ASTM D4006-2000 (R2005), Test Method for Water in Crude Oil by Distillation

ASTM D4007-2002a (R2006), Test Method for Water and Sediment in Crude Oil by the Centrifuge Method Laboratory Procedure

*(no abstract provided by developer)*

ASTM D4024-2000, Specification for Reinforced Thermosetting Resin (Rtr) Flanges (08.04)

*(no abstract provided by developer)*

ASTM D4042-1993 (R2004), Rolling Oils, Sampling and Testing for Ash and Total Iron in Steel Mill Dispersions of (05.03)

*(no abstract provided by developer)*

ASTM D4045-2004, Sulfur in Petroleum Products by Hydrogenolysis and Rateometric Colorimetry (05.02)

*(no abstract provided by developer)*

ASTM D4046-1991 (R2005), Test Method for Alkyl Nitrate in Diesel Fuels by Spectrophotometry

*(no abstract provided by developer)*

ASTM D4047-2005, Test Method for Phosphorus in Lubricating Oils and Additives by Quinoline Phosphomolybdate Method

ASTM D4048-2002, Method for Detection of Copper Corrosion from Lubricating Grease by the Copper Strip Tarnish Test (05.02)

*(no abstract provided by developer)*

ASTM D4049-2006, Test Method for Determining the Resistance of Lubricating Grease to Water Spray

*(no abstract provided by developer)*

ASTM D4051-1999, Preparation of Low-Pressure Gas Blends, Method for (05.02)

*(no abstract provided by developer)*

ASTM D4052-1996 (R2002), Test Method for Density and Relative Density of Liquids by Digital Density Meter (05.02)

*(no abstract provided by developer)*

ASTM D4053-2004, Test Method for Benzene in Motor and Aviation Gasoline by Infrared Spectroscopy (05.02)

*(no abstract provided by developer)*

ASTM D4054-1993 (R2003), Evaluating the Compatability of Additives with Aviation Turbine Fuels and Aircraft Fuel System Materials (05.02)

*(no abstract provided by developer)*

ASTM D4055-2004, Pentane Insolubles by Membrane Filtration (05.02)

*(no abstract provided by developer)*

ASTM D4056-2001 (R2006), Test Method for Estimation of Solubility of Water in Hydrocarbon and Aliphatic Ester Lubricants

*(no abstract provided by developer)*

ASTM D4057-2006, Practice for Manual Sampling of Petroleum and Petroleum Products

ASTM D4063-1999 (R2004), Specification for Electrical Insulating Board

ASTM D4068-2001, Specification for Chlorinated Polyethylene (CPE) Sheeting for Concealed Water-Containment Membrane (08.04)

*(no abstract provided by developer)*

ASTM D4072-1998 (R2004), Test Method for Toluene-Insoluble (TI) Content of Tar and Pitch

ASTM D4097-2001, Specification for Conduct Molded Glass-Fiber-Reinforced Thermoset Resin Chemical-Resistant Tanks (08.04)

*(no abstract provided by developer)*

ASTM D411-1998 (R2003), Test Methods for Shellac used for Electrical Insulation

ASTM D4166-1999 (R2004), Test Method for Measurement of Thickness of Nonmagnetic Materials by Means of a Digital Magnetic Intensity Instrument

ASTM D4167-1997, Specification for Fiber-Reinforced Plastic Fans and Blowers (08.04)

*(no abstract provided by developer)*

ASTM D4170-1997 (R2002), Test Method for Fretting Wear Protection by Lubricating Grease (05.02)

*(no abstract provided by developer)*

ASTM D4171-2004, Specification for Fuel System Icing Inhibitors (05.02)

*(no abstract provided by developer)*

ASTM D4172-1994 (R2004), Wear Preventive Characteristics of Lubricating Fluid (Four-Ball Method), Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D4174-1989 (R2005), Practice for Cleaning, Flushing, and Purification of Petroleum Fluid Hydraulic Systems

*(no abstract provided by developer)*

ASTM D4175-2005, Terminology Relating to Petroleum, Petroleum Products, and Lubricants

*(no abstract provided by developer)*

ASTM D4176-1997, Test Method for Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures)

ASTM D4176-2004, Test Method for Free Water and Particulate Contamination in Distillate Fuels (Clear and Bright Pass/Fail Proceedings) (05.02)

*(no abstract provided by developer)*

ASTM D4177-1995 (R2000), Practice for Automatic Sampling of Petroleum and Petroleum Products

ASTM D4177-1995 (R2005), Automatic Sampling of Petroleum and Petroleum Products, Method for the (05.02)

*(no abstract provided by developer)*

ASTM D4178-1982 (R2005), Practice for Calibrating Moisture Analyzers

*(no abstract provided by developer)*

ASTM D4226-2000, Test Method for Impact Resistance of Rigid Poly(Vinyl Chloride) (PVC) Building Products (95-1, Item 42) (08.02)

*(no abstract provided by developer)*

ASTM D4241-1999 (R2004), Gas Turbine Generator Lubricating Oil System, Design of (05.02)

*(no abstract provided by developer)*

ASTM D4243-1998 (R2004), Method for Measurement of Average Viscometric Degree of Polymerization of New and Aged Electrical Papers and Boards

ASTM D4244-1995 (R2001), Specification for General-Purpose, Heavy-Duty and Extra-Heavy Duty Acrylonitrile-Butadiene Polyvinyl Chloride (NBR PVC) Jackets for Wire and Cable (10.02)

ASTM D4245-1997, Specification for Ozone-Resistant Thermoplastic Elastomer Insulation for Wire and Cable 90oC Dry/75oC Wet Operation

ASTM D4245-2002, Specification for Ozone-Resistant Thermoplastic Elastomer Insulation for Wire and Cable 90oC Dry/75oC Wet Operation

ASTM D4246-2002, Specification for Ozone-Resistant Thermoplastic Elastomer Insulation for Wire and Cable, 90oC Operation

ASTM D4248-1999 (R2004), Design of Steam Turbine Generator Oil Systems (05.02)

*(no abstract provided by developer)*

ASTM D4250-1999 (R2003), Test Method for Water-Holding Capacity of Bibulous Fibrous Products

ASTM D4289-2003, Method of Testing Compatibility of Lubricating Grease with Elastomers (05.02)

*(no abstract provided by developer)*

ASTM D4290-2002, Determining the Leakage Tendencies of Automotive Wheel Bearing Grease Under Accelerated Conditions, Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D4291-2004, Trace Ethylene Glycol in Used Engine Oil, Test Method for (05.02)

*(no abstract provided by developer)*

ASTM D4292-1992 (R2002), Vibrated Bulk Density of Calcined Petroleum Coke, Test Method for (05.03)

*(no abstract provided by developer)*

ASTM D4293-83 (R2003), Phosphate Ester Based Fluids for Turbine Lubrication, Specification for (05.02)

*(no abstract provided by developer)*

ASTM D4294-2004, Sulfur in Petroleum Products by Non-Dispersive X-Ray Fluorescence Spectrometry, Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D4296-83 (R2004), Practice for Sampling Pitch

ASTM D4304-2006a, Specification for Mineral Lubricating Oil Used in Steam or Gas Turbines

*(no abstract provided by developer)*

ASTM D4305-1999 (R2004), Filter Flow of Aviation Fuels at Low Temperature, Method of Test for (05.02)

*(no abstract provided by developer)*

ASTM D4306-2001, Practice for Sampling Aviation Fuel for Tests Affected by Trace Contamination (05.02)

*(no abstract provided by developer)*

ASTM D4307-1999 (R2004), Preparation of Liquid Blends for Use as Analytical Standards, Practice for (05.02)

*(no abstract provided by developer)*

ASTM D4308-1995 (R2005), Test Method for Electrical Conductivity of Liquid Hydrocarbons by Precision Meter

*(no abstract provided by developer)*

ASTM D4310-2006b, Test Methods for Determination of the Sludging and Corrosion Tendencies of Inhibited Mineral Oils

ASTM D4312-2005, Test Method for Toluene-insoluble Ti Content of Tar and Pitch Short Method

ASTM D4313-2003, Specification for General Purpose, Heavy-Duty, and Extra-Heavy-Duty Crosslinked Chlorinated Polyethylene Jackets for Wire and Cable

ASTM D4314-1999, Specification for General Purpose Heavy-Duty and Extra-Heavy-Duty Crosslinked Chlorosulfonated Polyethylene Jackets for Wire and Cable (10.02)

*(no abstract provided by developer)*

ASTM D4325-2002, Test Methods for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes

ASTM D4356-1997 (R2002), Practice for Establishing Consistent Test Method Tolerances

ASTM D4363-1998 (R2003), Specification for Thermoplastic Chlorinated Polyethylene Jacket for Wire and Cable

ASTM D4377-2000 (R2006), Test Method for Water in Crude Oils by Potentiometric Karl Fischer Titration

*(no abstract provided by developer)*

ASTM D4378-2003, In-Service Monitoring of Mineral Turbine Oils for Steam and Gas Turbines (05.02)

*(no abstract provided by developer)*

ASTM D4388-2002, Specification for Nonmetallic Semi-Conducting and Electrically Insulating Tapes

ASTM D4418-2001 (R2006), Practice for Receipt, Storage, and Handling of Fuels for Gas Turbines

ASTM D4419-90 (R2005), Test Method for Measurement of Transition Temperatures of Petroleum Waxes by Differential Scanning Calorimetry (DSC)

*(no abstract provided by developer)*

ASTM D4422-2004, Test Method for Ash in Analysis of Petroleum Coke (05.02

ASTM D4423-1991 (R2006), Test Method for Determination of Carbonyls in C4 Hydrocarbons (05.02)

*(no abstract provided by developer)*

ASTM D4424-1990 (R2002), Test Method for Butylene Analysis by Gas Chromatography (05.02)

*(no abstract provided by developer)*

ASTM D4425-1997 (R2002), Test Method for Oil Separation from Lubricating Grease by Centrifuging (Koppers Method) (05.02)

ASTM D445-2006, Test Method for Kinematic Viscosity of Transparent and Opaque Liquids and the Calculation of Dynamic Viscosity

*(no abstract provided by developer)*

ASTM D446-2007, Specifications and Operating Instructions for Glass Capillary Kinematic Viscometers

*(no abstract provided by developer)*

ASTM D4470-1997 (R2004), Test Method for Static Electrification (10.02)

*(no abstract provided by developer)*

ASTM D4477-2004a, Specification for Rigid Poly(Vinyl Chloride) (PVC) Soffit (08.04)

*1.1 This specification establishes requirements and test methods for the materials, dimensions, camber, impact strength, weatherability, expansion, and appearance of extruded single-wall soffit manufactured principally from rigid (unplasticized) PVC compound. Methods of indicating compliance with this specification are also provided.*

ASTM D4485-2006a, Specification for Performance of Engine Oils

ASTM D4486-1991 (R2006), Test Method for Kinematic Viscosity of Volatile and Reactive Liquids

*(no abstract provided by developer)*

ASTM D4495-2000, Test Method for Impact Resistance of Poly(Vinyl Chloride) (PVC) Rigid Profiles by Means of a Falling Weight (08.04)

*(no abstract provided by developer)*

ASTM D4496-1998, Test Method for DC Resistance or Conductance of Moderately Conductive Materials

ASTM D4514-2006, Specification for Friction Tape

*(no abstract provided by developer)*

ASTM D4529-2002 (R2006), Estimation of Net Heat of Combustion of Aviation Fuels, Test Method for (05.02)

*(no abstract provided by developer)*

ASTM D4530-2005, Test Method for Determination of Carbon Residue Micro Method

*(no abstract provided by developer)*

ASTM D4539-2003, Test Method for Filterability of Diesel Fuels by the Low Temperature Flow Test (Lift) Method (05.02)

*(no abstract provided by developer)*

ASTM D4551-2001, Specification for Poly(Vinyl Chloride) (PVC) Plastic Flexible Concealed Water-Containment Membrane (08.04)

*(no abstract provided by developer)*

ASTM D4565-1999 (R2004), Test Methods for Physical and Environmental Performance Properties of Insulations and Jackets for Telecommunications Wire and Cable (10.02)

*(no abstract provided by developer)*

ASTM D4566-1998, Test Methods for Electrical Performance Properties of Insulations and Jackets for Telecommunications Wire and Cable (10.02)

*(no abstract provided by developer)*

ASTM D4568-1999 (R2004), Test Methods for Evaluating Compatibility Between Cable Filling and Flooding Compounds and Polyolefin Cable Materials (10.02)

*(no abstract provided by developer)*

ASTM D4616-2005, Test Method for Microscopical Analysis by Reflected Light and Determination of Mesophase in a Pitch

ASTM D4625-2004a, Test Method for Distillate Fuel Storage Stability at 43C (110F)

*(no abstract provided by developer)*

ASTM D4626-1995 (R2005), Practice for Calculation of Gas Chromatographic Response Factors

*(no abstract provided by developer)*

ASTM D4627-1992 (R2002), Water Soluble Metal Working Fluids, Iron Chip Corrosion Test for (05.02)

*(no abstract provided by developer)*

ASTM D4628-2005, Test Method for Analysis of Barium, Calcium, Magnesium, and Zinc in Unused Lubricating Oils by Atomic ABSorption Spectrometry

*(no abstract provided by developer)*

ASTM D4629-2002, Test Method for Organically Bound Trace Nitrogen in Liquid Petroleum Hydrocarbons by Oxidative Combustion and Chemiluminescence Detection (05.02)

*(no abstract provided by developer)*

ASTM D4636-1998 (R2004), Test Method for Corrosiveness and Oxidation Stability of Hydraulic Oils, Aircraft Turbine Engine Lubricants, and Other Highly Refined Oils

ASTM D465-1990 (R2001), Test Method for Blocking and Picking Points of Petroleum Wax

ASTM D4682-1996 (R2002), Specification for Miscibility with Gasoline and the Fluidity of Two-Stroke-Cycle Gasoline Engine Lubricants

ASTM D4683-2004, Standard Test Method to Measure Viscosity by Tapered Bearing Simulator at High Temperature and High Shear Rate (05.03)

*(no abstract provided by developer)*

ASTM D4684-2006, Test Method for Determination of Yield Stress and Apparent Viscosity of Engine Oils at Low Temperature (05.03)

ASTM D4693-2004, Test Method for Low-Temperature Torque of Grease-Lubricated Wheel Bearings

ASTM D470-2005, Methods of Testing Crosslinked Insulations and Jackets for Wire and Cable (10.01)

*(no abstract provided by developer)*

ASTM D4714-1992 (R2001), Test Method for Determination of Effect of Moist Heat on Properties of Paper and Board

ASTM D4715-1998 (R2004), Test Method for Coking Value of Tar and Pitch (Alcan)

ASTM D4726-2002, White Rigid Poly (Vinyl Chloride) Exterior-Profile Extrusions Used for Assembled Windows and Doors, Specification for (08.04)

*(no abstract provided by developer)*

ASTM D473-2002 (R2006), Sediment in Crude and Fuel Oils by Extraction, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D4730-2002, Specification for Flooding Compounds for Telecommunications Wire and Cable

ASTM D4731-2002, Specification for Hot-Application Filling Compounds for Telecommunications Wire and Cable

ASTM D4732-2002, Specification for Cool-Application Filling Compounds for Telecommunications Wire and Cable

ASTM D4733-2003, Test Methods for Solventless Electrical Insulating Varnishes

ASTM D4737-2004, Test Method for Calculated Centane Index by Four Variable Equation

ASTM D4739-2006a, Test Method for Base Number Determination by Potentiometric Titration

*(no abstract provided by developer)*

ASTM D4740-2004, Test Method for Cleanliness and Compatibility of Residual Fuels by Spot Test

ASTM D4741-2006, Test Method for Measuring Viscosity at High Temperature and High Shear Rate by Tapered-Plug Viscometer

*(no abstract provided by developer)*

ASTM D4742-2002a, Oxidation Stability of Gasoline Automotive Engine Oils by Thin-Film Oxygen Uptake (TFOUT), Test Method for (05.03)

*(no abstract provided by developer)*

ASTM D4746-1998 (R2004), Test Method for Determination of Quinoline Insolubles (QI) in Tar and Pitch by Pressure Filtration

ASTM D4756-2006, Practice for Installation of Rigid Poly (Vinyl Chloride) (PVC) Siding and Soffit

*(no abstract provided by developer)*

ASTM D4803-1997, Test Method for Predicting Heat Buildup in PVC Building Products

ASTM D4806-2006a, Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel

*(no abstract provided by developer)*

ASTM D4807-2005, Sediment in Crude Oil by Membrane Filtration, Test Method (05.03)

*(no abstract provided by developer)*

ASTM D4808-2001 (R2006), Test Methods for Hydrogen Content of Light Distillates, Middle Distillates, Gas Oils, and Residua by Low-Resolution Nuclear Magnetic Resonance Spectroscopy

*(no abstract provided by developer)*

ASTM D4809-2006, Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method)

*(no abstract provided by developer)*

ASTM D4814-2006a, Specification for Automotive Spark-Ignition Engine Fuel

ASTM D4815-2004, Analysis of C1 to C4 Alcohols and MTBE in Gasoline by Gas Chromatography, Test Method for (05.03)

*(no abstract provided by developer)*

ASTM D482-2002, Test Method for Ash from Petroleum Products (05.01)

*(no abstract provided by developer)*

ASTM D4825-1997 (R2002), Test Method for Measurement of Curl in Cut-Sized Office Paper

ASTM D4826-1997 (R2002), Practice for Units of Measurements and Conversion Factors for Pulp, Paper, and Paperboard

ASTM D483-2004, Test Method for Unsulfonated Residue of Petroleum Plant Spray Oils

*(no abstract provided by developer)*

ASTM D4857-2004, Determination of the Ability of Lubricants to Minimize Ring Sticking and Piston Deposits in Two-Stroke-Cycle Gasoline Engines Other Than Outboards, Test Method for (05.03)

*(no abstract provided by developer)*

ASTM D4858-2002, Determination of the Tendency of Lubricants to Promote Preignition in Two-Stroke-Cycle Gasoline Engines, Test Method for (05.03)

*(no abstract provided by developer)*

ASTM D4859-1997 (R2003), Lubricants for Two-Stroke-Cycle Spark-Ignition Gasoline Engines – TC, Specification for (05.03)

*(no abstract provided by developer)*

ASTM D4860-2005, Test Method for Free Water and Particulate Contamination in Mid-Distillate Fuels (Clear and Bright Numerical Rating)

ASTM D4863-2002, Determination of the Lubricity of Two-Stroke Cycle Gasoline Engine Lubricants (05.03)

*(no abstract provided by developer)*

ASTM D4864-1990 (R2005), Determination of Traces of Methanol in Propylene Concentrates by Gas Chromatography, Test Method for (05.03)

*(no abstract provided by developer)*

ASTM D4865-1999 (R2003), Guide for Generation and Dissipation of Static Electricity in Petroleum Fuel Systems

ASTM D4868-1990 (R2005), Estimation of Net and Gross Heat of Combustion of Petroleum Fuels, Test Method for (05.03)

*(no abstract provided by developer)*

ASTM D4870-2004, Test Method for Total Sediment in Residual Fuels (05.03)

*(no abstract provided by developer)*

ASTM D4871-2006, Guide for Universal Oxidation/thermal Stability Test Apparatus

*(no abstract provided by developer)*

ASTM D4872-1999 (R2004), Test Method for Dielectric Testing of Wire and Cable Filling Compounds

ASTM D4880-2003, Test Method for Salt Water Proofness of Insulating Varnishes over Enameled Magnet Wire

ASTM D4881-2005, Test Method for Thermal Endurance of Varnished Fibrous or Film Wrapped Magnet Wire

ASTM D4882-2005, Test Method for Bond Strength of Electrical Insulating Varnishes by the Twisted Coil Test

ASTM D4892-89 (R2004), Test Method for Density of Solid Pitch (Helium Pycnometer Method)

ASTM D4893-1994 (R2004), Test Method for Determination of Pitch Volatility

ASTM D4898-1990 (R2005), Test Method for Insoluble Contamination of Hydraulic Fluids by Gravimetric Analysis

ASTM D4917-1997 (R2002), Test Method for Coefficient of Static and Kinetic Friction of Uncoated Writing and Printing Paper by Use of the Horizontal Plane Method

ASTM D4918-1997 (R2002), Test Method for Coefficient of Static Friction of Uncoated Writing and Printing Paper by Use of the Inclined Plane Method

ASTM D4927-2005, Test Methods for Elemental Analysis of Lubricant and Additive Components – Barium, Calcium, Phosphorus, Sulfur, and Zinc by Wavelength-Dispersive X-Ray Fluorescence (05.02)

*(no abstract provided by developer)*

ASTM D4928-1996 (R2005), Test Method for Water in Crude Oils by Coulometric Karl Fischer Titration

ASTM D4929-2004, Test Methods for Determination of Organic Chloride Content in Crude Oil

ASTM D4930-2006, Test Method for Dust Control Material on Calcined Petroleum Coke

*(no abstract provided by developer)*

ASTM D4931-2006, Test Method for Gross Moisture in Green Petroleum Coke

ASTM D4949-1997 (R2002), Test Method for Determination of D.C. Resistivity of Writing Paper (Keithley Method)

ASTM D495-1999 (R2004), Test Method for High-Voltage, Low-Current, Dry Arc Resistance of Solid Electrical Insulation

ASTM D4950-2001 (R2004), Classification and Specification for Automotive Service Greases

ASTM D4951-2006, Test Method for Determination of Additive Elements in Lubricating Oils by Inductively Coupled Plasma Atomic Emission Spectrometry

ASTM D4952-2002, Test Method for Qualitative Analysis for Active Sulfur Species in Fuels and Solvents (Doctor Test) (05.03)

*(no abstract provided by developer)*

ASTM D4953-2006, Test Method for Vapor Pressure of Gasoline and Gasoline-Oxygenate Blends (Dry Method)

*(no abstract provided by developer)*

ASTM D4967-1999 (R2004), Guide for Selecting Materials to be Used for Insulation, Jacketing and Strength Components in Fiber-Optic Cables (10.02)

ASTM D4987-1994 (R2003), Test Method for Tensile Breaking Strength of Perforations in One Part Continuous Forms Paper

ASTM D4988-1996 (R2001), Test Method for Determination of Alkalinity of Paper as Calcium Carbonate (Alkaline Reserve of Paper)

ASTM D4998-1995 (R2003), Test Method for Evaluating Wear Characteristics of Tractor Hydraulic Fluids (05.03)

*(no abstract provided by developer)*

ASTM D5000-2005, Practice for Evaluating Activity of Clay Elements Using a Side-Stream Sensor

*(no abstract provided by developer)*

ASTM D5001-2006, Test Method for Measurement of Lubricity of Aviation Turbine Fuels by the Ball-on-Cylinder Lubricity Evaluator (BOCLE)

*(no abstract provided by developer)*

ASTM D5002-1999 (R2005), Test Method for Density and Relative Density of Crude Oils by Digital Density Analyzer

*(no abstract provided by developer)*

ASTM D5003-2006a, Test Method for the Hardgrove Grindability Index (HGI) of Petroleum Coke

*(no abstract provided by developer)*

ASTM D5004-2006, Test Method for Real Density of Calcined Petroleum Coke by Xylene Displacement

*(no abstract provided by developer)*

ASTM D5006-2004, Test Method for Determination of Fuel System Icing Inhibitors (Ether Type) in Aviation Fuels (05.03)

*(no abstract provided by developer)*

ASTM D5018-89 (R2004), Test Method for Shear Viscosity of Coal-Tar and Petroleum Pitches

ASTM D5032-2003, Practice for Maintaining Constant Relative Humidity by Means of Aqueous Glycerin Solutions

ASTM D5039-1997 (R2002), Test Methods for Identification of Wire Side of Paper

ASTM D5056-2004, Test Method for Trace Metals in Petroleum Coke by Atomic Absorption

ASTM D5059-1998 (R2003), Test Method for Lead in Gasoline by X-Ray Spectroscopy (05.03)

*(no abstract provided by developer)*

ASTM D5109-1999 (R2004), Test Methods for Copper-Clad Thermosetting Laminates for Printed Wiring Boards

ASTM D5133-2005, Test Method for Low Temperature, Low Shear Rate Viscosity/Temperature Dependence of Lubricating Oils Using a Temperature-Scanning Technique

ASTM D5134-1998 (R2003), Test Method for Detailed Analysis of Petroleum Naphthas Through N-Noname by Capillary Gas Chromatography (05.03)

*(no abstract provided by developer)*

ASTM D5182-1997 (R2002), Test Method for Evaluating the Scuffing (Scoring) Load Capacity of Oils (05.03)

*(no abstract provided by developer)*

ASTM D5183-2005, Test Method for Determination of the Coefficient of Friction of Lubricants Using the Four-Ball Wear Test Machine

*(no abstract provided by developer)*

ASTM D5184-2001 (R2006), Test Methods for Determination of Aluminum and Silicon in Fuel Oils by Ashing, Fusion, Inductively Coupled Plasma Atomic Emission Spectrometry, and Atomic Absorption Spectrometry (05.03)

*(no abstract provided by developer)*

ASTM D5185-2005, Test Method for Determination of Additive Elements, Wear Metals, and Contaminants in Used Lubricating Oils by Inductively Coupled Plasma Atomic Emission Spectrometry (05.03)

*(no abstract provided by developer)*

ASTM D5186-2003, Test Method for the Determination of the Aromatic Content and Polynuclear of Diesel Fuels and Aviation Turbine Fuels by Supercritical Fluid Chromatography

ASTM D5187-1991 (R2002), Test Method for Crystallite Size (LC) of Calcined Petroleum Coke by X-Ray Diffraction (05.03)

*(no abstract provided by developer)*

ASTM D5188-2004, Test Method for Vapor-Liquid Ratio Temperature Determination of Fuels Evacuated Chamber Method

ASTM D5190-2001, Test Method for Vapor Pressure of Petroleum Products (Automatic Method) (05.03)

*(no abstract provided by developer)*

ASTM D5191-2006, Test Method for Vapor Pressure of Petroleum Products (Mini Method)

*(no abstract provided by developer)*

ASTM D5206-2006, Test Method for Windload Resistance of Rigid Poly(Vinyl Chloride) (PVC) Siding

ASTM D5213-2004, Specification for Polymide Resin Film for Electrical Insulation and Dielectric Application (10.02)

*(no abstract provided by developer)*

ASTM D5234-1997 (R2002), Guide for the Analysis of Ethylene Product (05.03)

*(no abstract provided by developer)*

ASTM D5236-2003, Test Method for Distillation of Heavy Hydrocarbon Mixtures Vacuum Potstill Method

*(no abstract provided by developer)*

ASTM D524-2004, Test Method for Ramsbottom Carbon Residue of Petroleum Products

ASTM D525-2005, Test Method for Oxidation Stability of Gasoline Induction Period Method

*(no abstract provided by developer)*

ASTM D5273-1997 (R2002), Guide for Analysis of Propylene Concentrates (05.03)

*(no abstract provided by developer)*

ASTM D5274-2000 (R2005), Guide for Analysis of 1,3-Butadiene Product

*(no abstract provided by developer)*

ASTM D5275-2004, Test Method for Fuel Injector Shear Stability Test (FISST) for Polymer Containing Fluids (05.01)

*(no abstract provided by developer)*

ASTM D528-1997 (R2002), Test Method for Machine Direction of Paper and Paperboard

ASTM D528-879(R96), Test Methods for Machine Direction of Paper and Paperboard

ASTM D5288-1997 (R2004), Test Method for Determining the Tracking Index of Electrical Insulating Materials Using Various Electrode Materials (Excluding Platinum)

ASTM D5291-2002, Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants, Test Method for (05.03)

*(no abstract provided by developer)*

ASTM D5292-1999 (R2004), Test Method for Aromatic Carbon Contents of Hydrocarbon Oils by High Resolution Nuclear Magnetic Resonance Spectroscopy

*(no abstract provided by developer)*

ASTM D5293-2004, Apparent Viscosity of Engine Oils – Between 30 and 50°C Using the Cold-Cranking Simulation, Test Method for (05.03)

*(no abstract provided by developer)*

ASTM D5302-2001a, New Test Method for Evaluation of Automotive Engine Oils for Inhibition of Deposit Formation and Wear in Spark-Ignition Internal-Combustion Engine Fueled with Gasoline and Operated Under Low Temperature, Light-Duty Can (05.03)

*(no abstract provided by developer)*

ASTM D5303-1997 (R2002), New Test Method for Trace Carbonyl Sulfide in Propylene by Gas Chromatography

*(no abstract provided by developer)*

ASTM D5304-2006, Test Method for Assessing Middle Distillate Fuel Storage Stability by Oxygen Overpressure

*(no abstract provided by developer)*

ASTM D5305-1997 (R2002), New Test Method for the Determination of Ethyl Mercaptan in LPGas Vapor

*(no abstract provided by developer)*

ASTM D5306-1997 (R2002), New Test Method for Linear Flame Propagation Rate of Lubricating Oils and Hydraulic Fluids (05.03)

*(no abstract provided by developer)*

ASTM D5307-1997 (R2002), Test Method for the Determination of Boiling Range Distribution of Crude Petroleum by Gas Chromatography

ASTM D5319-2001, Specification for Glass-Fiber Reinforced Polyester Wall and Ceiling Panels

*(no abstract provided by developer)*

ASTM D5342-1997 (R2002), Test Method for Resistance to Bending of Paper and Paperboard (Taber-Type Tester in Basic Configuration)

ASTM D5365-2006, Test Method for Long-Term Ring-Bending Strain of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe

ASTM D5372-2004, Guide for the Evaluation of Hydrocarbon Heat Transfer Fluids

ASTM D5374-1999 (R2005), Test Methods for Forced-Convection Laboratory Ovens for Evaluation of Electrical Insulation

*/ANSI/ASTM D5374M-93(1999)*

ASTM D5384-1995 (R2005), Test Methods for Chlorine in Used Petroleum Products (Field Test Kit Method)

*(no abstract provided by developer)*

ASTM D5421-2005, Specification for Contact Molded “Fiberglass” (Glass-Fiber-Reinforced Thermosetting Resin) Flanges

ASTM D5423-1999 (R2005), Specification for Forced-Convection Laboratory Ovens for Evaluation of Electrical Insulation

ASTM D5424-2005, Test Method for Smoke Obscuration Caused by Burning Cables in a Vertical Configuration (10.02)

ASTM D5425-2002, Guide for Development of Fire Hazard Assessment Standards of Electrotechnical Products

ASTM D5441-2003, Test Method for Analysis of Methyl TERT-Butyl Ether MTBE by Gas Chromatography

ASTM D5442-93 (R2003), Test Method for Analysis of Petroleum Waxes by Gas Chromatography

ASTM D5443-2004, Test Method for Paraffin, Naphthene, and Aromatic Hydrocarbon Type Analysis in Petroleum Distillates Through 200°C by Multi-Dimensional Gas

ASTM D5452-2006, Test Method for Particulate Contamination in Aviation Fuels by Laboratory Filtration

*(no abstract provided by developer)*

ASTM D5453-2006, Test Method for Determination of Total Sulfur in Light Hydrocarbons, Spark Ignition Engine Fuel, Diesel Engine Fuel, and Engine Oil by Ultraviolet Fluorescence

ASTM D5455-1993 (R2003), Test Method for Short-Term Liquid Sorption Into Paper (Bristow Test)

ASTM D5470-2006, Test Method for Thermal Transmission Properties of Thin Thermally Conductive Solid Electrical Insulation Materials (10.02)

ASTM D548-1997 (R2002), Test Method for Water-Soluble Acidity or Alkalinity of Paper

ASTM D5481-2004, Test Method for Measuring Apparent Viscosity at High-Temperature and High-Shear Rate by Multicell Capillary Viscometer

ASTM D5482-2001, Test Method for Vapor Pressure of Petroleum Products (Mini Method-Atmospheric)

ASTM D5483-2005, Test Method for Oxidation Induction Time of Lubricating Greases by Pressure Differential Scanning Calorimetry

ASTM D5485-2005, Fire Test Response Standard for Determining the Corrosive Effective of Combustion Products Using the Cone Corrosimeter (10.02)

*(no abstract provided by developer)*

ASTM D5500-1999 (R2004), Test Method for Vehicle Evaluation of Unleaded Automotive Spark-Ignition Engine Fuel for Intake Valve Deposit (05.03)

*(no abstract provided by developer)*

ASTM D5501-2004, Test Method for the Determination of Ethanol Content of Denatured Fuel Ethanol by Gas Chromatography (05.03)

*(no abstract provided by developer)*

ASTM D5534-1999 (R2005), Test Method for Vapor-Phase Rust-Preventing Characteristics of Hydraulic Fluids

ASTM D5537-2003, Test Method for Heat Release, Flame Spread and Mass Loss Testing of Insulating Materials Contained in Electrical or Optical Fiber Cables When Burning in a Vertical Cable Tray Configuration

*(no abstract provided by developer)*

ASTM D5568-2001, Test Method for Measuring Relative Complex Permittivity and Magnetic Permeability of Solid Materials at Microwave Frequencies (10.02)

*(no abstract provided by developer)*

ASTM D5579-2006, Test Method for Evaluating the Thermal Stability of Manual Transmission Lubricants in a Cyclic Durability Test

*(no abstract provided by developer)*

ASTM D5598-2001, Test Method for Evaluating Unleaded Automotive Spark-Ignition Engine Fuel for Electronic Port Fuel Injector Fouling (05.03)

*(no abstract provided by developer)*

ASTM D5599-1995 (R2005), Test Method for the Determination of Oxygenates in Gasoline by Gas Chromotography and Oxygen Selective Flame Ionization Detection (05.03)

*(no abstract provided by developer)*

ASTM D56-2005, Test Method for Flash Point by Tag Closed Cup Tester

ASTM D5600-2004, Test Method for Trace Metals in Petroleum Coke by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) (05.03)

*(no abstract provided by developer)*

ASTM D5619-2004 (R2005), Test Method for Comparing Metal Removal Fluids Using the Tapping Torque Test Machine

*1.1 This test method covers a laboratory technique to evaluate the relative performance of metal removal fluids using a non-matrix test protocol using the tapping torque test machine. 1.2 The values stated in SI units are to be regarded as standard. Because the equipment used in this test method is available only in inch-pound units, SI units are omitted when referring to the equipment and the test pieces.*

ASTM D5620-1999 (R2004), Test Method for Evaluating Thin Film Fluid Lubricants in a Drain and Dry Mode Using a Pin and Vee Block Test Machine

*(no abstract provided by developer)*

ASTM D5621-2001, Test Method for Sonic Shear Stability of Hydraulic Fluid (05.03)

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ASTM D5622-1995 (R2005), Test Methods for Determination of Total Oxygen in Gasoline and Methanol Fuels by Reductive Pyrolysis

ASTM D5623-2004, Test Method for Sulfur Compounds in Light Petroleum Liquids by Gas Chromatography and Sulfur Selective Detection

ASTM D5625-1997 (R2002), Test Method for Measuring Length, Width, and Squareness of Sheeted Paper and Paper Products

ASTM D5626-1994 (R2001), Test Method for U.S. Postal Service Optical Measurements for Small Areas

ASTM D5637-2005, Test Method for Moisture Resistance of Electrical Insulating Varnishes (10.02)

*(no abstract provided by developer)*

ASTM D5638-2005, Test Method for Chemical Resistance of Electrical Insulating Varnishes (10.02)

*(no abstract provided by developer)*

ASTM D5642-1999 (R2004), Test Method for Sealed Tube Chemcal Compatability Test

ASTM D565-1999 (R2005), Carbonizable Substances in White Mineral Oil (Liquid Petrolatum), Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D5650-1997 (R2002), Test Method for Use of the Taber-Type Tester for Stiffness in the Expanded 0-10 Taber Stiffness Unit Range

ASTM D566-2002, Test Method for Dropping Point of Lubricating Grease (05.01)

*(no abstract provided by developer)*

ASTM D5662-2006a, Test Method for Determining Automotive Gear Oil Compatibility with Typical Oil Seal Elastomers

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ASTM D5663-2003, Guide for Validating Recycled Content in Packaging Paper and Paperboard

ASTM D5677-2005, Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Pipe Fittings, Adhesive Bonded Joint Type, for Aviation Jet Turbine Fuel Lines

*(no abstract provided by developer)*

ASTM D5685-2005, Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pressure Pipe Fittings

*(no abstract provided by developer)*

ASTM D5704-2006, Test Method for Evaluation of the Thermal and Oxidative Stability of Lubricating Oils Used for Manual Transmissions and Final Drive Axles

*(no abstract provided by developer)*

ASTM D5705-1995, Test Method for Measurement of Hydrogen Sulfide in the Vapor Phase above Residual Fuel Oils

ASTM D5705-2004, Test Method for Measurement of Hydrogen Sulfide in the Vapor Phase above Residual Fuel Oils (05.03)

*(no abstract provided by developer)*

ASTM D5706-1995, Test Method for Determining Extreme Pressure Properties of Lubricating Greases Using a High-Frequency, Linear-Oscillation (SRV) Test Machine

ASTM D5706-2005, Test Method for Determining Extreme Pressure Properties of Lubricating Greases Using a High-Frequency, Linear-Oscillation (SRV) Test Machine (05.03)

*(no abstract provided by developer)*

ASTM D5707-2005, Test Method for Measuring Friction and Wear Properties of Lubricating Grease Using a High-frequency, Linear-oscillation (SRV) Test Machine

ASTM D5708-2005, Test Methods for Determination of Nickel, Vanadium, and Iron in Crude Oils and Residual Fuels by Inductively Coupled Plasma (ICP) Atomic Emission Spectrometry

ASTM D5709-1995 (R2005), Test Method for Sieve Analysis of Petroleum Coke

*(no abstract provided by developer)*

ASTM D5725-1997 (R2003), Test Method for Surface Wettability and Absorbency of Sheeted Materials Using an Automated Contact Angle Tester

ASTM D5760-2005, Specification for Performance of Manual Transmission Gear Lubricants (05.03)

*(no abstract provided by developer)*

ASTM D5761-1997 (R2006), Practice for Emulsification/Suspension of Multiphase Fluid Waste Materials

*(no abstract provided by developer)*

ASTM D5762-2005, Test Method for Nitrogen in Petroleum and Petroleum Products by Boat-inlet Chemiluminescence

*(no abstract provided by developer)*

ASTM D5763-1995 (R2006), Test Method for Oxidation and Thermal Stability Characteristics of Gear Oils Using Universal Glassware (05.03)

*(no abstract provided by developer)*

ASTM D5769-2004, Test Method for Determination of Benzene, Toluene and Total Aromatics in Finished Gasolines by Gas Chromatography/Mass Spectrometry

ASTM D5770-2002, Test Method for Semi-Quantitative Micro Determination of Acid Number of Used Lubricating Oils

ASTM D5771-2005, Test Method for Cloud Point of Petroleum Products - Optical Detection Stepped Cooling Method

ASTM D5772-2005, Test Method for Cloud Point of Petroleum Products - Linear Cooling Rate Method

ASTM D5773-2005, Test Method for Cloud Point of Petroleum Products (Constant Cooling Rate Method)

ASTM D5797-2006, Specification for Fuel Methanol (M85-M70) for Automotive Spark-Ignition Engines

ASTM D5798-2006, Specification for Fuel Ethanol (ED85-ED75) for Automotive Spark-Ignition Engines

ASTM D5799-95 (R2004), Test Method for Determination of Peroxides in Butadiene

ASTM D5800-2005a, Test Method for Evaporation Loss of Lubricating Oils by the Noack Method

ASTM D5803-1997 (R2002), Test Method for Wet Tensile Strength at Zero-Span

ASTM D5804-1997 (R2002), Test Methods for Zero-Span Breaking Strength (“Dry Zero-Span Tensile”)

ASTM D5813-2004, Specification for Cured-in-place Thermosetting Resin Sewer Pipe

ASTM D5842-2004, Practice for the Sampling and Handling of Fuels for Volatility Measurement

ASTM D5845-2001 (R2006), Test Method for Determination of MTBE, ETBE, TAME, DIPE, Methanol, Ethanol and Tert-Butanol in Gasoline by Infrarred Spectroscopy

ASTM D5846-2002, Test Method for Universal Oxidation Test for Hydraulic Fluids and Turbine Oils

ASTM D585-1997 (R2002), Practice for Sampling and Accepting a Single Lot of Paper, Paperboard, Fiberboard, and Related Products

ASTM D5853-2006, Test Method for Pour Point of Crude Oils

ASTM D5854-1996 (R2005), Practice for Mixing and Handling of Liquid Samples of Petroleum and Petroleum Products

ASTM D586-1997 (R2002), Test Method for Ash in Pulp, Paper, and Paper Products

ASTM D5862-2006, Test Method for Evaluation of Engine Oils in the Two-Stroke Cycle Turbo-Supercharged 6v92ta Diesel Engine

ASTM D5863-2000 (R2005), Test Method for Determination of Nickel, Vanadium, Iron, and Sodium in Crude Oils and Residual Fuels by Flame Atomic Absorption Spectrometry

ASTM D5864-2005, Test Method for Determining the Aerobic Aquatic Biodegradation of Lubricants or Their Components

ASTM D589-1997 (R2002), Test Method for Opacity of Paper 15 Diffuse Illuminant

ASTM D590-1993 (R2002), Test Method for Petroleum Wax in Paper

ASTM D5901-2003, Test Method for Freezing Point of Aviation Fuels (Automated Optical Method)

ASTM D5926-2004, Specification for Poly(Vinyl Chloride) (PVC) Gaskets for Drain, Waste and Vent (DWV), Sewer, Sanitary and Storm Plumbing Systems

ASTM D5949-2001, Test Method for Pour Point of Petroleum Products (Automatic Pressure Pulsing Method)

ASTM D5950-2002, Test Method for Pour Point of Petroleum Products (Automatic Tilt Method)

ASTM D5966-2002, Test Method for Evaluation of Engine Oils for Roller Follower Wear in Light-Duty Diesel Engine

ASTM D5967-2005, Test Method for Evaluation of Diesel Engine Oils in the T-8 Diesel Engine

ASTM D5968-2004, Test Method for Evaluation of the Corrosiveness of Diesel Engine Oil

ASTM D5969-2005, Test Method for Corrosion-Preventive Properties of Lubricating Greases in the Presence of Dilute Synthetic Sea Water Environments

ASTM D5972-2005, Test Method for Freezing Point of Aviation Fuels (Automatic Phase Transition Method)

ASTM D5983-1996, Specification for Methyl Tertiary-Butyl Ether (MTBE) for Downstream Blending with Automotive Spark Ignition Fuel

ASTM D5983-2006, Specification for Methyl Tertiary-Butyl Ether (MTBE) for Downstream Blending with Automotive Spark-Ignition Fuel

ASTM D5984-1997 (R2002), Test Method for Semi-quantitative Field Test Method for Base Number in New and Used Lubricants by Color-indicator Titration

ASTM D5985-2002, Test Method for Pour Point of Petroleum Products (Rotational Method)

ASTM D5986-1996 (R2006), Test Method for Determination of Oxygenates, Benzene, Toluene, C8-C12 Aromatics and Total Aromatics in Finished Gasoline by Gas Chromatography/Fourier Transform Infrared Spectroscopy

ASTM D6006-1997a (R2004), Guide for Assessing Biodegradabillty of Hydraulic Fluids

ASTM D6021-2006, Test Method for the Measurement of Total Hydrogen Sulfide in Residual Fuels by Multiple Headspace Extraction and Sulfur Specific Detection

ASTM D6022-2006, Practice for the Calculation of Permanent Shear Stability Index

ASTM D6041-1997, Specification for Contact-Molded "Fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin) Corrosion Resistant Pipe and Fittings

ASTM D6045-2004, Test Method for Color of Petroleum Products by the Automatic Tristimulus Method

ASTM D6046-2002 (R2006), Classification of Hydraulic Fluids for Environmental Impact

ASTM D6053-2003, Test Method for Determination of Volatile Organic Compound (VOC) Content of Electric Insulating Varnishes

ASTM D6054-1997 (R2004), Practice for Conditioning Electrical Insulating Materials for Testing

ASTM D6064-1997, Specification for Hfc-227ea, 1, 1, 1, 2, 3, 3, 3-Heptafluoropropane (Cf3 Chfcf3)1

ASTM D6070-2002, Test Methods for Physical Properties of Smooth-Wall, Coilable Polyethylene (PE) Conduit (Duct) for Preassembled Wire and Cable

ASTM D6074-1999 (R2005), Guide for Characterizing Hydrocarbon Lubricant Base Oils

ASTM D6078-2004, Test Method for Evaluating Lubricity of Diesel Fuels by the Scuffing Load Ball-On-Cylinder Lubricity Evaluator (SLBOCLE)

ASTM D6079-2004, Test Method for Evaluating Lubricity of Diesel Fuels by the High-Frequency Reciprocating Rig (HFRR)

ASTM D6080-1997 (R2002), Practice for Defining the Viscosity Characteristics of Hydraulic Fluids

ASTM D6081-1997 (R2004), Practice for Aquatic Toxicity Testing of Lubricants: Sample Preparataion and Results Interpretation

ASTM D6082-2006, Test Method for High Temperature Foaming Characteristics of Lubricating Oils

ASTM D6095-2006, Test Method for Longitudinal Measurement of Volume Resistivity for Extruded Crosslinked and Thermoplastic Semiconducting Conductor and Insulation Shielding Materials

ASTM D6096-2002, Specification for Poly(vinyl Chloride) Insulation for Wire and Cable, 90 C Operation

ASTM D6097-2001a, Test Method for Relative Resistance to Vented Water-Tree Growth in Solid Dielectric Insulating Materials

ASTM D61-75 (R2004), Test Method for Softening Point of Pitches (Cube-In-Water Method)

ASTM D6101-2000 (R2005), Test Method for Equivalent Black Area (EBS) of Dirt in Pulp, Paper and Paperboard by Image Analysis

ASTM D611-2004, Aniline Point and Mixed Aniline Point of Petroleum Products and Hydrocarbon Solvents, Method of Test for (05.01, 06.04, 10.03)

*This standard was listed for public review in the 9/21/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ASTM D6113-2003, Test Method for Using a Cone Calorimeter to Determine Fire-Test-Response Characteristics of Insulating Materials Contained in Electrical or Optical Fiber Cables

ASTM D612-88 (R2004), Carbonizable Substances in Paraffin Wax, Method of Test for (05.01, 15.09)

*(no abstract provided by developer)*

ASTM D6120-1997 (R2002), Test Method for Electrical Resistivity of Anode and Cathode Carbon Material at Room Temperature

ASTM D6121-2006a, Test Method for Evaluation of Load-Carrying Capacity of Lubricants Under Conditions of Low Speed and High Torque Used for Final Hypoid Drive Axles

ASTM D6122-2006, Practice for Validation of Multivariate Process Infrared Spectrophotometers

ASTM D6125-1997 (R2002), Test Method for Bending Resistance of Paper and Paperboard (Gurley Type Tester)

ASTM D613-2005, Test Method for Cetane Number of Diesel Fuel Oil

*(no abstract provided by developer)*

ASTM D6138-2003, Test Method for Determination of Corrosion Preventive Properties of Lubricating Greases Under Dynamic Wet Conditions (Emcor Test)

ASTM D6139-2000 (R2005), Test Method for Determining the Aerobic Aquatic Biodegradation of Lubricants or Their Components Using the Gledhill Shake Flask

ASTM D6148-1997 (R2002), Practice for the Examination of Stickies

ASTM D6158-2005, Specification for Mineral Hydraulic Oils

ASTM D6159-1997 (R2002), Test Method for Determination of Hydrocarbon Impurities in Ethylene by Gas Chromatography

ASTM D6160-1998 (R2003), Test Method for Determination of Polychlorinated Biphenyls (PCBs) in Waste Materials by Gas Chromatography

ASTM D6184-1997 (R2005), Test Method for Oil Separation from Lubricating Grease (Conical Sieve Method)

ASTM D6185-1997 (R2002), Practice for Evaluating Compatibility of Binary Mixtures of Lubricating Greases

ASTM D6186-1997 (R2003), Test Method for Oxidation Induction Time of Lubricating Oils by Pressure Differential Scanning Calorimetry (PDSC)

ASTM D619-1999 (R2004), Test Methods for Vulcanized Fibre Used for Electrical Insulation (10.01)

*(no abstract provided by developer)*

ASTM D6194-2003, Test Method for Glow-Wire Ignition of Materials

ASTM D6200-2001, Test Method for Determination of Cooling Characteristics of Quench Oils by Cooling Curve Analysis

ASTM D6201-2004, Test Method for Dynamometer Evaluation of Unleaded Spark-Ignition Engine Fuel for Intake Value Deposit Formation

ASTM D6202-2002, Test Method for Measurement of the Effects of Automotive Engine Oils on the Fuel Economy of Passenger Cars and Light-Duty Trucks in the Sequence via Spark Ignition Engine

ASTM D6203-2006, Test Method for Thermal Stability of Way Lubricants

ASTM D6217-1998 (R2003), Test Method for Particulate Contamination in Middle Distillate Fuels by Laboratory Filtration

ASTM D6224-2002, Practice for In-Service Monitoring of Lubricating Oil for Auxiliary Power Plant Equipment

ASTM D6227-2004a, Specification for Grade 82 Unleaded Aviation Gasoline

ASTM D6258-2004, Test Method for Determination of Solvent Red 164 Dye Concentration in Diesel Fuels

ASTM D6259-1998 (R2004), Practice for Determination of a Pooled Limit of Quantitation

ASTM D6277-2001 (R2006), Test Method for Determination of Benzene in Spark-Ignition Engine Fuels Using Mid-Infrared Spectroscopy

ASTM D6278-2002, Test Method for Shear Stability of Polymer-Containing Fluids Using a European Diesel Injector Apparatus

ASTM D6293-1999 (R2003), Test Method for Oxygenates and Paraffin, Olefin, Naphthene, Aromatic (O-Pona) Hydrocarbon Types in Low-Olefin Spark-Ignition Engine Fules by Gas Chromatography

ASTM D6296-1999 (R2003), Test Method for Total Olefins in Spark-Ignition Engine Fuels by Multi-Dimensional Gas Chromatography

ASTM D6299-2002, Practice for Applying Statistical Quality Assurance Techniques to Evaluate Analytical Measurement System Performance

ASTM D6300-2006, Practice for Determination of Precision and Bias Data for Use in Test Methods for Petroleum Products and Lubricants

ASTM D6304-2004, Test Method for Determination of Water in Petroleum Products, Lubricating Oils, and Additives by Coulometric Karl Fischer Titration

ASTM D6334-1998 (R2003), Test Method for Sulfur in Gasoline by Wavelength Dispersive X-Ray Fluorescence

ASTM D6335-2002, Test Method for Determination of High Temperature Deposits by Thermo-Oxidation Engine Oil Simulation Test

ASTM D6343-1999 (R2004), Test Methods for Thin Thermally Conductive Solid Materials for Electrical Insulation and Dielectric Applications

ASTM D6351-1999 (R2005), Test Method for Determination of Low Temperature Fluidity and Appearance of Hydraulic Fluids

ASTM D6352-2004a, Test Method for Boiling Range Distribution of Petroleum Distillates in the Boiling Range of 174 to 700 C by Gas Chromatography

ASTM D6353-2006, Guide for Sampling Plan and Core Sampling of Prebaked Anodes Used in Aluminum Production

ASTM D6354-2004, Guide for Sampling Plan and Core Sampling of Carbon Cathode Blocks Used in Aluminum Production

ASTM D6371-20055, Test Method for Cold Filter Plugging Point of Diesel and Heating Fuels

ASTM D6374-2006, Test Method for Volatile Matter in Green Petroleum Coke Quartz Crucible Procedure

ASTM D6375-2005, Test Method for Evaporation Loss of Lubricating Oils by Thermogravimetric Analyzer (TGA) Noack Method

ASTM D6376-2006, Test Method for the Determination of Trace Metals in Petroleum Coke by Wavelength-Dispersive X-Ray Fluorescence Spectroscopy

ASTM D6377-2004, Test Method for Vapor Pressure of Crude Oil: Vpcrx (Expansion Method)

ASTM D6378-2006, Test Method for Determination of Vapor Pressure (VPx) of Petroleum Products, Hydrocarbons, and Hydrocarbon-Oxygenate Mixtures (Triple Expansion Method)

ASTM D6379-2004, Test Method for Determination of Aromatic Hydrocarbon Types in Aviation Fuels and Petroleum Distillates - High Performance Liquid Chromatography Method with Refractive Index Detection

ASTM D6384-1999 (R2005), Terminology Relating to Biodegradability and Ecotoxicity of Lubricants

ASTM D6417-2002, Test Method for Estimation of Engine Oil Volatility by Capillary Gas Chromatography

ASTM D6421-1999A (R2004), Test Method for Evaluating Automotive Spark-Ignition Engine Fuel for Electronic Port Fuel Injector Fouling by Bench Procedure

ASTM D6423-1999 (R2004), Test Method for Determination of the PHE of Ethanol, Denatured Fuel Ethanol, and Fuel Ethanol (Ed75-Ed85)

ASTM D6424-2004a, Practice for Octane Rating Naturally Aspirated Spark Ignition Aircraft Engines

ASTM D6425-2005, Test Method for Measuring Friction and Wear Properties of EP Lubricating Oils Using the SRV Test Machine

ASTM D6426-2004, Test Method for Determining Filterability of Middle Distillate Fuel Oils

ASTM D643-1997 (R2002), Test Method for Folding Endurance of Paper by the SchopperTester

ASTM D6439-2005, Guide for Cleaning, Flushing and Purification of Steam, Gas and Hydroelectric Turbine Lubrication Systems

ASTM D644-1999 (R2002), Test Method for Moisture Content of Paper and Paperboard by Oven Drying

ASTM D6443-2004, Test Method for Determination of Calcium, Chlorine, Copper, Magnesium, Phosphorus, Sulfur and Zinc in Unused Lubricating Oils and Additives by Wavelength Dispersive X-Ray Fluorescence Spectrometry (Mathematical)

ASTM D6445-1999 (R2004), Test Method for Sulfur in Gasoline by Energy-Dispersive X-Ray Fluorescence Spectrometry

ASTM D6446-2006, Test Method for Estimation of Heat of Combustion (Specific Energy) of Aviation Fuels

ASTM D6447-2004, Test Method for Hydroperoxide Number of Aviation Turbine Fuels by Voltammetric Analysis

ASTM D6448-2004, Specification for Industrial Burner Fuels from Used Lubricating Oils

ASTM D645-1997 (R2002), Test Methods for Thickness of Paper and Paperboard

ASTM D6450-2005, Test Method for Flash Point by Continuously Closed Cup (CCCFP) Tester

ASTM D6454-1998, Guide for Sampling Plan and Core Sampling of Carbon Cathode Blocks Used in Aluminum Production

ASTM D646-1996 (R2001), Test Method for Grammage of Paper and Paperboard (Weight Per Unit Area)

ASTM D6468-2006, Test Method for High Temperature Stability of Distillate Fuels

ASTM D6469-2004, Guide to Microbial Contamination in Fuels and Fuel Systems

ASTM D6470-1999 (R2004), Method for Salt in Crude Oils (Potentiometric Method)

ASTM D6478-1999, Test Method for High Temperature Stability of Distillate Fuels

ASTM D6481-1999 (R2004), Test Method for Determination of Phosphorus, Sulfur, Calcium and Zinc in Lubricating Oils by Energy Dispersive X-Ray Fluorescence Spectroscopy

ASTM D6482-2006, Test Method for Determination of Cooling Characteristics of Aqueous Polymer Quenchants by Cooling Curve Analysis with Agitation (Tensi Method)

ASTM D6483-2004, Test Method for Evaluation of Diesel Engine Oils in the T-9 Diesel Engine

ASTM D6514-2003, Test Method for High Temperature Universal Oxidation Test for Turbine Oils (1)

ASTM D6546-2000 (R2005), Test Methods and Suggested Limits for Determining the Compatibility of Elastomer Seals for Industrial Hydraulic Fluid Applications

ASTM D6547-2000 (R2005), Test Method for Corrosiveness of a Lubricating Fluid to a Bi-Metallic Couple

ASTM D6548-2005, Test Method for Resistance to Mechanical Penetration of Sanitary Tissue Papers (Ball Burst Procedure)

ASTM D6549-2006, Test Method for Determination of Cooling Characteristics of Quenchants by Cooling Curve Analysis with Agitation (Drayton Unit)

ASTM D6550-2005, Test Method for the Determination of the Olefin Content of Gasolines by Super-Critical-Fluid Chromatography

ASTM D6553-2000 (R2005), Test Method for Coolant Compatibility of Way Lubricants

ASTM D6557-2004, Test Method for Evaluation of the Rust Preventive Characteristics of Automotive Engine Oils

ASTM D6558-2001 (R2005), Test Method for Determination of TGA CO2 Reactivity of Baked Carbon Anodes and Cathode Blocks

ASTM D6559-2001 (R2005), Test Method for Determination of TGA Air Reactivity of Baked Carbon Anodes and Cathode Blocks

ASTM D6560-2000 (R2005), Test Method for Determination of Asphaltenes (Heptane Insolubles), in Crude Petroleum and Petroleum Products

ASTM D6584-2007, Test Method for Determination of Free and Total Glycerin in B-100 Biodiesel Methyl Esters by Gas Chromatography

ASTM D6591-2006, Test Method for Determination of Aromatic Hydrocarbon Types in Middle Distillates - High Performance Liquid Chromatography Method with Refractive Index Detection

ASTM D6593-2006a, Test Method for Evaluation of Automotive Engine Oils for Inhibition of Deposit Formation in a Spark-Ignition Internal Combustion Engine Fueled with Gasoline and Operated Under Low-Temperature, Light-Duty Conditions

ASTM D6594-2005, Test Method for Evaluation of Corrosiveness of Diesel Engine Oil at 135oC

ASTM D6595-2005, Test Method for Determination of Wear Metals and Contaminants in Used Lubricating Oils or Used Hydraulic Fluids by Rotating Disc Electrode Atomic Emission Spectrometry

ASTM D6596-2005, Practice for Ampulization and Storage of Gasoline and Related Hydrocarbon Materials

ASTM D6615-2006, Specification for Jet B Wide-Cut Aviation Turbine Fuel

ASTM D6616-2001a (R2006), Test Method for Measuring Viscosity at High Shear Rate by Tapered Bearing Simulator Viscometer at 100 C

ASTM D6617-2005, Practice for Laboratory Bias Detection Using a Single Test Result from a Standard Material

ASTM D6618-2005, Test Method for Evaluation of Engine Oils in the Diesel Four-Stroke Cycle Supercharged 1m-PC Single Cylinder Oil Test Engine

ASTM D6624-2006, Practice for Determining a Flow-Proportioned Average Property Value (FPAPV) for a Collected Batch of Process Stream Material Using Stream Analyzer Data

ASTM D664-2006, Test Method for Acid Number of Petroleum Products by Potentiometric Titration

ASTM D665-2006, Test Method for Rust-Preventing Characteristics of Inhibited Mineral Oil in the Presence of Water

*(no abstract provided by developer)*

ASTM D6666-2004, Guide for Evaluation of Aqueous Polymer Quenchants

ASTM D6667-2004, Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence

ASTM D6668-2001 (R2006), Test Method for Discrimination Between Flammability Ratings of F = 0 and F = 1

ASTM D668-1999 (R2004), Method for Measuring Dimensions of Rigid Rods and Tubes Used for Electrical Insulation (10.01)

*(no abstract provided by developer)*

ASTM D6681-2005, Test Method for Evaluation of Engine Oils in a High-Speed, Single-Cylinder Diesel Engine - Caterpillar 1p Test Procedure

ASTM D669-2003, Test Method for Dissipation Factor and Permittivity Parallel with Laminations of Laminated Sheet and Plate Materials

ASTM D6708-2006, Practice for Statistical Assessment and Improvement of the Expected Agreement Between Two Test Methods That Purport to Measure the Same Property of a Material

ASTM D6709-2006, Test Method for Evaluation of Automotive Engine Oils in the Sequence VIII Spark-Ignition Engine (CLR Oil Test Engine)

ASTM D6710-2002, Guide for Evaluation of Hydrocarbon-Based Quench Oil

ASTM D6728-2001 (R2006), Test Method for Determination of Contaminants in Gas Turbine and Diesel Engine Fuel by Rotating Disc Electrode Atomic Emission Spectrometry

ASTM D6729-2004, Test Method for the Determination of Individual Components in Spark Ignition Engine Fuels by 100 Meter Capillary (With Precolumn) High Resolution Gas Chromatography

ASTM D6730-2001 (R2006), Test Method for Determination of Individual Components in Spark Ignition Engine Fuels by 100 Meter Capillary High Resolution Gas Chromatography

ASTM D6731-2001 (R2005), Test Method for Determining the Aerobic, Aquatic Biodegradability of Lubricants or Lubricant Components in a Closed Respirometer

ASTM D6732-2004, Test Method for the Determination of Copper in Jet Fuels by Graphite Furnace Atomic Absorption Spectrometry

ASTM D6733-2001 (R2006), Test Method for Determination of Individual Components in Spark Ignition Engine Fuels by 50 Meter Capillary High Resolution Gas Chromatography

ASTM D6743-2006, Test Method for Thermal Stability of Organic Heat Transfer Fluids

ASTM D6744-2005, Test Method for Determination of the Thermal Conductivity of Anode Carbons by the Guarded Heat Flow Meter Technique

ASTM D6745-2005, Test Method for Linear Thermal Expansion of Electrode Carbons

ASTM D6748-2002a, Test Method for Determination of Potential Instability of Middle Distillate Fuels Caused by the Presence of Phenalenes and Phenalenones. Rapid Method by Portable Spectrophotometer

ASTM D6749-2002, Test Method for Pour Point of Petroleum Products (Automatic Air Pressure Method)

ASTM D6750-2006, Test Methods for Evaluation of Engine Oils in a High-Speed, Single-Cylinder Diesel Engine - 1K Procedure (0.4% Fuel Sulfur) and 1N Procedure (0.04% Fuel Sulfur)

ASTM D6751-2006b, Provisional Specification for Biodiesel Fuel (B100) Blend Stock for Distillate Fuels

ASTM D6756-2002, Test Method for Determination of the Red Dye Concentration and Estimation of the ASTM Color of Diesel Fuel and Heating Oil Using a Portable Visible Spectrophotometer

ASTM D6777-2002, Test Method for Relative Rigidity of Poly(Vinyl Chloride) (PVC) Siding

ASTM D6783-2005, Specification for Polymer Concrete Pipe

ASTM D6789-2002a, Test Method for Accelerated Light Aging of Printing and Writing Paper by Xenon-Arc Exposure Apparatus

ASTM D6791-2006, Test Method for the Determination of Grain Stability of Calcined Petroleum Coke

ASTM D6792-2006, Guide for a Quality System in Petroleum Products and Lubricants Testing Laboratories

ASTM D6793-2002, Test Method for Determination of Isothermal Secant and Tangent Bulk Modulus

ASTM D6794-2002, Test Method for Measuring the Effect on Filterability of Engine Oils After Treatment with Various Amounts of Water and a Long (6 H) Heating Time

ASTM D6795-2002, Test Method for Measuring the Effect on Filterability of Engine Oils After Treatment with Water and Dry Ice and a Short (30 Min) Heating Time

ASTM D6810-2002, Test Method for Measurement fo Hindered Phenolic Antioxidant Content in Turbine Oil by Linear Sweep Voltammetry

ASTM D6811-2002, Test Method of Measurement of Thermal Stability of Aviation Turbine Fuels under Turbulent Flow Conditions (HIRETS Method)

ASTM D6812-2004b, Practice for Ground-based Octane Rating Procedures for Turbocharged/supercharged Spark Ignition Aircraft Engines

ASTM D6813-2002a, Guide for the Performance Evaluation of Hydraulic Fluids for Piston Pumps

ASTM D6819-2002, Test Method for Accelerated Temperature Aging of Printing and Writing Paper by Dry Oven Exposure Apparatus

ASTM D6821-2002, Test Method for Viscosity of Drive Line Lubricants in a Constant Shear Stress Viscometer

ASTM D6822-2002, Test Method for Density, Relative Density and API Gravity of Crude Petroleum and Liquid Petroleum Products by Thermohydrometer Method

ASTM D6823-2002, Standard Specification for Commercial Boiler Fuels with Used Lubricating Oils

ASTM D6824-2004, Test Method for Determining Filterability of Aviation Turbine Fuel

ASTM D6833-2002, Test Method for Accelerated Pollutant Aging of Printing and Writing Paper by Pollution Chamber Exposure Apparatus

ASTM D6837-2006, Test Method for Measurement of the Effects of Automotive Engine Oils on the Fuel Economy of Passenger Cars and Light-Duty Trucks in the Sequence VIB Spark Ignition Engine

ASTM D6838-2004, Test Method for Cummins M11 High Shoot Test

ASTM D6839-2002, Test Method for Hydrocarbons Types, Oxygenated Compounds and Benzene in Spark Ignition Engine Fuels by Gas Chromatography

ASTM D6849-2002, Practice for Storage and Use of LPG in Sample Cylinders for LPG Test Methods

ASTM D685-1993 (R2002), Practice for Conditioning Paper and Paper Products for Testing

ASTM D686-1993, Test Method for Qualitative Examination of Mineral Filler and Mineral Coating of Paper

ASTM D686-1996 (R2002), Test Method for Qualitative Examination of Mineral Filler and Mineral Coating of Paper

ASTM D6864-2003, Specification for Color and Appearance Retention of Solid Colored Plastic Siding Products

ASTM D689-2003, Test Method for Internal Tearing Resistance of Paper

ASTM D6890-2006, Test Method for the Determination of Ignition Delay and Derived Cetane Number (DCN) of Diesel Fuel Oils by Combustion in a Constant Volume Chamber

ASTM D6891-2006a, Test Method for Evaluation of Automotive Engine Oils in the Sequence IVA Spark-Ignition Engine

ASTM D6892-2003, Test Method for Pour Point of Petroleum Products (robotic Tilt Method)

ASTM D6894-2003, Test Method for Evaluation of the Aeration Resistance of Engine Oils in a Direct-injected Turbocharged Automotive Diesel Engine

ASTM D6895-2006, Test Method for Rotational Viscosity of Heavy Duty Diesel Drain Oils at 100 C

ASTM D6896-2003, Test Method for Determination of Yield Stress and Apparent Viscosity of Used Engine Oils at Low Temperature

ASTM D6897-2004, Test Method for Vapor Pressure of Liquefied Petroleum Gases (LPG) (Expansion Method)

ASTM D6898-2003, Test Method for Evaluating Diesel Fuel Lubricity by an Injection Pump Rig

ASTM D69-2006, Test Methods for Friction Tapes

ASTM D6920-2003, Test Method for Total Sulfur in Naphthas, Distillates, Reformulated Gasolines, Diesels, Biodiesels, and Motor Fuels by Oxidative Combustion and Electrochemical Detection

ASTM D6922-2003, Test Method for Measuring Homogeneity and Miscibility in Automotive Engine

ASTM D6923-2005, Test Method for Evaluation of Engine Oils in a High

Speed, Single-Cylinder Diesel Engine - Caterpillar 1R Test Procedure

ASTM D6969-2003, Practice for the Preparation of Calcined Petroleum Coke Samples for Analysis

ASTM D6970-2003, Practice for Collection of Calcined Petroleum Coke Samples for Analysis

ASTM D6973-2005, Test Method for Indicating Wear Characteristics of Petroleum Hydraulic Fluids in a High Pressure Constant Volume Vane Pump

ASTM D6974-2003, Practice for Enumeration of Viable Bacteria and Fungi in Liquid Fuels - Filtration and Culture Procedures

ASTM D6974-2004a, Practice for Enumeration of Viable Bacteria and Fungi in Liquid Fuels - Filtration and Culture Procedures

ASTM D6975-2004, Test Method for Cummins M11 EGR Test

ASTM D6984-2006a, Test Method for Evaluation of Automotive Engine Oils in the Sequence IIIF, Spark-Ignition Engine

ASTM D6985-2004a, Specification for Middle Distillate Fuel Oil - Military Marine Applications

ASTM D6987-2005a, Test Method for Evaluation of Diesel Engine Oils in the T-10 Exhaust Gas Recirculation Diesel Engine

ASTM D7038-2006, Test Method for the Evaluation of Moisture Corrosion Resistance of Automotive Gear Lubricants

ASTM D7039-2004, Test Method for Sulfur in Gasoline and Diesel Fuel by Monochromatic Wavelength Dispersive X-ray Fluorescence Spectrometry

ASTM D7040-2004, Test Method for Determination of Low Levels of Phosphorus in Gf 4 Lubricating Oils by Inductively Coupled Plasma Atomic Emission Spectrometry"

ASTM D7041-2004, Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Online Gas Chromatography with Flame Photometric Detection

ASTM D7042-2004, Test Method for Dynamic Viscosity and Density of Liquids by Stabinger Viscometer ( an D the Calculation of Kinematic Viscosity)

ASTM D7043-2004a, Test Method for Indicating Wear Characteristics of Petroleum and Non-petroleum Hydraulic Fluids in a Constant Volume Vane Pump

ASTM D7044-2004a, Specification for Biodegradable Fire Resistant Hydraulic Fluids

ASTM D7058-2004, Standard Test Method for Determination of the Red Dye Concentration and Estimation of Saybolt Color of Aviation Turbine Fuels and Kerosine Using a Portable Visible Spectrophotometer1

ASTM D7058-2004, Standard Test Method for Determination of the Red Dye Concentration and Estimation of Saybolt Color of Aviation Turbine Fuels and Kerosine Using a Portable Visible Spectrophotometer1

ASTM D7059-2004, Test Method for Determination of Methanol in Crude Oils by Multidimensional Gas Chromatography

ASTM D7059-2004, Test Method for Determination of Methanol in Crude Oils by Multidimensional Gas Chromatography

ASTM D7060-2004, Test Method for Determination of the Maximum Flocculation Ratio and Peptizing Power in Residual and Heavy Fuel Oils (optical Detection Method)

ASTM D7060-2005, Test Method for Determination of the Maximum Flocculation Ratio and Peptizing Power in Residual and Heavy Fuel Oils (optical Detection Method)

ASTM D7061-2006, Test Method for Measuring the N-Heptane Induced Phase Separation of Asphaltene-Containing Heavy Fuel Oils as a Separability Number by an Optical Scanning Device

ASTM D7066-2004, Test Method for Dimer/Trimer of Chlorotrifluoroethylene (s-316) Recoverable Oil and Grease and Nonpolar Material by Infrared Determination

ASTM D709-2001, Specification for Laminated Thermosetting Materials

ASTM D7094-2004, Test Method for Flash Point by Modified Continuously Closed Cup Flash Point Tester

ASTM D7095-2004, Test Method for Rapid Determination of Corrosiveness to Copper from Petroleum Products Using a Disposable Copper Foil Strip

ASTM D7096-2005, Test Method for Determination of the Boiling Range Distribution of Gasoline by Wide-bore Capillary Gas Chromatography

ASTM D7097-2006a, Test Method for Determination of Moderately High Temperature Piston Deposits by Thermo-Oxidation Engine Oil Simulation Test - TEOST MHT

ASTM D7098-2006, Test Method for Oxidation Stability of Lubricants by Thin-film Oxygen Uptake (TFOUT) Catalyst B

ASTM D71-1994 (R2004), Test Method for Relative Density of Solid Pitch and Asphalt (Displacement Method)

ASTM D710-1997 (R2002), Specification for Vulcanized Fibre Sheets-94, Rods-94, and Tubes Used for Electrical Insulation (10.01)

*(no abstract provided by developer)*

ASTM D7109-2006, Test Method for Shear Stability of Polymer Containing Fluids Using a European Diesel Injector Apparatus at 30 and 90 Cycles

*This test method covers the evaluation of the shear stability of polymer-containing fluids. The test method measures the viscosity loss, in mm2/s and percent, at 100C of polymer-containing fluids when evaluated by a diesel injector apparatus procedure that uses Europena diesel injector test equipment. The viscosity loss reflects polymer degradation due to shear at the nozzle.*

ASTM D7110-2005, Test Method for Determining the Viscosity-temperature Relationship of Used and Soot-containing Engine Oils at Low Temperatures

ASTM D7111-2005, Standard Test Method for Determination of Trace Elements in Middle Distillate Fuels by Inductively Coupled Plasma Atomic Emission Spectrometry (icp-aes)1

*This test method covers the determination of selected elements in middle distillate fuels by inductively coupled plasma atomic emission spectrometry (ICP-AES). The specific elements are listed in Table 1. The concentration range of this method is approximately 0.1 mg/kg to 2.0 mg/kg. The method may be used for concentrations outside of this range; however, the precision statements may not be applicable. Middle distillate fuels covered in this method have all distillation fractions contained within the boiling range of 150 C to 390 C. This includes, but is not limited to, diesel fuels and aviation turbine fuels. This method is not intended.*

ASTM D7112-2005, Test Method for Determining Stability and Compatibility of Heavy Fuel Oils and Crude Oils by Heavy Fuel Oil Stability Analyzer Optical Detection

ASTM D7148-2006, Test Method for Determining the Ionic (resistivity) (er) of Alkaline Battery Separator Using a Carbon Electrode in an Electrolyte Bath Measuring System

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ASTM D7155-2007, Practice for Evaluating Compatibility of Mixtures of Turbine Lubricating Oils

ASTM D7156-2006, Test Method for Evaluation of Diesel Engine Oils in the T-11 Exhaust Gas Recirculation Diesel Engine

ASTM D7170-2006, Test Method for Determination of Derived Cetane Number Dcn of Diesel Fuel Oils --fixed Range Injection Period, Constant Volume Combustion Chamber Method

ASTM D7171-2005, Standard Test Method for Hydrogen Content of Middle Distillate Petroleum Products by Low-Resolution Pulsed Nuclear Magnetic Resonance Spectroscopy

ASTM D721-2006, Test Method for Oil Content of Petroleum Waxes

*(no abstract provided by developer)*

ASTM D7212-2005, Test Method for Low Sulfur in Automotive Fuels by Energy-Dispersive X-Ray Flurosecence Spectrometry Using A Low-Background Proportional Counter

ASTM D7213-2006, Test Method for the Boiling Range Distribution of Petroleum Distillates in The Boiling range form 100 to 615 by Gas Chromatography

ASTM D7214-2005, Test Method for Determination of the Oxidation of Used Lubricants by FT-IR Using Peak Area Increase Calculation

*1.1 This test method covers the determination of the oxidation of used lubricants by FT-IR (Fourier Transform Infrared Spectroscopy). It measures the constituents containing a carbonyl function that have formed during the oxidation of the lubricant. 1.2 The test method may be used to indicate relative changes that occur in an oil under oxidizing conditions. The test method is not intended to measure an absolute oxidation property that can be used to predict performance of an oil in service*

ASTM D7216-2005, Test Method for Determining Automotive Engine Oil Compatibility With Typical Seal Elastomers

*This test method provides quantitative procedures for the evaluation of the compatibility of automotive engine oils with reference elastomers.*

ASTM D7217-2006, Test Method for Determining Extreme Pressure Properties of Solid Bonded Films Using A High-Frequency, Linear-Oscillation (SRV Test Machine 1

ASTM D7219-2006, Specification for Isotropic and Near-Isotropic Nuclear Graphites

ASTM D722-1993 (R2002), Test Method for Grease Resistance of Paper (Turpentine Test)

ASTM D7220-2005, Test Method for Sulfur in Automotive Fuels by polarization X-Ray Flurescence Spectrometry

ASTM D7223-2006, Specification for Aviation Certification Turbine Fuel

ASTM D7224-2006, Test Method for Determining Water Separation characteristics of Kerosene-type Aviation Turbine Fuels Containing Additives by Portable Separometer

ASTM D7235-2005, Guide for Establishing a Linear Correlation Relationship Between Analyzer and Test Method Results Using Relevant ASTM Standard Practices

ASTM D7236-2005, Method for Flash Point by Small Scale Closed Cup Tester (ramp Method)

ASTM D724-1999 (R2003), Test Method for Surface Wettability of Paper (Angle-Of-Contact Method)

ASTM D7251-2006, Specification for Color and Appearance Retention of Variegated Color Plastic Siding Products

ASTM D7254-2006, Specification for Polypropylene (pp) Siding

ASTM D726-1994 (R2003), Test Method for Resistance of Nonporous Paper to Passage of Air

ASTM D7260-2006, Standard Practice for Optimization, Calibration and Validation of Inductively Coupled Plasma-atomic Emission Spectrometry (icp-aes) for the Elemental Analysis of Petroleum Products and Lubricants

ASTM D7261-2006a, Test Method for Determining Water Separation Characteristics of Distillate Diesel Fuels by Portable Separometer

ASTM D727-1996 (R2001), Test Method for Kerosine Number of Roofing and Flooring Felt by the Vacuum Method

ASTM D7278-2006, Standard Guide for Prediction of Analyzer Sample System Lag Times

*This guide covers the application of routine calculations to estimate sample system lag time, in seconds, for gas, liquid, and mixed phase systems.*

ASTM D7279-2006, Standard Test Method for the Determination of Kinematic Viscosity of Transparent and Opaque Liquids by Automated Houillon Viscometer

*This test method covers the measurement of the kinematic viscosity of transparent and opaque liquids such as fresh and used lubricating oils using a Houillon viscometer in automated mode.*

ASTM D7280-2006, New Standard, Standard Test Method for Quinoline-Insoluble (QI) Content of Tar and Pitch by Stainless Steel Crucible Filtration

*This test method covers the determination of the quinoline-insoluble matter (QI) in tar and pitch using stainless steel filter crucible and a filtration membrane.*

ASTM D7280-2007, Test Method for Quinoline-Insoluble (QI) Content of Tar and Pitch by Stainless Steel Crucible Filtration

*This test method covers the determination of the quinoline-insoluble matter (QI) in tar and pitch using a stainless steel filters crucible and a filtration membrane.*

ASTM D7303-2007, Standard Test Method for the Determination of Metals in Lubricating Greases by Inductively Coupled Plasama Atomic Emission Spectrometry

*This test method covers the determination of a number of metals such as aluminum, antimony, barium, calcium, iron, lithium, magnesium, molybdenum, phosphorus, silicon, sodium, sulfur, and zinc in unused lubricating greases by inductively coupled plasma atomic emission spectrometry (ICP-AES)technique.*

ASTM D7317-2007, Standard Test Method for Insolubles by Filtration

ASTM D7318-2007, Test Method for Total Inorganic Sulfate in Ethanol by Potentiometric Titration

ASTM D7319-2007, Test Method for the Determination of Total and Potential Sulfate and Inorganic Chloride in Fuel Ethanol by Direct Injection Suppressed Ion Chromatorgraphy

ASTM D7320-2007, Standard Test Method for Evaluation of Automotive Engine Oils in the Sequence IIIG, Spark-Ignition Engine

ASTM D7328-2007, Test Method for the Determination of Total and Potential Inorganic Sulfate and Total Inorganic Chloride in Fuel Ethanol by Ion Chromatography Using Aqueous Sample Injection

*This test method describes an ion chromatographic procedure for the determination of the total and potential inorganic sulfate and total inorganic chloride content in hydrous and anhydrous denatured ethanol to be used in motor fuel applications. It is intended for the analysis of ethanol samples containing between 0.55-20 mg/kg of total inorganic sulfate, 4.0-20 mg/kg of potential inorganic sulfate, and 0.75-50 mg/kg of total inorganic chloride.*

ASTM D748-2000 (R2005), Specification for Natural Block Mica and Mica Films Suitable for Use in Fixed Mica-Dielectric Capacitors

ASTM D774-1997 (R2002), Test Method for Bursting Strength of Paper

ASTM D776-1992 (R2001), Test Method For Determination Of Effect Of Dry Heat On Properties Of Paper And Board

ASTM D777-1997 (R2002), Test Method For Flammability Of Treated Paper And Paperboard

ASTM D778-1997 (R2002), Test Methods for Hydrogen Ion Concentrate (pH) of Paper Extracts (Hot-Extraction and Cold-Extraction Procedures)

ASTM D779-2003, Test Method For Water Resistance Of Paper, Paperboard, And Other Sheet Materials By The Dry-Indicator Method

ASTM D780-1995 (R2003), Test Method For Printing Ink Permeation Of Paper (Castor Oil Test)

ASTM D784-2003, Specification for Orange Shellac and Other Indian Lacs for Electrical Insulation (10.01)

*(no abstract provided by developer)*

ASTM D808-2005, Test Method for Chloride in New and Used Petroleum Products (Bomb Method)

*(no abstract provided by developer)*

ASTM D824-1994 (R2002), Test Method For Rate Of Absorption Of Water By Bibulous Papers

ASTM D828-2002, Test Method for Tensile Properties of Paper and Paperboard Using

ASTM D829-1997 (R2002), Test Methods for Wet Tensile Breaking Strength of Paper and Paper Products

ASTM D834-1990 (R2001), Test Method for 20-Deg Specular Gloss of Waxed Paper

ASTM D86-2007, Test Method for Distillation of Petroleum Products at Atmospheric Pressure

*D86*

ASTM D866-1999 (R2004), Specification for Styrene-Butadiene (SBR) Synthetic Rubber Jacket for Wire and Cable (10.01)

*(no abstract provided by developer)*

ASTM D87-2004, Test Method for Melting Point of Petroleum Wax (Cooling Curve) (05.01)

*(no abstract provided by developer)*

ASTM D873-2002, Test Method for Oxidation Stability of Aviation Fuels Potential Residue Method

*(no abstract provided by developer)*

ASTM D874-2006, Test Method for Sulfated Ash from Lubricating Oils and Additives

*(no abstract provided by developer)*

ASTM D892-2006, Test Method for Foaming Characteristics of Lubricating Oils

*(no abstract provided by developer)*

ASTM D893-2005a, Insolubles in Used Lubricating Oils, Method of Test for (05.01)

ASTM D902-2006, Test Methods for Flexible Resin-Coated Glass Fabrics and Glass Fabric Tapes Used for Electrical Insulation

*(no abstract provided by developer)*

ASTM D909-2001, Test Method for Knock Characteristics of Aviation Gasolines by the Supercharge Method (not available as separate reprint) (05.04)

*(no abstract provided by developer)*

ASTM D91-2002, Test Method for Precipitation Number of Lubricating Oils (05.01)

*(no abstract provided by developer)*

ASTM D910-2006, Specification for Aviation Gasolines

*(no abstract provided by developer)*

ASTM D918-1993 (R2003), Test Method For Blocking Resistance Of Paper And Paperboard

ASTM D919-1997 (R2002), Test Method For Copper Number Of Paper And Paperboard

ASTM D92-2005, Test Method for Flash and Fire Points by Cleveland Open Cup Tester

*(no abstract provided by developer)*

ASTM D922-2000 (R2006), Specification for Nonrigid Vinyl Chloride Polymer Tubing

*This standard was listed for public review in the 8/11/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ASTM D922-2000d, Specification for Nonrigid Vinyl Chloride Polymer Tubing

*This standard was listed for public review in the 8/11/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ASTM D93-2006, Test Methods for Flash-point by Pensky-Martens Closed Cup Tester

*(no abstract provided by developer)*

ASTM D937-2004, Test Method for Cone Penetration of Petrolatum (05.01)

*(no abstract provided by developer)*

ASTM D938-2005, Congealing Point of Petroleum Waxes Including Petrolatum, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D94-2002, Saponification Number of Petroleum Products, Test for (05.01, 10.03)

*(no abstract provided by developer)*

ASTM D942-2002, Test Method for Oxidation Stability of Lubricating Greases by the Oxygen Bomb Method (05.01)

*(no abstract provided by developer)*

ASTM D943-2004, Test Method for Oxidation Characteristics of Inhibited Mineral Oils

ASTM D95-2005, Test Method for Water in Petroleum Products and Bituminous Materials by Distillation

*(no abstract provided by developer)*

ASTM D96-88 (R1998), Water and Sediment in Crude Oils, Method of Test for (05.01)

*(no abstract provided by developer)*

ASTM D97-2006, Test Method for Pour Point of Petroleum Products

*(no abstract provided by developer)*

ASTM D972-2002, Test Method for Evaporation Loss of Lubricating Greases and Oils (05.01)

*(no abstract provided by developer)*

ASTM D974-2006, Test Method for Acid and Base Number by Color-Indicator Titration

*(no abstract provided by developer)*

ASTM D975-2006, Specification for Diesel Fuel Oils

ASTM D976-2006, Test Method for Calculated Cetane Index of Distillate Fuels

*(no abstract provided by developer)*

ASTM D982-2006, Method of Test for Organic Nitrogen in Paper and Paperboard

*This test method covers the determination of nitogenous organic materials in paper and paperboard, which typically are uesd to reduce the thermal degradation of the cellulose in the paper and paperboard.*

ASTM D984-1997 (R2002), Test Methods For Reducible Sulfur In Paper

ASTM D985-1997 (R2002), Test Method for Brightness of Pulp, Paper, and Paperboard (Directional Reflectance at 457 Nm)

ASTM E1026-2004, Practice for Using the Fricke Reference Standard Dosimetry System

ASTM E105-1997, Practice for Probability Sampling of Materials

ASTM E108-2006, Test Methods For Fire Tests Of Roof Coverings

ASTM E1169-2002, Guide for Conducting Ruggedness Tests

ASTM E119-2007, Test Methods for Fire Tests of Building Construction and Materials

ASTM E1204-2004, Dosimetry in Gamma Irradiation Facilities for Food Processing, Practice for (12.02)

ASTM E1205-2006, Practice for Use of a Ceric-cerous Sulfate Dosimetry System

ASTM E122-2000, Practice for Choice of Sample Size to Estimate a Measure of Quality for a Lot or Process

ASTM E1239-2005, Guide for Description of Reservation/registration-admission, Discharge, Transfer R-ADT Systems for Electronic Health Record EHR Systems

*(no abstract provided by developer)*

ASTM E1261-2000, Selection and Calibration of Dosimetry Systems for Radiation Processing, Guide for (12.02)

*(no abstract provided by developer)*

ASTM E1275-2004, The Use of a Radiochromic Film Dosimetry System, Practice for (12.02)

*(no abstract provided by developer)*

ASTM E1276-2002, Use of Polymethylmethacrylate Dosimetry System, Practice for

ASTM E1284-1997, Guide for Nosologic Standards and Guides for Construction of New Biomedical Nomenclature

ASTM E1296-1997, Terminology Relating to Liquid Particle Statistics

ASTM E1301-1996 (R2003), Guide for Development and Operation of Laboratory Proficiency Testing Programs

ASTM E1302-2000, Guide for Acute Animal Toxicity Testing of Water-Miscible Metal Working Fluids

ASTM E1310-2004, Practice for Use of a Radiochromic Optical Waveguide Dosimetry System

ASTM E1317-2002, Test Method for Flammability of Marine Surface Finishes

ASTM E1321-2002, Test Method for Determining Material Ignition and Flame Spread Properties

ASTM E1323-1996 (R2002), Guide for Evaluating Laboratory Measurement Practices and the Statistical Analysis of the Resulting Data

ASTM E1325-2002, Terminology Relating to Design of Experiments

ASTM E1334-1995 (R2005), Practice for Rating the Serviceability of a Building or Building-Related Facility

ASTM E1340-2005, Guide for Rapid Prototyping of Computerized Systems

ASTM E1352-2002, Test Methods For Cigarette Ignition Resistance Of Mock-Up Upholstered Furniture Assemblies

ASTM E1353-2002, Test Methods For Cigarette Ignition Resistance Of Components Of Upholstered Furniture

ASTM E1355-2005, Guide For Evaluating The Predictive Capability Of Fire Models

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ASTM E136-2004, Test Method For Behavior Of Materials In a Vertical Tube Furnace At 750 Degrees Celcius

ASTM E1384-2002a, Description for Content and Structure of an Automated Primary Record of Care, Guide for (14.01)

*(no abstract provided by developer)*

ASTM E1400-2003, Characterization and Performance of a High-Dose Radiation Dosimetry Calibration Laboratory, Practice for (12.02)

*(no abstract provided by developer)*

ASTM E1401-2003, Use of a Dichromate Dosimetry System, Practice for (12.02)

*(no abstract provided by developer)*

ASTM E141-1997 (R2003), Practice for Acceptance of Evidence Based on the Results of Probability Sampling

ASTM E1410-1991 (R2005), Practice for Specifying Data for Evaluation of Energy Used in Residential Buildings

ASTM E1431-2004, Dosimetry in Electron and Bremsstrahlung Irradiation Facilities for Food Processing, Practice for (12.02)

*(no abstract provided by developer)*

ASTM E1464-1992 (R2005), Guide for Developing Energy Monitoring Protocols

for Commercial and Institutional Buildings or Facilities (04.11)

ASTM E1472-2005, Guide For Documenting Computer Software For Fire Models

ASTM E1474-2001, Test Method for Determining the Heat Release Rate of Upholstered Furniture and Mattress Components or Composites Using a Bench Scale Oxygen Consumption Calorimeter

ASTM E1480-1992 (R2004), Terminology of Facility Management (Building-Related) (04.11)

ASTM E1488-2002, Test Method for Statistical Procedures to Use in Developing and Applying Test Methods

ASTM E1497-2005, Practice for Safe Use of Water-Miscible Metal Removal Fluids

ASTM E1529-2005, Test Methods for Determining Effects of Large Hydrocarbon Pool Fires on Structural Members and Assemblies

ASTM E1537-2002b, Test Method for Fire Testing of Real Scale Upholstered Furniture Items

ASTM E1538-2006, Practice for Use of the Ethanol-Chlorobenzene Dosimetry System

*(no abstract provided by developer)*

ASTM E1539-2004, Guide for the Use of Radiation-Sensitive Indicators

ASTM E1540-2004, Use of a Radiochromic Liquid Solution Dosimetry System, Practice for (12.02)

*(no abstract provided by developer)*

ASTM E1546-1998, Guide For Development Of Fire Hazard Assessment Standards

ASTM E1580-1996, Guide for Surveillance of Accredited Laboratories

ASTM E1590-2002, Method for Fire Testing of Real Scale Matresses

ASTM E1591-2007, Guide For Data For Fire Models

ASTM E1607-2004, Use of the Alanine-EPR Dosimetry System, Practice for (12.02)

*(no abstract provided by developer)*

ASTM E1608-2004, Dosimetry in an X-Ray (Bremsstrahlung) Facility for Radiation Processing, Practice for (12.02)

*(no abstract provided by developer)*

ASTM E162-2006, Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source

ASTM E1623-2003, Test Method For Determination Of Fire And Thermal Parameters Of Materials, Products And Systems Using An Intermediate Scale Calorimeter (ICAL)

ASTM E1626-2002, Guide for Including Government Procurement Requirements In ASTM Documents

ASTM E1631-2003, Use of Calorimetric Dosimetry Systems for Electron Beam Dosimeter Measurements and Dosimeter Calibrations, Practice for

ASTM E1633-2002, Specification for Coded Values Used in Computer-Based Patient Record

ASTM E1649-2004, Dosimetry in an Electron Beam Facility for Radiation Processing at Energies between 300 KeV and 25 MeV, Practice for (12.02)

*(no abstract provided by developer)*

ASTM E1650-2004, Use of a Cellulose Acetate Dosimetry System, Practice for

ASTM E1660-1995A (R2005), Classification for Serviceability of an Office Facility for Support for Office Work

ASTM E1661-1995A (R2005), Classification for Serviceability of an Office Facility for Meetings and Group Effectiveness

ASTM E1662-1995A (R2005), Classification for Serviceability of an Office Facility for Sound and Visual Environment

ASTM E1663-2003, Classification for Serviceability of an Office Facility for Typical Office Information Technology

ASTM E1664-1995A (R2005), Classification for Serviceability of an Office Facility for Facility Protection

ASTM E1665-1995A (R2005), Classification for Serviceability of an Office Facility for Facility Protection

ASTM E1666-1995A (R2005), Classification for the Serviceability of an Office Facility for Work Outside Normal Hours or Conditions

ASTM E1668-1995A (R2005), Classification for Serviceability of an Office Facility for Amenities to Attract and Retain Staff

ASTM E1669-1995A (R2005), Classification for Serviceability of an Office Facility for Location, Access, and Wayfinding

ASTM E1670-1995A (R2005), Classification for Serviceability of an Office Facility for Management of Operations and Maintenance

ASTM E1671-1995A (R2005), Classification for Serviceability of an Office Facility for Cleanliness

ASTM E1678-1995, Test Method For Measuring Smoke Toxicity For Use In Fire Hazard Analyses

ASTM E1679-1995 (R2005), Practice for Setting Requirements for Serviceability of a Building or Building-Related Facility

ASTM E1687-2004, Test Method for Determining Carcinogenic Potential of Virgin Base Oils in Metalworking Fluids

ASTM E1692-1995A (R2005), Classification for Serviceability of an Office Facility for Change and Churn by Occupants

ASTM E1693-1995 (R2005), Classification for Serviceability of an Office Facility for Protection of Occupant Assets

ASTM E1694-1995A (R2005), Classification for Serviceability of an Office Facility for Special Facilities and Technologies

ASTM E1700-1995 (R2005), Classification for Serviceability of an Office Facility for Structure and Building Envelope

ASTM E1701-1995 (R2005), Classification for Serviceability of an Office Facility for Manageability

ASTM E1702-2004, Practice for Dosimetry in a Gamma Irradiation Facility for Radiation Processing

ASTM E1707-2004, Guide for Estimating Uncertainties in Dosimetry for Radiation Processing

*(no abstract provided by developer)*

ASTM E1714-2001, The Properties of a Universal Healthcare Identifier, Guide for (14.01)

*(no abstract provided by developer)*

ASTM E1715-2001, Practice for an Object-Oriented Model for Registration, Admitting, Discharge, and Transfer (RADT) Functions in Computer-Based Patient Record Systems

ASTM E1725-1995 (R2001), Test Methods For Fire Tests Of Fire Resistive Barrier Systems For Electrical System Components

ASTM E1740-2001, Test Method for Determining the Heat Release Rate and Other Fire-Test-Response Characteristics of Wallcovering Composites Using a Cone Calorimeter

ASTM E1744-2005, Guide for a View of Emergency Medical Care in the Computerized Patient Record

ASTM E176-2005a, Terminology of Fire Standards

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ASTM E1762-1997 (R2003), Specification for Electronic Authentication of Health Care Information

ASTM E1769-1996, Guide for Properties of Electronic Health Records and Record Systems

ASTM E177-2006a, Practice for Use of the Terms Precision and Bias in ASTM Test Methods

ASTM E178-2002, Practice for Dealing with Outlying Observations

ASTM E18-2003, Test Method for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials

ASTM E1818-2006, Practice for Dosimetry in an Electron Beam Facility for Radiation Processing at Energies between 80 and 300 Kev

ASTM E1822-2002a, Test Method for Fire Testing of Real Scale Stacked Chairs

ASTM E1836-2002, Standard Classification for Building Floor Area Measurements for Facility Management

ASTM E1869-2005, Guide for Confidentiality, Privacy, Access and Data Security Principles for Health Information Including Computer Based Patient Records

ASTM E1895-2004, Guide for Determining Uses and Limitations of Deterministic Fire Models

ASTM E1900-2005, Guide for Dosimetry in Radiation Research on Food and Agricultural Products

ASTM E1902-2002, Guide for Mangement of the Confidentiality and Security of Dictation, Transcription, and Transcribed Health Record

ASTM E1939-2004, Practice for Blood Irradiation Dosimetry

ASTM E1940-2004, Guide for Dosimetry for Irradiation of Insects for Sterile Release Programs

ASTM E1956-2005, Practice for Use of Thermoluminescence-Dosimetry (TLD) Systems for Radiation Processing

ASTM E1959-2006, Guide for Requests for Proposals Regarding Medical Transcription Services for Healthcare Institutions

ASTM E1966-2001, Test Method for Fire Resistive Joint Systems

ASTM E1972-2004, Practice for Minimizing Effects of Aerosols in Wet Removal Environment

ASTM E1985-1998 (R2006), Guide for User Authentication and Authorization

ASTM E1986-1998 (R2006), Information Access Privileges to Health Information

ASTM E1987-1998, Guide for Individual Rights Regarding Health Information

ASTM E1988-1998, Guide for Training of Persons Who Have Access to Health Information

ASTM E1994-1998 (R2003), Practice for Use of Process Oriented AOQL and LTPD Sampling Plans

ASTM E1995-2004, Test Method for Measurement of Smoke Obscuration Using in a Single Closed Chamber, with the Test Specimen Oriented Horizontally

*research*

ASTM E2010-2001, Test Method for Positive Pressure Fire Test of Window Assemblies

ASTM E2017-1999 (R2005), Guide for Amendments to Health Information

ASTM E2026-1999, Guide for Estimation of Building Damageability in Earthquakes

ASTM E2030-2006a, Guide for Recommended Uses of Photoluminescent Phosphorescent Safety Markings

ASTM E2032-1999, Extension of Data from Fire Endurance Tests

ASTM E2058-2006, Test Methods for Measurement of Synthetic Polymer Material Flammability Using a Fire Propagation Apparatus (FPA)

ASTM E2061-2006, Guide for Fire Hazard Assessment of Rail Transportation Vehicles

ASTM E2067-2002a, Practice for Full-Scale Oxygen Consumption Calorimetry Fire Tests

ASTM E2072-2004, Specification for Photoluminescent (Phosphorescent) Safety Markings

ASTM E2073-2001, Test Method for Photopic Luminance of Photoluminescent (Phosphorescent) Markings

ASTM E2074-2001, Method of Tests for Fire Door Assemblies Under Positive Pressure

ASTM E2087-2000, Specification for Controlled Health Vocabularies

ASTM E2097-2000, Practice for Full Scale Oxygen Consumption Calorimetry Fire Tests

ASTM E2102-2004b, Method for Measurement of Mass Loss and Ignitability for Screening Purposes Using a Conical Radiant Heater

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ASTM E2116-2001, Practice for Dosimetry for a Self-Contained Dry Source Irradiator

ASTM E2117-2006, Classifications Guide for Identification and Establishment of a Quality Assurance Program for Medical Transcription

ASTM E2144-2002, Practice for Personal Sampling and Analysis of Endotoxin in Metalworking Fluid Aerosols in Workplace Atmospheres

ASTM E2145-2001, Practice for Modeling in Health Informatics

ASTM E2148-2006, Guide for Using Documents Related to Metalworking or Metal Removal Fluid Health and Safety

*This Guide covers information on how to use documents related to health and safety of metalworking and metal removal fluids. As such, this guide will provide the user with sufficient background information to effectively use the documents listed in Section 2. Documents referenced in this guide are grouped as applicable to producers, to users or to all.*

ASTM E2169-2001, Practice for Selecting Antimicrobial Pesticides for Use in Water-Miscible Metalworking Fluids

ASTM E2171-2002, Practice for Rating-Scale Measures Relevant to the Electronic Health Record

ASTM E2182-02, Specification for Clinical XML DTDs in Healthcare

ASTM E2183-02, Practice/guide for XML DTD Design, Architecture and Implementation

ASTM E2184-02, Specification for Healthcare Document Formats

ASTM E2185-2001, Specification for Transferring Digital Voice Data Between Independent Digital Dictation Systems and Workstations

ASTM E2187-2004, Test Method for Measuring the Ignition Strength of Cigarettes

*This fire-test-response standard provides a standard measure of the capability of a cigarette, positioned on one of three standard substrates, to generate sufficient heat to continue burning and thus potentially cause ignition of bedding or upholstered furniture.*

ASTM E2210-2007, Specification for Guideline Elements Model Gem --document Model for Clinical Practice Guidelines

ASTM E2211-2002, Specification for Relationship Between a Person (consumer) and a Supplier of an Electronic Personal (consumer) Health Record

ASTM E2212-2002, Practice for Healthcare Certificate Policy

ASTM E2226-2002, Practice for Application of Hose Stream

ASTM E2230-2002, Practice for Thermal Qualification of Type B Packages for Radioactive Material

ASTM E2231-2003, Standard Practice on Specimen Preparation and Mounting for Pipe and Duct Insulation for Flame Spread and Smoke Obscuration

ASTM E2232-2002, Guide for Selection and Use of Mathematical Methods for Calculating Absorbed Dose in Radiation Processing Applications

ASTM E2233-2002, Practice for Sampling a Stream of Product by Variables Indexed by Aql

ASTM E2234-2005, Practice for Sampling a Stream of Product by Attributes Indexed by Aql

ASTM E2250-2002, Determination of Endotoxin Concentration in Water-Miscible Metalworking Fluids

ASTM E2257-2003, Room Fire Test of Wall and Ceiling Materials and Assemblies

ASTM E2280-2003, Guide for the Fire Hazard Assessment of the Effect of Upholstered Seating Furniture Within Patient Rooms of Health Care Facilities

ASTM E2284-2003, Practice for Setting an Upper Confidence Bound for a Fraction or Number of Non-conforming Items, or a Rate of Occurence for Non-conformities, Using Attribute Data, When There Is a Zero Response in the Sample

ASTM E23-2006, Test Methods for Notched Bar Impact Testing of Metallic Materials

ASTM E230-2002, Specification for Temperature - Electromotive Force (EMF) Tables for Standardized Thermocouples

ASTM E2303-2003, Guide for Absorbed-Dose Mapping in Radiation Processing Facilities

ASTM E2304-2003a, Practice for Use of a LIF Photo-Fluorescent Film Dosimetry System

ASTM E2307-2004, Test Method for Determining the Fire-endurance of Perimeter Fire Barrier Systems Using the Intermediate-scale, Multi-story Test Apparatus

ASTM E2320-2004, Classification for Serviceability of an Office Facility for Thermal Environment and Indoor Air Conditions

*This classification contains pairs of scales for classifying an aspect of the serviceability of an office facility, that is, the capability of an office facility to meet certain possible requirements for suitable thermal environment and indoor air conditions.*

ASTM E2334-2003, Practice for Setting an Upper Confidence Bound for a Fraction or Number of Non-conforming Items, or a Rate of Occurence for Non-conformities, Using Attribute Data, When There Is a Zero Response in the Sample

ASTM E2343-2004, Standard Practice for Performance Characterization of Routine Dosimetery Systems

ASTM E2364-2004, Guide to Speech Recognition Technology Products in Health Care

ASTM E2369-2005, Specification for the Continuity of Care Record (CCR)

ASTM E2381-2004, Guide for Dosimetry in Radiation Processing of Fluidized Beds and Fluid Streams

ASTM E2404-2005, Practice for Specimen Preparation and Mounting of Paper or Vinyl Wall Coverings to Assess Surface Burning Characteristics

ASTM E2405-2005, Test Method for Determination of Fire and Thermal Parameters of Materials Using an Intermediate Scale Test with Vertically Oriented Specimen

ASTM E2457-2005, Standard Terminology for Healthcare Informatics

*This standard is intended to name and document the principal concepts, and their associated terms, that are utilized in the Healthcare Information Domain and all of its specialized subdomains. It is applicable to all areas of healthcare about which information is kept or utilized. It is intended to complement and utilize those concepts already identified by other national or international bodies. It will identify alternate accepted terms for the same concept or its elected term. Its terms inteneded to clarify and simplify usage in the dialog and documentation about concepts, processes and data used to schedule, conduct, and manage all phases of healthcare.*

ASTM E2473-2006, Practice for the Occupational/Environmental Health View of the Electronic Health Record

*This practice is intended to assemble a logical occupational/ environment health view of the already definded general structue and vocabulary for the Electronice Health Record (EHR)and to suggest the ways in which this view can be used to support employee health assessment and other healthcare delivered at the work site.*

ASTM E2489-2006, Practice for Statistical Analysis of One-sample and Two-sample Interlaboratory Proficiency Testing Programs

ASTM E2502-2006, Standard Guide for Medical Transcription Workstations

*This guide identifies ways to improve the medical transcription workstation, including, but not limited to, the work environment, which encompasses ergonomics and security issues, equipment, references, and tools.*

ASTM E2523-2006, Terminology for Metalworking Fluids and Operations

*www.astm.org*

ASTM E2536-2006, Guide for Assessment of Measurement Uncertainty in Fire Tests

ASTM E2538-2007, Practice for Defining and Implementing Pharmacotherapy Information Services Within the Electronic Health Record Environment and Networked Architectures

*This work Item would create a document "Standard Practice for Defining and Implementing Pharmacotherapy Information Services with the Electronic Healh Record Environment and Networked Architectures" for use in extending the definition of the EHR Structure and Content to document how that content provides support for all aspects of patient care for an individual and for all related aspects of research and public health involving pharmacotherapy.*

ASTM E29-2006b, Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

ASTM E329-2006a, Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

ASTM E456-2006, Terminology Relating to Quality and Statistics

ASTM E535-2005a, Practice For Preparation Of Fire-Test-Response Standards

ASTM E541-02, Criteria for Agencies Engaged in System Analysis and Compliance Assurance for Manufactured Building

ASTM E603-2006, Guide for Room Fire Experiments

ASTM E648-2006, Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source

ASTM E651-02, Guidelines for Evaluating Capabilities of Agencies Involved in System Analysis and Compliance Assurance for Manufactured Building

ASTM E662-2006, Test Method for Specific Optical Density of Smoke Generated by Solid Materials

ASTM E691-1999, Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

ASTM E699-2003, Practice for Criteria for Evaluation of Agencies Involved in Testing

ASTM E800-2006, Guide for Measurement of Gases Present or Generated During Fires

ASTM E814-2006, Methods for Fire Tests of Through-Penetration Fire Stops

ASTM E84-2006b, Test Method for Surface Burning Characteristics of Building Materials

*REFER TO WWW.ASTM.ORG*

ASTM E906-2006, Test Method for Heat and Visible Smoke Release Rates for Materials and Products

ASTM E970-1996, Test Method For Critical Radiant Flux Of Exposed Attic Floor Insulation Using A Radiant Heat Energy Source

ASTM F1003-2002, Specification for Searchlights on Motor Lifeboats

ASTM F1005-1997 (R 2002), Practice for HVAC Duct Shapes; Identification and Description of Design Configuration

ASTM F1006-1997 (R2004), Specification for Entrainment Separators for Use in Marine Piping Applications

ASTM F1007-1997 (R2002), Specification for Pipe-Line Expansion Joints of the Packed Slip Type for Marine Application

ASTM F1014-2002, Specification for Flashlights on Vessels

ASTM F1015-2003, Test Method for Relative Abrasiveness of Synthetic Turf Playing Surfaces

ASTM F1018-87A (R2004), Specification for Steel Emergency Gear Stowage Locker

ASTM F1019M-2001 (R2006), Specification for Steel Deck Gear Stowage Box (Metric)

ASTM F1020-1986 (R2006), Practice for Line Blind Valves for Marine Applications

ASTM F1025-1994 (R2006), Guide for Selection and Use of Full-Encirclement-Type Band Clamps for Reinforcement or Repair of Punctures or Holes in Polyethylene Gas Pressure Pipe

ASTM F1030-86 (R2004), Practice for Selection of Valve Operators

ASTM F1038-1999 (R2006), Test Method for Motor Life Evaluation of a Canister, Hand-held, Stick, and Utility Type

Vacuum Cleaner Without a Driven Agitator

ASTM F1041-1995, Guide for Squeeze-Off of Polyolefin Gas Pressure Pipe and Fittings

ASTM F1045-2005, Performance Specification for Ice Hockey Helmets

ASTM F1047-2004, Specification for Frying and Braising Pans, Tilting Type

ASTM F1055-1996 (R2006), Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and Tubing

ASTM F1056-2004, Specification for Socket Fusion Tools for Use in Socket Fusion Joining Polyethylene Pipe or Tubing and Fittings

ASTM F1057-2005, Practice for Estimating the Quality of Extruded Poly (Vinyl Chloride) (PVC) Pipe by the Heat

Reversion Technique

ASTM F1068-1990 (R2004), Specification for Doors, Double, Gastight/Airtight, Individually Dogged, for Marine Use

ASTM F1069-87 (R2004), Specification for Doors, Watertight, Gastight/Airtight and Weathertight, Individually Dogged, for Marine Use

ASTM F1070-87 (R2004), Specification for Doors, Non-Tight, for Marine Use

ASTM F1071-1994 (R2006), Specification for Expanded-Metal Bulkhead Panels

ASTM F1072-1994 (R2006), Specification for Expanded-Metal Door

ASTM F1073-1987 (R2000), Specification for Door Fittings, for Watertight/Gastight/Airtight, Weathertight, and Non-Tight Doors, for Marine Use

ASTM F1074-1997 (R2002), Specification for Cleats, Welded Horn Type

ASTM F1075-1997 (R2004), Specification for Dehumidifier, Mechanically Refrigerated, Self-Contained

ASTM F1076-1997 (R2004), Practice for Expanded Welded and Silver Brazed Socket Joints for Pipe and Tube

ASTM F1081-1997, Specification for Competition Wrestling Mats

ASTM F1085-2004, Specification for Mattress and Box Springs, Berths

ASTM F1092-2004, Specification for Fiberglass (Grp) Pultruded Open-Weather Storm- and Guard-Square Handrails

ASTM F1097-1991 (R2006), Specification for Mortar, Refractory (High Temperature, Air Setting)

ASTM F1098-87 (R2004), Specification for Envelope Dimensions for Butterfly Valves - NPS 2 to 24

ASTM F1099-1998, Specification for Rat Guards, Ship's

ASTM F1106-87 (R2006), Specification for Warping Heads, Rope Handling (Gypsy Head, Capstan Head)

ASTM F1120-87 (93, Specification for Circular Metallic Bellows Type Expansion Joints for Piping Applications

ASTM F1120-87 (R1998), Specification for Circular Metallic Bellows Type Expansion Joints for Piping Applications

ASTM F1121-87 (R2004), Specification for International Shore Connections for Marine Fire Applications

ASTM F1122-2004, Specification for Quick Disconnect Couplings

ASTM F1123-87 (R2004), Specification for Non-Metallic Expansion Joints

ASTM F1130-2000 (R2005), Practice for Inspecting the Coating System of a Ship

ASTM F1134-1997 (R2002), Specification for Insulation Resistance Monitor for Shipboard Electrical Motors and Generators

ASTM F1138-1998 (R2004), Specification for Spray Shields for Mechanical Joints

ASTM F1139-88 (R2004), Specification for Steam Traps and Drains

ASTM F1142-1990 (R2004), Specification for Manhole Cover Assembly, Bolted, Semi-Flush, Oiltight and Watertight

ASTM F1143-1990 (R2004), Specification for Manhole Cover Assembly, Raised, Oiltight, and Watertight

ASTM F1144-1990 (R2004), Specification for Manhole Cover Assembly, Bolted, Hinged, Semi-Flush, Oiltight and Watertight

ASTM F1145-1992 (R2001), Specification for Turnbuckles, Swaged, Welded, Cast, Forged

ASTM F1155-1998 (R2004), Practice for Selection and Application of Piping System Materials

ASTM F1162-2002, Specification for Pole Vault Landing Pits

ASTM F1163-2001, Specification for Headgear Used in Horse Sports and Horseback Riding

ASTM F1166-2007, Practice for Human Engineering Design for Marine Systems, Equipment and Facilities

ASTM F1172-88 (R2004), Specification for Fuel Oil Meters of the Volumetric Positive Displacement Type

ASTM F1173-2001 (R2006), Specification for Thermosetting Resin Fiberglass Pipe and Fittings to be Used for Marine Applications

ASTM F1176-2001, Practice for Design and Installation of Thermoplastic Irrigation Systems with Maximum Working Pressure of 63 PSI

ASTM F1178-2001, Specification for Enameling System, Baking, Metal Joiner Work and Furniture

ASTM F1179-1997, Practice for Inspection Procedure for Use of Anaerobic Thread Locking Compounds with Studs

ASTM F1182-1990 (R2006), Specification for Anodes, Sacrificial Zinc Alloy

ASTM F1196-2001, Specification for Sliding Watertight Door Assemblies

ASTM F1197-2001, Specification for Sliding Watertight Door Control Systems

ASTM F1198-1997 (R2002), Guide for Shipboard Fire Detection Systems

ASTM F1199-88 (R2004), Specification for Cast All Temperatures and Pressures and Welded Pipe Line Strainers 150 Psig and 150 Deg;f Maximum

ASTM F1200-88 (R2004), Specification for Fabricated (Welded) Pipe Line Strainers (Above 150 PSIG and 150oF)

ASTM F1201-88 (R2004), Specification for Fluid Conditioner Fittings in Piping Applications Above 0oF

ASTM F1207/F1207M-1997 (R2002), Specification for Electrical Insulation Monitors for Monitoring Ground Resistance in Active Electrical Systems

ASTM F1216-2006, Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube

ASTM F1217-2003, Specification for Cooker, Steam

ASTM F1244-2000 (R2004), Specification for Berths, Marine

ASTM F1245-1989 (R2006), Specification for Faucets, Single and Double, Compression and Self-Closing Type, Shipboard

ASTM F1248-1996 (R2002), Test Method for Determination of Environmental Stress Crack Resistance (ESCR) of Polyethylene Pipe

ASTM F1250-2000 (R2006), Consumer Safety Specification for Stationary Exercise Bicycles

ASTM F1270-1997, Practice for Preparing and Locating Emergency Station Bills

ASTM F1271-1990 (R2006), Specification for Spill Valves for Use in Marine Tank Liquid Overpressure Protections Applications

ASTM F1273-1997 (R2002), Specification for Tank Vent Flame Arresters

ASTM F1275-2003, Test Methods for the Performance of Griddles

ASTM F1281-2003, Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe

ASTM F1282-2005, Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe

ASTM F1290-1999 (R2004), Practice for Electrofusion Joining Polyolefin Pipe and Fittings

ASTM F1292-2004, Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment

ASTM F1297-1999 (R2005), Guide for Location and Instruction Symbols for Evacuation and Lifesaving Equipment

ASTM F1298-1990 (R2006), Specification for Flexible, Expansion-Type Ball Joints for Marine Applications

ASTM F1309-1998 (R2004), Practice for Installation Procedures for Fitting Chocks to Marine Machinery Foundations

ASTM F1310-1997, Specification for 65-Gallon Dispensing Tank

ASTM F1311-1990 (R2006), Specification for Large-Diameter Fabricated Carbon Steel Flanges

ASTM F1312-90 (R1997), Specification for Brick, Insulating, High-Temperature, Fire Clay

ASTM F1321-1997 (R2004), Guide for Conducting a Stability Test (Lightweight Survey and Inclining Experiment) to Determine the Light Ship Displacement and Centers of Gravity of a Vessel

ASTM F1322-1990 (R2004), Guide for Selection of Shipboard Incinerators

ASTM F1323-2001, Specification for Shipboard Incinerators

ASTM F1326-1996 (R2006), Test Method for Measuring Maximum Dry Volume of Utility Vacuum Cleaners

ASTM F1330-1991 (R2006), Guide for Metallic Abrasive Blasting to Descale the Interior of Pipe

ASTM F1331-1997 (R2002), Practice for Installation Procedures of Vinyl Deck Coverings on Portable Plates in Electrical and Electronic Spaces

ASTM F1332-1999 (R2005), Practice for Use of SI [Metric] Units in Maritime Applications (Committee F-25 Supplement to E 380)

ASTM F1333-1997 (R2002), Specification for Construction of Fire and Foam Station Cabinets

ASTM F1335-2004, Specification for Pressure-Rated Composite Pipe for Elevated Temperature Service

ASTM F1336-2002, Specification for Poly (Vinyl Chloride) (PVC) Gasketed Sewer Fittings

ASTM F1337-1991 (R2006), Practice for Human Engineering Program Requirements for Ships and Marine Systems, Equipment, and Facilities

ASTM F1338-1997 (R2002), Guide for Main Propulsion Medium Speed Marine Diesel Engines Covering Performance and Minimum Scope of Assembly

ASTM F1347-1991 (R2006), Specification for Manually Operated Fueling Hose Reels

ASTM F1348-1997, Specification for Pneumatic Rotary Descaling Machines

ASTM F1352-91 (R1998), Guide for Fixed Blade Broadhead Performance and Safety Standards

ASTM F1360-2006, Specification for Ovens, Microwave, Electric

ASTM F1361-2005, Test Methods for the Performance of Open Deep Fat Fryers

ASTM F1363-2003, Guide for Reduction of Risk of Injury for Archery Overdraws

ASTM F1365-1991 (R2005), Test Method for Water Infiltration Resistance of Plastic Underground Conduit Joints which Use Flexible Elastomeric Seals

ASTM F1370-1992 (R2003), Specification for Pressure-Reducing Valves for Water Systems, Shipboard

ASTM F1380-1996 (R2002), Specification for Metal Insert Fittings for Polybutylene (PB) Tubing

ASTM F1385-2001, Practice for Platforms in Cargo Tanks

ASTM F1386-1997 (R2004), Guide for Construction of a Sounding Tube and Striker Plate for Tank Sounding

ASTM F1387-1999 (R2005), Specification for the Performance of Mechanically Attached Fittings

ASTM F1410-1999 (R2006), Test Method for Measuring Maximum Functional Wet Volume of Utility Vacuum Cleaners

ASTM F1412-2001, Specification for Polyolefin Pipe and Fittings for Corrosive Waste Drainage Systems

ASTM F1417-1996, Test Method for Installation Acceptance of Plastic Gravity Sewer Lines Using Low Pressure Air

ASTM F1429-1999 (R2005), Test Method for Assembly Force of Plastic Underground Conduit Joints that Use Flexible Elastomeric Seals Located in the Bell

ASTM F1430-2003, Test Method for Acoustic Emission Testing of Insulated Aerial Personnel Devices with Supplemental Load Handling Attachments

ASTM F1431-1992 (R2004), Specification for Water Trap for Diesel Exhaust

ASTM F1433-1997 (R2004), Specification for Mechanically Refrigerated Air Conditioner

ASTM F1435-2004, Specification for the Balance Point Location for Archery Arrows

ASTM F1436-2003, Guide for Center Serving Diameter Dimensions for Archery Bow Strings

ASTM F1437-2006, Practice for Inclined Cargo Tank Ladders

ASTM F1446-2006, Test Methods for Equipment, and Procedures Used in Evaluating the Performance Characteristics of Protective Headgear

ASTM F1447-2006, Specification for Helmets Used in Recreational Bicycling or Roller Skating

ASTM F1455-1992 (R2001), Guide for Selection of Structural Details for Ship Construction

ASTM F1473-2001, Test Method for Notch Tensile Test to Measure the Resistance to Slow Crack Growth Polyethylene Pipes and Resins

ASTM F1475-1997, Specification for Dispensing Tanks, 250 Litre Maximum

ASTM F1476-2001 (R2006), Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications

ASTM F1483-1999, Specification for Oriented Poly (Vinyl Chloride), PVCO, Pressure Pipe

ASTM F1484-2004, Test Method for Performance of Steam Cookers

ASTM F1488-2003, Specification for Coextruded Composite Pipe

ASTM F1492-2001, Specification for Protective Headgear Used in Skateboarding

ASTM F1495-2005, Specification for Combination Oven, Electric or Gas Fired

ASTM F1496-2006, Test Method for Performance of Convection Ovens

ASTM F1498-2000, Specification for Coextruded Composite Pipe

ASTM F1499-1997, Specification for Coextruded Composite Drain, Waste, and Vent Pipe (DWV)(1)

ASTM F1499-2001, Specification for Coextruded Composite Drain, Waste, and Vent Pipe (DMV) (1)

ASTM F1499-2001, Specification for Coextruded Composite Drain, Waste, and Vent Pipe (DMV) (1)

ASTM F1504-2002, Specification for Folded Poly (Vinyl Chloride) (PVC) Pipe for Existing Sewer and Conduit Rehabilitation

ASTM F1507-2000 (R2006), Specification for Surge Suppressors for Shipboard Use

ASTM F1508-1997 (R200), Specification for Angle Style, Pressure Relief Valves for Steam, Gas, and Liquid Services

ASTM F1510-2001 (R2006), Specification for Rotary Positive Displacement Pumps, Commercial Ships Use

ASTM F1511-2006, Specification for Mechanical Seals for Shipboard Pump Applications

ASTM F1521-2003, Test Methods for Performance of Range Tops

ASTM F1533-2001, Specification for Deformed Polyethylene (PE) Liner

ASTM F1543 -2003, Specification for Shock Attenuation Properties of Fencing Surfaces

ASTM F1544-2004, Specification for Determining the Rating Velocities of an Archery Bow

ASTM F1545-1996 (R2003), Specification for Plastic-Lined Ferrous Metal Pipe, Fittings and Flanges

ASTM F1546/F1546M-1996 (R2006), Specification for Fire Hose Nozzles

ASTM F1547-2006, Guide Listing Relevant Standards and Publications for Commercial Shipbuilding

ASTM F1548-2001 (R2006), Specification for the Performance of Fittings for Use with Gasketed Mechanical Couplings Used in Piping Applications

ASTM F1551-2003, Test Methods for Comprehensive Characterization of Synthetic Turf Playing Surfaces and Materials

ASTM F1563-2001, Specification for Tools to Squeeze-off Polyethylene (PE) Gas Pipe or Tubing

ASTM F1565-2000 (R2006), Specification for Pressure-Reducing Valves for Steam Service

ASTM F1567-1994 (R2006), Specification for Fabricated or Cast Automatic Self-Cleaning, Fuel Oil and Lubricating Oil Strainers

ASTM F1587-1999 (R2005), Specification for Head and Face Protective Equipment for Ice Hockey Goaltenders

ASTM F1588-1996, Test Method for Constant Tensile Load Joint Test (CTLJT)

ASTM F1602-1995 (R2001), Specification for Kettles, Steam Jacketed, 20 Oz to 200 Gal (75.7 to 757 L), Floor or Wall Mounted, Direct Connected, Gas Fired and Electric Fired

ASTM F1603-1995 (R2001), Specification for Kettles, Steam Jacketed, 32 Oz to 20 Gal (1 to 75.7 L), Tilting, Table Mounted, Direct Connected, Gas Fired and Electric Fired

ASTM F1605-1995 (R2001), Test Method for Performance of Double Sided Griddles

ASTM F1614-1999 (R2006), Test Method for Shock Attenuating Properties of Materials Systems for Athletic Footwear

ASTM F1625-2000, Specification for and Test Procedure for Rear-Mounted and Front-Mounted Bicycle Child Carriers

ASTM F1626-1995 (R2006), Practice for Preparing Shipboard Fire Control Plans

ASTM F1631-2003, Test Method for Impact Attenuation Properties of Body Padding and Protective Wear for the Sport of Fencing

ASTM F1632-2003, Test Method for Particle Size Analysis and Sand Shape Grading of Golf Course Putting Green and Sports Field Rootzone Mixes

ASTM F1639-2005, Test Method for Performance of Combination Ovens

ASTM F1646-2003, Standard Terminology Relating to Safety and Traction for Footwear

ASTM F1647-2002, Test Methods for Organic Matter Content of Putting Green and Sports Turf Root Zone Mixes

ASTM F1648-1995 (R2003), Test Methods for Archery Bowstring Component - Serving String Material

ASTM F1668-1996 (R2002), Guide for Construction Procedures for Buried Plastic Pipe

ASTM F1669M-1997 (R2002), Specification for Insulation Monitors for Shipboard Electrical Systems (Metric)

ASTM F1673-2004, Specification for Polyvinylidene Fluoride (PVDF) Corrosive Waste Drainage Systems

ASTM F1674-1996, Specification for Joint Restraint Products for Use with PVC Pipe

ASTM F1676-1996 (R2003), Specification for Basic Tumbling Mats

ASTM F1677-2005, Test Method for Using a Portable Inclineable Articulated Strut Slip Tester (PIAST)

ASTM F1679-2004, Test Method for Using a Variable Incidence Tribometer (VIT)

ASTM F1685-2000 (R2006), Specification for Pressure-Reducing Manifolds for Air or Nitrogen Systems

ASTM F1695-2003, Test Method for the Performance of Underfired Broilers

ASTM F1696-1996, Test Method for the Energy Performance of Single Rack, Hot Water Sanitizing, Door Type Commercial Dishwashing Machines

ASTM F1697-2002, Specification for Poly (Vinyl Chloride) (PVC) Drain, Waste and Pipe and Fittings

ASTM F1698-2002, Practice for Installation of Poly (Vinyl Chloride) (PVC) Linear and Cementitious Grout for Rehabilitation of Existing Man-Entry Sewers and Conduits

ASTM F1702-2002, Test Method for Measuring Shock-attenuation Characteristics of Natural Playing Surface Systems Using Lightweight Portable Apparatus

ASTM F1703-2004, Guide for Ice Hockey Playing Facilities

ASTM F1704-1999, Test Method for the Performance of Commercial Kitchen Ventilation Systems

ASTM F1716-1997 (R2002), Guide for Transition and Performance of Marine Software Systems Maintenance

ASTM F1718-2001 (R2006), Specification for Rotary Positive Displacement Distillate Fuel Pumps

ASTM F1720-2006, Test Method for Measuring the Thermal Insulation of Sleeping Bags Using a Heated Manikin

ASTM F1734-2003, Practice for Qualification of a Combination of Squeeze Tool, Pipe and Squeeze-Off Procedures to Avoid Long-Term Damage in Polyethylene (PE) Gas Pipe

ASTM F1735-2002, Specification for Poly (Vinyl Chloride)(PVC) Profile Strip for PVC Liner for Rehabilitation of Existing Man-Entry Sewers and Conduits

ASTM F1741-2005, Practice for Installation of Machine Spiral Wound Poly Vinyl Chloride (PVC) Liner Pipe for Rehabilitation of Existing Sewers and Conduits

ASTM F1743-1996 (R2003), Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-in-place Installation of Cured-in-place Thermosetting Resin Pipe (CIPP)

ASTM F1749-2002, Specification for Fitness Equipment Facility Safety Signage and Labels

ASTM F1750-2005, Specification for Paintball Gun Threaded Propellant Source Interface

ASTM F1751-2001, Specification for Helmets Used in Recreational Roller Skating

ASTM F1752-1996 (R2006), Test Method for Archery Bow Component-Cord Material

ASTM F1753-1996 (R2006), Specification for Classification and Marking of Single-Lens Scopes for Use with Archery Bows

ASTM F1754-1996 (R2004), Guide for Marine Vessel Structural Inspection Considerations for Design and Production

ASTM F1755/F1755M-1996 (R2002), Specification for Solid State Bargraph Meters for Shipboard Use [Metric]

ASTM F1756-1997a (R2002), Guide for Implementation of a Fleet Management System Network

ASTM F1757-1996 R2002, Guide for Digital Communication Protocols for Computerized Systems

ASTM F1759-1997 (R2004), Practice for Design of High-density Polyethylene (HDPE) Manholes for Subsurface Applications

ASTM F1760-2001 (R2005), Specification for Poly(Vinyl Chloride) (PVC) Non-Pressure Plastic Pipe Having Reprocessed-Recycled Content

ASTM F1772-1999 (R2005), Specification for Climbing Harnesses

ASTM F1773-1997 (R2004), Terminology Relating to Climbing and Mountineering Equipment and Practices

ASTM F1774-1999 (R2005), Specification for Climbing and Mountaineering Carabiners

ASTM F1775-1997 (R2004), Specification for Labeling of Climbing and Mountaineering Equipment

ASTM F1776-2001, Specification for Eye Protective Devices for Paintball Sports

ASTM F1777-2002, Specification for Paintball Field Operations

ASTM F1784-1997 (R2003), Test Method for the Performance of a Pasta Cooker

ASTM F1785-1997 (R2003), Test Method for Performance of Steam Kettles

ASTM F1786-1997 (R2004), Test Method for Performance of Rotisserie Ovens

ASTM F1787-2003, Test Method for Performance of Rotisserie Ovens

ASTM F1791-2000 (R2006), Specification for Filters Used in Air or Nitrogen Systems

ASTM F1792-1997, Specification for Special Requirements for Valves Used in Gaseous Oxygen Service

ASTM F1793-1997 (R2004), Specification for Automatic Shut-Off Valves (also known as Excess Flow Valves EFV) for Air or Nitrogen Service

ASTM F1794-1997 (R2004), Specification for Hand-Operated Globe-Style Valves for Gas (Except Oxygen Gas) and Hydraulic Systems

ASTM F1795-2000 (R2006), Specification for Pressure-Reducing Valves for Air or Nitrogen Systems

ASTM F1797-1998 (R2003), Test Method for Acoustic Emission Testing of Insulated Digger Derricks

ASTM F1799-1997 (R2004), Guide for Shipboard Generated Waste Management Audits

ASTM F1802-2004, Test Method for Performance Testing of Excess Flow Valves

ASTM F1803-2005, Specification for Poly(Vinyl Chloride) (PVC) Closed Profile Gravity Pipe and Fittings Based on Controlled Inside Diameter

ASTM F1804-1997, Practice for Determining Allowable Tensile Load for Polyethylene (PE) Gas Pipe During Pull-In Installation

ASTM F1807-2005, Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-Linked Polyethylene (PEX) Tubing

ASTM F1808-2003, Guide for Weight Control Technical Requirements for Surface Ships

ASTM F1815-2006, Test Methods for Saturated Hydraulic Conductivity, Water Retention, Porosity, Particle Density, and Bulk Density of Putting Green and Sports Turf Root Zones

ASTM F1817-1997 (R2003), Test Method for the Performance of Conveyor Ovens

ASTM F1832-1997 (R2003), Method for Determining the Force-Draw and Let-Down Curves for Archery

ASTM F1833-1997 (R2006), Test Method for Comparison of Rearfoot Motion Control Properties of Running

ASTM F1835-1997 (R2002), Guide for Cable Splicing Installations

ASTM F1836M-1997 (R2002), Specification for Stuffing Tubes, Nylon; and Packing Assemblies (Metric)

ASTM F1837M-1997 (R2002), Specification for Heat-Shrink Cable Entry Seals (Metric)

ASTM F1849-2000, Specification for Helmets Used in Short Track Speed Ice Skating (Not to Include Hockey)

ASTM F1853-2003, Test Method for Measuring Sleeping Bag Packing Volume

ASTM F1865-2002, Specification for Mechanical Cold Expansion Insert Fitting with Compression Sleeve for Crosslinked Polyethylene PEX Tubing

ASTM F1866-2005, Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings

ASTM F1867-2005, Practice for Installation of Folded/Formed Poly(Vinyl Chloride) (PVC) Pipe Type A for Existing Sewer and Conduit Rehabilitation

ASTM F1871-2002, Specification for Folded/formed Poly (Vinyl Chloride) Pipe Type a for Existing Sewer and Conduit Rehabilitation

ASTM F1878-1998 (R2004), Guide for Escort Vessel Evaluation and Selection

ASTM F1880-1998 (R2004), Specification for Determination of Percent of Let-Off for Archery Bows

ASTM F1881-2005, Test Method for Measuring Baseball Bat Performance Factor

ASTM F1882-2006, Specification for Residential Basketball Systems

ASTM F1883-2003, Practice for Selection of Wire and Cable Size, in AWG or Metric Units

ASTM F1887-1998, Test Method for Measuring the Coefficient of Restitution (COR) of Baseballs and Softballs

ASTM F1887-2003, Test Method for Measuring the Coefficient of Restitution COR of Baseballs and Softballs

ASTM F1888-1998, Test Method for Compression-Displacement of Baseballs and Softballs

ASTM F1888-2003, Test Method for Compression-Displacement of Baseballs and Softballs

ASTM F1889-2005, Guide for Straightness Measurement of Arrow Shafts

ASTM F1890-2005, Test Method for Measuring Softball Bat Performance Factor

ASTM F1898-2001, Specification for Bicycle Helmets Used by Infants and Toddlers

ASTM F1900-1998 (R2004), Test Method for Water Resistance of Footwear Using a Walking Step Simulator

ASTM F1901-2004, Specification for Polyethylene (PE) Pipe and Fittings for Roof Drain Systems

ASTM F1919-2003, Specification for Griddles, Single and Double Sided, Self-Heating, Counter or Stand Mounted Gas and Electric Fired

ASTM F1920-2003, Test Method for the Energy Performance of Rack Conveyor, Hot Water Sanitizing, Commercial Dishwashing Machines

ASTM F1924-2005, Specification for Plastic Mechanical Fittings for Use on Outside Diameter Controlled Polyethylene Gas Distribution Pipe and Tubing

ASTM F1931-1998 (R2004), Test Method for Characterization of Gymnastic Landing Mats and Floor Exercises Surfaces

ASTM F1932-1998 (R2004), Test Method for Measuring Sleeping Bag Loft

ASTM F1933-1998 (R2004), Specification for Illustrating the Footprint of a Backpacking or Mountaineering Tent

ASTM F1934-1998 (R2004), Test Method for Welding a Backpack or Mountaineering Tent

ASTM F1935-2001, Test Method for Measuring Peak Height of a Backpacking or Mountaineering Tent

ASTM F1936-1998, Specification for Shock-Absorbing of North American Football Playing Systems as Measured in the Field

ASTM F1937-2005, Specification for Body Protectors Used in Horse Sports and Horseback Riding

ASTM F1947-2004, Practice for Installation of Folded Poly(Vinyl Chloride) (PVC) Pipe into Existing Sewers and Conduits

ASTM F1948-2005, Specification for Metallic Mechanical Fittings for Use on Outside Diameter Controlled Thermoplastic Gas Distribution Pipe and Tubing

ASTM F1952-2000, Specification for Helmets Used for Down Hill Mountian Bicycle Racing

ASTM F1953-1999 (R2003), Guide for Construction and Maintenance of Grass Tennis Courts

ASTM F1955-1998 (R2005), Test Method for Flammability of Sleeping Bags

ASTM F1960-2004, Specification for Cold Expansion Fittings with Peroxide PEX Reinforcing Rings for Use with Cross-Linked Polyethylene (PEX) Tubing

ASTM F1961-2002, Specification for Metal Mechanical Cold Flare Compression Fittings with Disc Spring for Crosslinked Polyethylene (PEX) Tubing

ASTM F1962-1999, Guide for Use of Maxi-Horizontal Directional Drilling for Placement of Polyethylene Pipe or Conduit Under Obstacles, Including River Crossings

ASTM F1963-2005, Specification for Deep-Fat Fryers, Gas or Electric, Open

ASTM F1964-2006, Test Method for the Performance of Pressure and Kettle Fryers

ASTM F1965-2006, Test Method for the Performance of Deck Ovens

ASTM F1970-2005, Specification for Special Engineered Fittings, Appurtenances or Valves for Use in Poly(Vinyl Chloride) (PVC) or Chlorinated Poly(Vinyl Chloride) (CPVC) Systems

ASTM F1973-2005, Specification for Factory Assembled Anodeless Risers and Transition Fittings in Polyethylene (PE) and Polyamide 11 (PA11) Fuel Gas Distribution Systems

ASTM F1974-2004, Specification for Metal Insert Fittings for Polyethylene/Aluminum/Polyethylene and Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene Composite Pressure Pipe

ASTM F1975-2002, Specification for Non-Powered Bicycle Trailers Designed for Human Passengers

ASTM F1976-2006, Test Method for Cushioning Properties of Athletic Shoes Using an Impact Test

ASTM F1977-2004, Test Method for Determining Initial Fractional Filtration Efficiency of a Vacuum Cleaner System

*This test method may be used to determine the initial, fractional, filtration efficiency of household and commercial canister (tank-type), stick, hand-held, upright, and utility vacuum cleaner systems.*

ASTM F1979-2005, Specification for Paintballs Used in the Sport of Paintball

ASTM F1985-1999 (R2005), Specification for Pneumatic-Operated, Globe-Style, Control Valves

ASTM F1986-2001 (R2006), Specification for Multilayer Pipe Type 2, Compression Fittings, and Compression Joints for Hot and Cold Drinking-water Systems

ASTM F1987-2001 (R2006), Specification for Multilayer Pipe Type 2, Compression Fittings, and Compression Joints for Hydronic Heating Systems

ASTM F1991-2006, Test Method for the Performance of Chinese (Wok) Ranges

ASTM F1994-2000 (R2005), Test Method for Shipboard Fixed Foam Firefighting Systems

ASTM F2001-2001 (R2006), Guide for Vessel-Related Technical Information for Use in Developing An Electronic Database and Ship Safety Record

ASTM F2014-2000 (R2006), Specification for Non-Reinforced Extruded Tee Connections for Piping Applications

ASTM F2015-2000 (R2006), Specification for Lap Joint Flange Pipe End Applications

ASTM F2016-2000 (R2006), Practice for Establihsing Shipbuiling Quality Requirements for Hull Structure, Outfitting and Coatings

ASTM F2017-2000 (R2006), Database Structure of Electronic Data Interchange Between Ship Owner and Shipyard for Contract Administration

ASTM F2018-2000 (R2006), Test Method for Time-to-Failure of Plastics Using Plane Strain Tensile Specimens

ASTM F2019-2003, Practice for Existing Pipelines and Conduits by the Pulled-in-Place Installation of Glass Reinforced Plastic (GRP) Cured-in-Place Thermosetting Resin Pipe (CIPP)

ASTM F2021-2006, Specification for Design and Installation of Plastic Syphonic Roof Drainage Systems

ASTM F2022-2001, Test Method for Performance of Booster Heater

ASTM F2023-2005a, Test Method for Evaluating the Oxidative Resistance of Crosslinked Polyethylene (PEX) Tubing and Systems to Hot Chlorinated Water

ASTM F2030-2000, Specification for Paintball Cylinder Burst Disk Assemblies

ASTM F2031-2005, Method of Measurement of Arrow Shaft Static Spine (Stiffness)

ASTM F2032-2006, Specification for Helmets Used, in BMX Cycling

ASTM F2039-2000 (R2006), Guide for the Basic Elements of a Shipboard Occupational Health and Safety Program

ASTM F2040-2006, Specification for Helmets Used for Recreational Snow Sports

ASTM F2041-2000, Specification for Paintball Marker Warnings

ASTM F2043-2000, Classification for Bicycle Usage

ASTM F2044-2005, Specification for Liquid Level Indicating Equipment, Electrical

ASTM F2045-2000 (R2006), Specification for Indicators, Sight, Liquid Level, Direct/Indirect Reading, Tubular Glass/Plastic

ASTM F2046-2000 (R2006), Specification for Tachometers, Various

ASTM F2048-2000, Practice for Reporting Slip Resistance Test Results

ASTM F2060-2001 (R2005), Guide for Maintaining Cool Season Turfgrasses on Athletic Fields

ASTM F2070-2001 (R2006), Specification for Transducers, Pressure and Differential Pressure, Electrical and Fiber Optic

ASTM F2071-2001 (R2006), Specification for Switch, Position, Proximity (Non-Contact) or Limit (Mechanical Contact), Fiber Optic

ASTM F2075-2001a, Specification for Engineered Wood Fiber for Use as a Playground Safety Surface Under and Around Playground Equipment

ASTM F2080-2005, Specification for Cold-expansion Fittings with Metal Compression-sleeves for Cross-linked Polyethylene (PEX Pipe

ASTM F2087-2001, Practices for Packing, Fiberglass, Braided, Rope and Wick

ASTM F2092-2001, Specification for Convection Oven Gas or Electric

ASTM F2093-2006, Test Method for the Performance of Rack Ovens

ASTM F2098-2004, Test Method for Stainless Steel Clamps for Securing SDR9 Cross-Linked Polyethylene (PEX) Tubing to Metal Insert Fittings

ASTM F2106-2003, Test Method for Evaluating Design and Performance Characteristics of Motorized Treadmills

ASTM F2107-2001, Guide for Construction and Maintenance of Skinned Areas on Sports Fields

ASTM F2115-2005, Test Method for Motorized Treadmills

ASTM F2117-2001, Test Method for Vertical Rebound Characteristics of Sports Surface/Ball Systems; Acoustical Measurement

ASTM F2120-2006, Practice for Testing Treestand Load Capacity

ASTM F2121-2005, Practice for Treestand Labels

ASTM F2122-2005, Practice for Treestand Safety Devices

ASTM F2123-2005, Practice for Treestand Instructions

ASTM F2124-2005, Practice for Testing Ladder Treestand, Tripod Treestand and Climbing Stick Load Capacity

ASTM F2125-2005, Test Method for Treestand Static Stability

ASTM F2126-2006, Test Method for Treestand Static Load Capacity

ASTM F2128-2005, Test Method for Treestand and Repetitive Loading Capability

ASTM F2131-2003, Charpy Impact Test on Thin Specimens of Polyethylene Used in Pressurized Pipes

ASTM F2133-2001, Test Methods for Determining Effects of Large Hydrocarbon Pool Fires on Marine Bulkheads and Decks, Constructed of Steel

ASTM F2135-2001, Specification for Molded Drain Waste and Vent (DWV) Short-Pattern Plastic Fittings

ASTM F2138-2001, Specification for Excess Flow Valves for Natural Gas Service

ASTM F2140-2001, Test Method for Performance of Hot Food Holding Cabinets

ASTM F2141-2001, Test Method for Performance of Hot Deli Cases

ASTM F2142-2001, Test Method for Performance of Drawer Warmers

ASTM F2143-2004, Test Method for Performance of Refrigerated Buffet and Preparation Tables

ASTM F2144-2005, Test Method for Performance of Large Open Vat Fryers

ASTM F2145-2001, Specification for Polyamide11 (Pa11) Mechanical Fittings for Use on Outside Diameter Controlled Polyamide11 Pipe and Tubing (60-01-02)

ASTM F2153-2002, Standard for the Measurement of Backpack Capacity

ASTM F2154-2001, Specification for Sound Absorbing Board, Fibrous Glass, Perforated Fibrous Glass Cloth Faced

ASTM F2157-2002, Specification for Synthetic Surfaced Running Tracks

ASTM F2158-2001, Specification for Residential Central-Vacuum Tube and Fittings

ASTM F2159-2005, Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-Linked Polyethylene (PEX) Tubing

ASTM F2164-2002, Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure

ASTM F2165-2002, Specification for Flexible Pre-insulated Piping

ASTM F2168-2002, Specification for Packing Material, Graphitic, Corrugated Ribbon or Textured Tape and Die-Formed Ring

ASTM F2173-2002, ISO 7767, Oxygen Monitors for Monitoring Patient Breathing Mixtures - Safety Requirements

ASTM F2174-2002, Practice for Verifying Acoustic Emmission Sensor Response

ASTM F2176-2002, Specification for Mechanical Couplings Used on Polyethylene Conduit, Duct and Innerduct

ASTM F2177-2002, ISO 5361, Anaesthetic and Respiratory Equipment - Tracheal Tubes and Connectors

ASTM F2184-2002, Installation Guide for Paintball Barrier Netting

ASTM F2189-2002, Specification for Particular Requirements for Nitric Oxide Monitors

ASTM F2191-2002, Specification for Packing Material, Graphitic or Carbon Braided Yarn

ASTM F2192-2005, Test Method for Determining and Reporting the Berthing Energy and Reaction of Marine Fenders

ASTM F2202-2002, Standard Specification for Slow Cook/Hold Ovens and Food Warming Cabinet

ASTM F2206-2002, Specification for Fabricated Fittings of Butt-fused Polyethylene (PE) Plastic Pipe, Fittings, Sheet Stock, Plate Stock or Block Stock

ASTM F2207-2006, Specification for Cured-in-place Pipe Lining System for Rehabilitation of Metallic Gas Pipes

ASTM F2216-2005, Specification for Selectorized Strength Equipment

ASTM F2219-2005, Test Methods for Measuring High Speed Baseball Bat Performance Factor

ASTM F2220-2003, Specification for Headforms

ASTM F2221-2002, Medical Suction Equipment- Part 2: Manually Powered Suction Equipment

*Adoption of ISO 10079-2 (with Deviations)*

ASTM F2222-2002, Medical Suction Equipment-suction Equipment Powered from a Vacuum or Pressure Source

*Adoption of ISO 10079-3 (with Deviations)*

ASTM F2223-2004, Guide for ASTM Standards on Playground Surfacing

ASTM F2225-2006, Specification for Consumer Trampoline Enclosures

ASTM F2237-2003, Test Method for the Performance of Upright Overfired Broilers

ASTM F2238-2003, Test Method for the Performance of Rapid Cook Ovens

ASTM F2239-2003, Test Method for Performance of Conveyor Broilers

ASTM F2261-2006, Test Method for Pressure Rating Poly(vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40 and 80 Socket-type

ASTM F2262-2005, Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene Tubing OD Controlled SDR9

ASTM F2263-2005, Test Method for Evaluating the Oxidative Resistance of Polyethylene(pe) Pipe to Chlorinated Water

ASTM F2265-2003, Medical Suction Equipment - Part 1: Electrically Powered Suction Equipment - Safety Requirements

*Adoption of ISO 10079-1 (with Deviations)*

ASTM F2268-2003, Specification for Bicycle Serial Numbers

ASTM F2270-2004, Guide for Construction and Maintenance of Warning Track Areas on Sports Fields

ASTM F2273-2003, Test Methods for Bicycle Forks

ASTM F2274-2003, Specification for Condition 3 Bicycle Forks

ASTM F2275-2003, Practice for Treestand Manufacturer Quality Assurance Program

ASTM F2276-2005, Specification for Fitness Equipment

ASTM F2277-2003, Test Methods for Evaluating Design and Performance Characteristics of Selectorized Strength Equipment

ASTM F2278-2003, Test Method for Evaluating Paintball Barrier Netting

ASTM F2283-2004, Specification for Shipboard Oil Pollution Abatement System

ASTM F2283-2004, Specification for Shipboard Oil Pollution Abatement System

ASTM F2288-2003, Adoption of ISO 5366-1 Anesthetic and Respirator Y Equipment - Tracheostomy Tubes - Part1: Tracheostomy Tubes and Connectors for Use in Adults

ASTM F2289-2003, Adoption of ISO 5366-3 Anaesthetic and Respiratory Equipment - Tracheostomy Tubes - Part 3: Paediatric Tracheostomy Tubes

ASTM F2290-2003, Adoption of ISO 5359 Low-pressure Hose Assemblies for Use with Medical Gases

ASTM F2307-2003, Specification for Series 10 Poly(Vinyl Chloride) (PVC) Closed Profile Gravity Pipe and Fittings Based on Controlled Inside Diameter (project #62-02-03)

ASTM F2324-2003, Test Method for Pre-rinse Spray Valves

ASTM F2330-2004, Test Method for Evaluating the Oxidative Resistance of Multilayer Polyolefin Tubing to Hot Chlorinated Water

ASTM F2331-2004, Test Method for Determining Chemical Compatibility of Thread Sealants with Thermoplastic Threaded Pipe and Fittings Materials

ASTM F2333-2004, Test Method for Traction Characteristics of the Athletic Shoe-sports Surface Interface

ASTM F2336-2005, Guide for Roller Hockey Playing Facilities

ASTM F2337-2003, Test Method for Treestand Fall Protection Devices

ASTM F2379-2004, Test Method for the Energy Performance of Powered Open Warewashing Sinks

ASTM F2380-2004, Test Method for the Performance of Conveyor Toasters

ASTM F2389-2005, Specification for Pressure-rated Polypropylene Pp Piping Systems

ASTM F2396-2004, Guide for Construction of High Performance Sand-based Rootzones for Sports Fields

ASTM F2397-2005, Specification for Protective Headgear Used in Martial Arts

ASTM F2398-2004, Test Method for Measuring Moment of Inertia and Center of Percussion of a Baseball or Softball Bat

ASTM F2400-2004, Specification for Helmets Used in Pole Vaulting

ASTM F2400-2006, Specification for Helmets Used in Pole Vaulting

ASTM F2402-2004, Flow-metering Devices for Connection to Terminal Units of Medical Gas Pipeline Systems, Adoption of ISO 15002 as an American National Standard (with Deviations)

ASTM F2416-2006, Specification for Protective Headgear Used in Electric Personal Assistive Mobility Devices

*Covers performance requirements for helmets manufactured for users of Electric Personal Assistive Mobility Devices.*

ASTM F2418-2005, Specification for Polypropylene(pp) Corrugated Wall Stormwater Collection Chambers

ASTM F2434-2005, Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene (PEX-AL-PEX) Tubing

ASTM F2439-2005, Specification for Headgear Used for Soccer

ASTM F2440-2005, Specification for Indoor Wall/feature Padding

ASTM F2442-2006, Guide for Layout of Ice Arena

ASTM F2472-2005, Test Method for the Performance of Staff-served Hot Deli Cases

ASTM F2479-2006, Guide for Specification,purchase,installation and Maintenance of Poured-in-placeplayground Surfacing

ASTM F2480-2006, Guide for In-ground Concrete Skate Park

ASTM F2487-2006, Practice for Infiltration and Exfiltration Acceptance Testing of Installed Corrugated High Density Polyethylene Pipelines

*This practice covers prcedures for testing installed corrugated high-density polyethylene pipeline using either water infiltration or exfiltration acceptance limits to demonstrate the integrity of the installed materials and construction procedure.*

ASTM F2509-2006, Specification for Field-assembled Anoddeless Riser Kits for Use on Outside Diameter Controlled Polyethylene Gas Distribution Pipe and Tubing

ASTM F2510-2006, Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures and Corrugated High Density Polyethylene Drainage Pipes

ASTM F2521-2005, Specification for Heavy-Duty Ranges Gas and Electric

*Reinstatement of Z9394Z (F2521)*

ASTM F2531-2005, Test Method for the Load Capacity of Treestand Seats

*ANSI/ASTM Reinstatement of WK7080 (F2531)*

ASTM F2536-2006a, Guide for Installing Plastic DWV Piping - Suspended from On-Grade Slabs

ASTM F2544-2006, Test Method for Determining a Weighted Sound Power Level of Central Vacuum Power Units

ASTM F2553-2006, Standard Specification for Warnings on Refillable Co2 Cylinders Used in the Sport of Paintball

*This specification covers warnings used on refillable CO2 cylinders with a threaded interface used in the sport of paintball.*

ASTM F2561-2006, Practice for Rehabilitation of a Sewer Service Lateral and Its Connection to the Main Using a One Piece Main and Lateral Cured-in-place Liner

ASTM F2568-2006, Test Method for Measurement of Sleeping Bags

ASTM F2573-2006, Specification for Low Velocity Resilient Material Projectile

ASTM F2574-2006, Specification for Low Velocity Projectile Marker

ASTM F2599-2006, Practice for Sectional Repair of Damaged Pipe by Means of an Inverted Cured-in-place Liner

ASTM F2600-2006, Standard Specification Forelectrofusion Type Polyamide-11 Fittings for Outsidediameter Controlled Polyamide-11 Pipe and Tubing

ASTM F2607-2006, Test Method for Measuring the Hard Surface Floor-Cleaning Ability of Household/Commercial Vacuum Cleaners

*www.astm.org*

ASTM F2609-2006, Standard Test Method For litter-cleaning Effectiveness of Vacuum Cleaners

*www.astm.org*

ASTM F2620-2006, Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings

ASTM F355-2001, Test Method for Shock-Absorbing Properties of Playing Surface Systems and Materials

ASTM F381-2006, Safety Specification for Components, Assembly, Use, and Labeling of Consumer Trampolines

ASTM F395-1997, Terminology Relating to Vacuum Cleaners

ASTM F400-2004, Consumer Safety Specification for Lighters (15.07)

*This consumer safety specification covers all flame-producing consumer products commonly known as cigarette lighters, pipe lighters, and cigar lighters and such similar devices as defined in 2.1.6. Matches are specifically excluded from this safety specification; flame-producing products intended solely for igniting apparatus other than cigars, pipes, and cigarettes are also specifically excluded from this safety specification. Lighters are specifically not intended for sue as a candle, flashlight, or for other uses requiring an extended burn time.*

ASTM F402-1999, Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings

ASTM F405-2005, Specification for Corrugated Polyethylene (PE) Pipe and Fittings

ASTM F409-2002, Specification for Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings

ASTM F412-2006, Terminology Relating to Plastic Piping Systems

ASTM F429-2001, Test Method for Shock-Attenuation Characteristics of Protective Headgear for Football

ASTM F430-75 (R1999), Test Methods for Paper Used for Vacuum Cleaner Filter Bags

ASTM F431-1999, Specification for Air Performance Measurement Plenum Chamber for Vacuum Cleaners

ASTM F437-2006, Specification for Threaded Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80

ASTM F438-2004, Specification for Socket-Type Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40

ASTM F439-2006, Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80

*(Includes Change to Title)*

ASTM F441-1996, Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80

ASTM F441/F441M-1999, Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80

ASTM F442-1996 (R2005), Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)

ASTM F442/F442M-1999, Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)

ASTM F449-2002, Practice for Subsurface Installation of Corrugated Thermoplastic Tubing for Agricultural Drainage or Water Table Control

ASTM F477-2002, Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe

ASTM F480-2006b, Specification for Thermoplastic Well Casing Pipe and Couplings Made in Standard Dimension Ratios (SDR), (SCH 40 and SCH 80)

ASTM F481-1996 (R2002), Practice for Installation of Thermoplastic Pipe and Corrugated Tubing in Septic Tank Leach Fields

ASTM F492-1996, Specification for Propylene and Polypropylene (PP) Plastic-Lined Ferrous Metal Pipe and Fittings

ASTM F493-2004, Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings

ASTM F512-1995 (R2001), Specification for Smooth-Wall Poly(Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation

ASTM F513-2000, Safety Specification for Eye and Face Protective Equipment for Hockey Players

ASTM F539-2002, Practice for Fitting Athletic Footwear

ASTM F542-2002, Test Method for Exothermic Temperature of Encapsulating Compounds for Electronic and Microelectronic Encapsulation

ASTM F555-2006, Standard Test Method for Motor Life Evaluation of an Upright Vacuum Cleaner

*This test method covers motor life evaluation of household or commercial single and dual motor upright vacuum cleaners (uprights with separate motors for creating the vacuum and driving the floor brush). Self-propelled or power-assist cleaners are not within the scope of this test method.*

ASTM F585-1994 (R2000), Practice for Insertion of Flexible Polyethylene Pipe into Existing Sewers

ASTM F599-1996, Specification for Poly (Vinylidene Chloride) (PVDC) Plastic-Lined Ferrous Metal Pipe and Fittings

ASTM F608-2006, Laboratory Test Method for Evaluation of Carpet-Embedded Dirt Removal Effectiveness of Household Vacuum Cleaners

*This test method covers only a laboratory test for determining the relative carpet dirt removal effectiveness of household/commercial vacuum cleaners when tested under specified conditions.*

ASTM F609-1996, Test Method for Using a Horizontal Pull Slipmeter (HPS)

ASTM F610/F610M-2005, Test Method for Evaluating the Quality of Molded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings by the Heat Reversion Technique

ASTM F628-2006, Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core

ASTM F645-2004, Guide for Selection, Design, and Installation of Thermoplastic Water Pressure Piping Systems

ASTM F656-2002, Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings

ASTM F659-2006, Specification for Skier Goggles and Faceshields

*This specification shall include requirements for materials, lens size, optical properties, lens strength, field of vision, labeling, indentification, and testing procedures for goggles and faceshields for alpine skiers.*

ASTM F667-2006, Specification for Large Diameter Corrugated Polyethylene Tubing and Fittings

ASTM F670-2003, Specification for Tanks, 5- and 10-Gal (20- and 40-L) Lube Oil Dispensing

ASTM F677-2004, Test Method for Fluid and Grease Resistance of Thermoset Encapsulating Compounds Used in Electronic and Microelectronic Applications (10.02)

*(no abstract provided by developer)*

ASTM F679-2006, Specification for Poly(Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings

ASTM F681-82 (R2004), Practice for Use of Branch Connections

ASTM F682-82A (93, Specification for Wrought Carbon Steel Sleeve-Type Pipe Couplings

ASTM F682-82A (R1998), Specification for Wrought Carbon Steel Sleeve-Type Pipe Couplings

ASTM F683-2004, Practice for Selection and Application of Thermal Insulation for Piping and Machinery

ASTM F689-1997 (R2004), Practice for Determination of the Temperature of Above-Ground Plastic Gas Pressure Pipe within Metallic Casings

ASTM F690-1996 (R2003), Practice for Underground Installation of Thermoplastic Pressure Piping Irrigation Systems

ASTM F697-2000 (R2006), Practice for Care and Use of Athletic Mouth Protectors

ASTM F704-1981 (R2001), Practice for Selecting Bolting Lengths for Piping System Flanged Joints

ASTM F707/F707M-1981 (R2006), Specification for Modular Gage Boards

ASTM F708-1997 (R2004), Practice for Design and Installation of Rigid Pipe Hangers

ASTM F714-2006a, Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter

ASTM F717-1989 (R2006), Specification for Football Helmets

ASTM F718-2000 (R2005), Standard for Shipbuilders and Marine Paints and Coatings Product/Procedure Data Sheet

ASTM F721-81 (R2004), Specification for Gage Piping Assemblies

ASTM F722-82 (R2004), Specification for Welded Joints for Shipboard Piping Systems

ASTM F725-1989, Practice for Drafting Impact Test Requirements in Thermoplastic Pipe and Fittings Standards

ASTM F737-86 (R1998), Performance Specification for Ice Hockey Skate Blades

ASTM F758-1995 (R2000), Specification for Smooth-Wall Poly (Vinyl Chloride) (PVC) Plastic Underdrain Systems for Highway, Airport, and Similar Drainage

ASTM F760-1993, Specification for Food Service Equipment Manuals

ASTM F765-1993 (R2006), Specification for Wildcats, Ship Anchor Chain

ASTM F771-2005, Specification for Polyethylene (PE) Thermoplastic High-Pressure Irrigation Pipeline Systems

ASTM F781-1996, Specification for Perfluoro (Alkoxyalkane) Copolymer (PFA) Plastic-Lined Ferrous Metal Pipe and Fittings

ASTM F782-2001, Specification for Doors, Furniture, Marine

ASTM F783-88 (R2004), Specification for Staple, Handgrab, Handle, and Stirrup Rung

ASTM F794-2003, Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter

ASTM F803-2003, Specification for Eye Protectors for Use by Players of Racket Sports

ASTM F809/F809M-2000 (R2006), Specification for Large Diameter Polybutylene (PB) Plastic Pipe

ASTM F810-2001, Specification for Smoothwall Polyethylene (PE) Pipe for Use in Drainage and Waste Disposal Absorption Fields

ASTM F821-2001, Specification for Doors and Frames, Steel, Interior, Marine

ASTM F822-1993 (R2004), Specification for Chest of Drawers (Chiffonier), Steel, Marine

ASTM F823-1993 (R2004), Specification for Desk, Log, Marine, Steel, with Cabinet

ASTM F824-1993 (R2004), Specification for Tables, Mess, Marine, Steel

ASTM F825-1993 (R2004), Specification for Drawers, Furniture, Marine, Steel

ASTM F826-1994 (R2004), Specification for Tops, Furniture, Marine, Steel

ASTM F840-83 (R2004), Specification for Ladders, Fixed, Vertical, Steel, Ships

ASTM F841-84 (R2006), Specification for Thrusters, Tunnel, Permanently Installed in Marine Vessels

ASTM F845-1996, Specification for Plastic Insert Fittings for Polybutylene (PB) Tubing

ASTM F856-1997 (R2004), Practice for Symbols - Heating, Ventilation, and Air Conditioning (HVAC)

ASTM F869-2001, Definitions of Terms Relating to Athletic Shoes and Biomechanics

ASTM F876-2006, Specification for Crosslinked Polyethylene (PEX) Tubing

*This standard was listed for public review in the 8/11/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ASTM F877-2002, Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems

ASTM F885-1984 (R2006), Specification for Envelope Dimensions for Bronze Globe Valves NPS 1/4 to 2

ASTM F891-2004, Specification for Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core

ASTM F894-2006, Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drain Pipe

ASTM F905-2004, Practice for Qualification of Polyethylene Saddle Fusion Joints

ASTM F906-85 (R2004), Specification for Letters and Numerals for Ships

ASTM F910-2004, Specification for Face Guards for Youth Baseball

ASTM F913-2002, Specification for Thermoplastic Elastomeric Seals (Gaskets) for Joining Plastic Pipe

ASTM F914-2003, Test Method for Acoustic Emission for Insulated Aerial Personnel Devices

ASTM F936-1997, Specification for Chocks, Panama, Mooring Cast Steel

ASTM F937-1997, Specification for Chocks, Ship Mooring, Cast Steel

ASTM F940-2000 (R2005), Practice for Quality Control Receipt Inspection Procedures for Protective Coatings (Paint), Used in Marine Construction and Shipbuilding

ASTM F941-2000 (R2005), Practice for Inspection of Marine Surface Preparation and Coating Application

ASTM F948-1994 (R2006), Test Method for Time-to-Failure of Plastic Piping Systems and Components under Constant Internal Pressure with Flow

ASTM F949-2006a, Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings

ASTM F956-1991 (R2006), Specification for Bell, Cast, Sound Signaling

ASTM F957-1991 (R2006), Specification for Gong, Sound Signaling

ASTM F963-2003, Consumer Safety Specification on Toy Safety (15.07)

*Relates to possible hazards that may not be recognized readily by the public and that may be encountered in the normal use for which a toy is needed or after reasonably foreseeable abuse. It does not purport to cover every conceivable hazard of a particular toy.*

ASTM F985-2000 (R2006), Specification for Panama Canal Pilot Platform (Reinstatement)

ASTM F986-1997 (R2004), Specification for Suction Strainer Boxes

ASTM F987-2004, Specification for Portable Intermediate Flush Deck Stanchion

ASTM F991M-2004, Specification for Docking/drain Plug and Boss Assemblies (metric)

ASTM F992-1986 (R2006), Specification for Valve Label Plates

ASTM F993-1986 (R2006), Specification for Valve Locking Devices

ASTM F994-1986 (R2006), Specification for Design and Installation of Overboard Discharge Hull Penetration Connections

ASTM F998-2004, Specification for Centrifugal Pump, Shipboard Use

ASTM Z4822Z-1996, Test Method for Fire Testing of Real Scale Stacked Chairs (Ref. Z4822Z)

ASTM/ISO 10651-4-2002, Lung Ventilators - Part 4: Particular Requirements for Operator-powered Resuscitators

*refer to www.astm.org*

ASTM/ISO 10651-5-2006, Lung Ventilators For Medical use - Particular Requirements for Basic Safety and Essential Performance - Part 5: Gas-Powered Emergency resuscitators

*refer to www.astm.org*

ASTM/ISO 14031:1999, Environmental Management - Environmental Performance Evaluation - Guidelines

*Describes and gives guidance on the design and use of environmental performance evaluation within an organization. It is applicable to all organizations, regardless of type, size, location and complexity. This Standard does not establish environmental performance levels. It is not intended for use as a specification standard for certification or registration purposes or for the establishment of any other environmental management system conformance requirements.*

ASTM/ISO 14041:1998, Life Cycle Assessment - Inventory Analysis

*The standard describes and gives guidance on a general framework for the life cycle inventory analysis phase of life cycle assessment and the key features and inherent limitations of inventory analysis. It specifies requirements for conducting inventory analysis and the relationship of this to other LCA phases. Order from: webstore.ansi.org*

ASTM/ISO 14042:2000, Life Cycle Assessment - Impact Assessment

*The standard describes and gives guidance on a general framework for the life cycle impact assessment phase of life cycle assessment and the key features and inherent limitations of LCIA. It specifies requirements for conducting the LCIA phase and the relationship of this to other LCA phases. Order from: webstore.ansi.org*

ASTM/ISO 14043:2000, Life Cycle Assessment - Interpretation

*The standard provides requirements and recommendations for conducting the life cycle interpretation in LCA or LCI studies. It does not describe specific methodologies for the life cycle interpretation phase of LCI and LCA studies. Order from: webstore.ansi.org*

ASTM/ISO 14049-2000, Environmental Management - Life Cycle Assessment - Examples of Application of ISO 14041 to Goal and Scope Definition and Inventory Analysis

*The standard provides requirements and recommendations for conducting the life cycle interpretation in LCA or LCI studies. It does not describe specific methodologies for the life cycle interpretation phase of LCI and LCA studies. Available electronically through the ANSI Electronic Standards Store.*

ASTM/ISO 21647-2006, Medical Electrical Equipment - Particular requirements for the basic safety and essential performance of respiratory gas monitors

*REFER TO WWW.ASTM.ORG*

ASTM/ISO/IEC 17011-2004, Conformity Assessment - General Requirements for Accreditation bodies Accrediting Conformity Assessment Bodies

*refer to www.astm.org*

ASTM/ISO/IEC 17020-1998, General Criteria For the Operation of Various Types of Bodies Performing Inspection

*refer to www.astm.org*

ASTM/ISO/IEC 17024-2005, Conformity assessment - General requirements for bodies operating certification of persons

*ISO/IEC 17024:2003 specifies requirements for a body certifying persons against specific requirements, including the development and maintenance of a certification scheme for personnel.*

IEEE/ASTM SI 10-2002, Standard for Use of the International System of Units (SI):

The Modern Metric System

*REFER TO WWW.ASTM.ORG*

## ATA (ARCNET Trade Association)

ANSI/ATA 878.1-1999, ARCNET Local Area Network: Token Bus (2.5 MBPS)

*Specifies the formats and protocols used by the 878.1 token passing bus medium access control (MAC) sublayer and physical (PHY) layer. It defines the basic ARCNET technology and recommends certain practices that increase reliability and interoperability. The standard has been revised to add alternate data rates.*

## ATIS (Alliance for Telecommunications Industry

ANSI ATIS 0100001-2004, User Plane Security Guidelines and Requirements for ETS

*This Standard provides guidelines and requirements for security aspects of ETS communications relevant to the user plane. The user plane consists of those aspects related to the user and includes what is called the bearer plane. Security of the other planes in the telecommunications network model, i.e., the signaling and control plane, and the management plane is not within the scope of this Standard. Non-traceability and the impacts on performance of security for ETS are also outside the scope of this document and may be addressed in future documents.*

ANSI ATIS 0100005-2006, Auditory Non-Intrusive Quality Estimation Plus (ANIQUE+): Perceptual Model for Non-Intrusive Estimation of Narrowband Speech Quality

*This American National Standard (ANS) describes Auditory Non-Intrusive QUality Estimation Plus (ANIQUE+) objective model, which can be used to estimate the subjective quality of telephone band speech. This ANS can be used to estimate the listening quality of one-way speech transmission. This objective testing method was developed to predict the quailty that would be obtained by subjective listening tests using the Absolute Category Rating (ACR) method at a standard listening level of 79 dB SPL (as per ITU-T P.800 and P.830.*

ANSI ATIS 0100801.04-2005, Telecommunications - Multimedia Communications Delay, Synchronization, and Frame Rate

*This standard covers test methodologies for multimedia transmission systems utilizing digital transport facilities. It gives a set of measurement parameters, without providing limits, to characterize the following aspects of system performance: a) Active Video Frame inter-arrival time, which is the reciprocal of the elementary frame rate; b) Visual channel transmission time, also called video delay; c) Audio channel transmission time (or audio delay); d) Data channel transmission time or delay (and frame inter-arrival time); e) Temporal synchronization between channels.*

ANSI ATIS 0150200-2005, System M-NTSC Television Signals - Network Interface Specifications and Performance Parameters

*This standard covers interface and performance specifications of television transmission service channels. Hypothetical reference channels have been defined and utilized to apportion performance parameters. Television signals created or transmitted in accordance with other standards or make-ups may not necessarily be compatible with the specifications of the standard.*

ANSI ATIS 0152100-2005, Packet Loss Concealment for Use with ITU-T Recommendation G.711

*To provide high-quality speech transmission in packetized systems that use G.711 and in which packet loss may occur, high quality methods for recovering from packet loss are required.*

ANSI ATIS 0300002-2005, XML Schema Interface for POTS Service Test

*This standard provides an XML schema information model for POTS Service Test based on ANSI T1.262 and an XML schema interface for POTS Service Test function specified in the same ANSI standard.*

ANSI ATIS 0300003.a.-2006, Supplement to ATIS-0300003.2005 - XML Schema Interface for Fault Management (Trouble Administration)

*This supplement changes the definitions for: AdditionalTroubleinfoItem, TimeIntervalType, TRNameBindingIdType, GraphicStringType. The rationale behind these changes will be addressed in the appropriate sections of the document.*

ANSI ATIS 0300003-2005, XML Schema Interface for Fault Management (Trouble Administration)

*This standard provides an XML schema information model for Trouble Administration based on ANSI T1.227/228 and an XML schema interface for Trouble Administration functions and services specified in the same ANSI standards.*

ANSI ATIS 0300074-2006, Guidelines and Requirements for Security Management Systems

*This document describes the functional requirements of a security management system (SMS) that offers a central view and control that oversees the security of a Telecommunications Service Provider's (TSP's) infrastructure. The SMS provides for the management of Management Plane Security, Control Plane Security, and User Plane Security.*

ANSI ATIS 0300075.1-2006, Usage Data Management for Packet-Based Services - Service-Neutral Protocol Specification for Billing Application

*The focus of this specification is on service-neutral protocol (for usage data management of packet-based services) that will satisfy the requirements of core billing applications (see ATIS-0300075, Usage Data Management for Packet-Based Services--Service-Neutral Architecture and Protocol Requirements.*

ANSI ATIS 0300202.a.-2005, Internetwork Operations - Guidelines for Network Management of the Public Telecommunications Networks under Disaster Conditions, to clarify call precedence strategy from Section 5.3

*Implementation of the following strategies should help optimize the integrity of the network while obtaining the maximum use of network capability: inhibit switching congesting, optimize facilities, reroute traffic, and invoke national security emergency preparedness procedures.*

ANSI ATIS 0300213-2006, Coded Identification of Equipment Entities of the North American Telecommunications System for Information Exchange

*This standard provides the structure and the coded representation of equipment entities. When used in conjunction with associated records, the Equipment Entity codes are intended: a) to identify equipment included within circuit details exchanged between telecommunications carriers; b) as an identification to be marked on manufactured equipment according to customer requirements, within the framework of this standard; and c)as an aid in identifying equipment engineered or furnished by manufacturers and suppliers.*

ANSI ATIS 0300228-2006, OAM&P - Services for Interfaces between Operations Systems across Jurisdictional Boundaries to Support Fault Management (Trouble Administration)

*This standard is the first in a series of standards that specify interface requirements between Operations Systems (OSs) across jurisdictional boundaries. It descrives a set of Fault Management functional area services for OAM&P applications.*

ANSI ATIS 0300232-2006, Human-to-Machine Interface Specification for Telecommunications Management

*The original T1.232-1996 provided informatioin on a wide range of topics germane to the design of HMIs. Subsequent work in the Telemanagement Forum and the ITU-T went into more detail in several important and specific areas. This work resulted in the three ITU-T standards referenced in this document (see Section 3). These three ITU-T Recommendations should be employed directly for Human Machine Interface design in telecommunication management applications. In order to maintain the valuable information contained in ANSI T1.232-1996 (R2001) and connect it to the ITU-T standards this pointer document was created with the original text in an informational appendix.*

ANSI ATIS 0300236-2005, Signaling System 7 (SS7) - ISDN User Part Compatibility Testing

*This standard addresses the testing required for internetwork connections employing Common Channel Signaling (CCS) based on Signaling System No. 7 (SS7) protocol used in North America. The internetwork connection may be either within or between North American countries. This standard provides a list of test scripts for testing compatibility between the interconnecting networks of the ISDN User Part (ISUP) of the SS7 protocol used for call control and circuit supervision. This standard referenced material in ANSI T1 SS7 protocol standards.*

ANSI ATIS 0300269-2006, Structure and Representation of Trace Message Formats for Information Exchange

*This standard identifies the structure and the coded representation for trace message formats. Specifically, trace message formats are described in a manner that makes them independent of transmission layer or technology--e.g., SONET, SDH, optical. Application of this standard to optical networks is for further study.*

ANSI ATIS 0300276.a.-2005, Operations, Administration, Maintenance, and Provisioning - Security Requirements for the Public Telecommunications Network: A Baseline of Security Requirements for the Management Plane, to add requirements to support Packet Filtering

*To protect the management infrastructure, and the DCN in general, it is useful for the network operator to discard certain packets received from outside the perimeter of the DCN (i.e. from peers and customer.*

ANSI ATIS 0322000-2005, Representation of the Communications Industry Manufacturers, Suppliers, and Related Service Companies for Information Exchange

*This standard identifies the structure and the coded format representation of identifying the manufacturers, suppliers, and related service companies that provide products to the communications industry.*

ANSI ATIS 0325300-2005, Identification of Location Entities for Information Exchange

*This standard is intended for general use to*

*provide a common method of identification of location entities, in order to help ensure that unambiguous exchange and interpretation of information. The code described in this standard is intended to be used for information exchange between humans, between humans and machines, and between machines.*

ANSI ATIS 0326400-2004, Telecommunications - Operations, Administration, Maintenance, and Provisioning (OAM&P) - Model for Alarm Synchronization

*This alignment effort consists of adopting ITU-T Recommendation Q.821 to replace the previously published (1999) version of T1.264.*

ANSI ATIS 0326600-2005, Telecommunications - Information Interchange - Structure for the Identification of Telecommunications Circuits for the North American Telecommunications System

*This standard addresses the code and format structures for identifying message trunks, message trunk groups and special services circuits.*

ANSI ATIS 0326800-2004, Telecommunications - TMN - PKI - Digital Certificates and Certificate Revocation Lists Profile

*This alignment effor consists of adopting ITU-T Recommendation Q.817 to replace the previously published (2000) version of T1.268.*

ANSI ATIS 0327000-2004, Telecommunications - CORBA Generic Network and NE Level Information Model

*This alignment effort consists of adoting ITU-T Recommendation M.3120 ro replace the previously published (2000) version of T1.270.*

ANSI ATIS 0327100-2004, Telecommunications - Framework for CORBA-Based Telecommumications Management Network Interfaces

*This alignment effort consists of adopting ITU-T Recommendations Q.816, Q.816.1, X.780, and X.780.1 to replace the previously published (2000) version of T1.271.*

ANSI ATIS 0600004-2006, Equipment Surface Temperature

*The surface temperature considerations and criteria in this standard are applicable to network equipment intended to be installed in environmentally controlled telecommunications network facilities. Examples of such locations are Central Offices, controlled Environmental Vaults, and aboveground Huts. This standard does not apply to auxiliary monitoring equipment such as ocsilloscopes, personal computers, portable test equipment, etc. which are not integral to the equipment. It also does not apply to network equipment that is designed for use solely in an outside plant cabinet/enclosure or equipment intended to be located solely at a customer premises location.*

ANSI ATIS 0600005-200x, Acoustic Measurement

*This standard identifies sound power as the preferred method of measuring the emission of acoustic noise from telecommunications equipment. The main focus is to use sound power to gain repeatabiltiy and accuracy over sound pressure methods. This standard will also provide the emission limits for the temperature-controlled environment (i.e. Central Office, data centers) for the North American environment.*

ANSI ATIS 0600006-2006, Mechanical Structure

*This standard is part of a suite of standards and provides the physical technical requirements for telecommunications equipment systems and assemblies intended for installation in network equipment buildings, equipment areas within buildings, electronic equipment enclosures such as controlled environmental vaults, outside electronic equipment cabinets, and customer locations. Please note: This standard (ATIS-0600006) along with ATIS-0600005 and ATIS-0600004, together, supercedes that of T1.304-1997.*

ANSI ATIS 0600318-2005, Electrical Protection Applied to Telecommunications Network Plant at Entrances to Customer Structures or Buildings

*This standard covers the electrical protection to be applied to telecommunications network plant at entrances to customer structures or buildings. Electrical protectioin refers to the application of electrical protection devices, such as primary protectors and fuse links, and to the bonding and grounding of the telecommunications network plant and primary protectors. The electrical protection, bonding, and grounding criteria presented in this standard are intended to assist in protecting persons and property from the effects of lightning, electrical power system faults, and Electromagnetic Interference (EMI) on the telecommunications network plant.*

ANSI ATIS 0600321-2005, Telecommunications – Electrical Protection for Network Operator-Type Equipment Positions

*This standard covers new installations of network operator-type equipment positions in which personnel are required to access a computer terminal keyboard while continually wearing a headset.*

ANSI ATIS 0600332-2005, Telecommunications – Electrical Protection of Broadband Facilities

*The electrical protection, bonding and grounding measure presented in this standard are intended to assist in protecting persons, equipment and property from the effects of lightning, commercial ac power system faults and electromagnetic interference (EMI) on the Network-powered broadband facilities.*

ANSI ATIS 0600401-2006, Network to Customer Installation Interface - Analog Voicegrade Switched Access Lines Using Loop-Start and Ground-Start Signaling

*This standard provides the signaling requirements associated with analog voicegrade switched access lines that use loop-start and ground-start signaling. In this standard, the public switched network is referred to as the Network and the customer premises cabling and equipment is referred to as the Customer Installation (CI.*

ANSI ATIS 0600404.a-2005, Network and Customer Network Interfaces - DS3 Metallic Interfaces Specification

*The M13/M23 Multiplex application provides as optional in-band method for activating a line loopback for trouble isolation. Use of an NIU on the carrier side of the network interface is optional at the discretion of the carrier. Support of the NIU in-band line loopback methodology is also optional at the discretion of the carrier. If NIU in-band line loopback is supported, the following method shall be used.*

ANSI ATIS 0610700a-2005, Digital Hierarchy - Formats Specification (Virtual Concatenation and LCAS)

*This supplement to T1.107-2002 adds the virtual concatenation applications for DS1 and DS3 signals. These virtual concatenation applications include the Link Capacity Adjustment Scheme (LCAS.*

ANSI ATIS 0700004-2005, High Capacity-Spatial Division Multiple Access (HC-SDMA

*This document defines the radio (RF), Physical Layer (PHY), Medium Access Control (MAC), and Layer 3 (L3) specifications for the HC-SDMA (High Capacity-Spatial Division Multiple Access) protocol. This specification does not address functionality at the service and application layers. Typical deployments are expected to use a standardized data netowrking access paradigm, such as L2TP and PPP.*

ANSI ATIS 0700713-2006, Personal Communications Services (PCS 1900) - Specifications

*The purpose of this standard is to provide the North American PCS industry with information on the PCS1900 technology to ensure interoperability between equipment. This standard includes the core standards for PCS1900 which are the Air Interface, A-Interface, and MAP Specifications and these specifications also provide support for the 3-digit MNC and the Enhanced Full Rate (EFR) Vocoder. This standard also supports features for GPRS (General Packet Radio Service), Number Portability (NP), Customized Application for Mobile Network Enhanced Logic (CAMEL) and Location Services (LCS.*

ANSI ATIS 0900101-2006, Synchronization Interface Standard

*This standard describes and specifies synchronization-related performance parameter for digital networks. The specifications apply to network interfaces carrying synchronization references, which can be DS1 or SONET optical carrier (OC-N) signal.*

ANSI ATIS 0900119-2006, Synchronous Optical Network (SONET) - Operations, Administration, Maintenance, and Provisioning (OAM&P) Communications

*This document provides a pointer to the international standard for the SDH (synchronous digital hierarchy) management information model that should be employed directly as a management information model for SONET. Prior provisions (now deprecated) of T1.119 (1994) are provided as informational Annex I to document the operation of legacy installations.*

ANSI ATIS 0900119.01-2006, Telecommunications – Synchronous Optical Network (SONET) – Operations, Administration, Maintenance, and Provisioning (OAM&P) Communications – Protection Switching Fragment

*This document provides a pointer to the international standard for the SDH (synchronous digital hierarchy) management information model for Multiplex Section Protection Switching (the international equivalent of SONET linear APS) that should be employed directly as a management information model for management of SONET linear APS. Prior provisions (now deprecated) of T1.119.01 (1995) are provided as informational Annex I to document the operation of legacy installations.*

ANSI ATIS 0900119.02-2006, SONET: OAM&P - Communications - Performance Management Fragment

*This document provides a pointer to the international standard for the SDH (synchronous digital hierarchy)management information model for performance management that should be employed directly for performance management of SONET. Prior provisions (now deprecated) of T1.119.02 (1998) are provided as informational Appendix I to document the operation of legacy installations.*

ANSI ATIS 1000006-2005, Signalling System No. 7 (SS7) - Emergency Telecommunications Service (ETS

*To ensure that a survivable and enduring National Security/Emergency Preparedness (NS/EP) telecommunications capability is available during emergencies, the U.S. government has endorsed the development and adoption of standards to support increased call completion capabilities for critical users. The Emergency Telecommunications Service (ETS) would be applied during the call setup by providing an identifier for those calls in the SS7 network protocol.*

ANSI ATIS 1000007-2006, Generic Signaling and Control Plane Security Requirements for Evolving Networks

*This document addresses generic signaling and control plane security aspects of evolving telecommunications networks. Evolving telecommunications networks often combine legacy telecommunication facilities with new technologies such as Wireless, ATM, and Internet Protocol transport Mechanisms. The security recommendations given in this document apply to service provider networks and may also be applicable to individual company corporate enterprise networks.*

ANSI ATIS 1000008-2006, ANSI Extensions to Q.1980.1 - The Narrowband Signaling Syntax (NSS)

*This standard specifies extensions to ITU-T Recommendation Q.1980.1, Narrowband Signaling Syntax (NSS), which specifies a flexible encoding syntax of narrowband signaling information to be transferred in protocols that cannot inherently transfer such information.*

ANSI ATIS 1000009-2006, IP Network-to-Network Interface (NNI) Standard for VoIP

*This standard defines the IP Network-to-Network Interface (NNI) for VoIP between carriers. It addresses the need for a standard interface as telecom networks migrate the NNI from circuit switched to IP. The focus of this standard is to support VoIP.*

ANSI ATIS 1000010-2006, Support of Emergency Telecommunications Service (ETS) in IP Network

*This document defines the procedures and capabilities required to support Emergency Telecommunications Service (ETS) within and between Internet Protocol (IP) based service provider network.*

ANSI ATIS 1000012-2006, Signaling System No. 7 (SS7) - SS7 Network and NNI Interconnection Security Requirements and Guidelines

*This document is part of a suite of signaling and control security standards. Figure 1 illustrates the relationships among these standards. The scope of this document is a Signaling System No.7 (SS7) Network, and SS7 network interconnections. This includes interconnection to other SS7 networks and to multimedia signaling and control networks such as SIP and H.323 networks. Specifically, this document provides security requirements and guidelines for a Signaling System No.7 (SS7) network and its network interconnections.*

ANSI ATIS 1000019-2007, Network to Network (NNI) Standard for Signaling and Control Security for Evolving VoP Multimedia Networks

*This document specifies Voice over Packet and Multimedia signaling and control plane security requirements for evolving networks. This standard presents detailed security requirements for VoP and Multimedia signaling and control services that cross the Network to Network Interfaces (NNI.*

ANSI ATIS 1000111-2005, Signalling System Number 7 (SS7) - Message Transfer Part (MTP)

*The overall objective of the SS7 Message Transfer Part (MTP) is to provide an internationally standardized general purpose common channel signaling system that provides a reliable means of transfer of information in correct sequence and without loss or duplication.*

ANSI ATIS 1000112.a.-2006, Subsystem Number Assignment Guidelines

*This addendum to ATIS-1000112.2005 specifies a range of ANSI specific SS7 Subsystem Numbers and administrative procedures for requesting assignment of such code points.*

ANSI ATIS 1000112-2005, Signalling System Number 7 (SS7) - Signalling Connection Control Part (SCCP)

*The Signalling Connection Control Part (SCCP) provides additional functiona to the Message Transfer Part (MTP) to provide both connectionless as well as connection-oriented network services to transfer circuit-related and non-circuit related signalling information and other types of information between exchanges and specialized centers in telecommunication networks (e.g., for management and maintenance purposes) via a Signalling System No. 7 (SS7) network.*

ANSI ATIS 1000113-2005, Signalling System No. 7 (SS7) - Integrated Services Digital Network (ISDN) User Part

*The Integrated Services Digital Network (ISDN) User Part (UP) defines the protocol which supports the signalling functions required to provide voice and non-voice services in an Integrated Services Digital Network.*

ANSI ATIS 1000607.a.-2006, Supplement to T1.607-2000 (R2004

*This supplement to T1.607-2000 (R2004() addresses alignment to T1.607-2000 (R2004), with ITU-T Q.931 for V.32 and V.4 Modem Types.*

ANSI ATIS 1000631-2005, Signalling System No. 7 (SS7) - High Probability of Completion (HPC) Network Capability

*The High Probability of completion (HPC) network capability would be applied during the call setup of NS/EP calls by providing for an identifier for those calls in the SS7 network protocol.*

ANSI ATIS 1000678-2006, Lawfully Authorized Electronic Surveillance (LAES) for Voice over Packet Technologies in Wireline Telecommunications Networks

*The purpose of this Standard is to facilitate a TSP's compliance with the assistance capability requirements defined in Section 103 of CALEA [Ref 1]. This Standard defines capabilities to support LAES and the interfaces to deliver intercepted communications and reasonably available call-identifying information to an LEA when authorized. This Standard also defines a protocol for delivering content and call identifying information to LEA's. Compliance with this Standard addresses the "safe harbor" provisions of Section 107 of CALEA [Ref 1] and helps ensure efficient and industry-wide implementation of capabilities to assist LEAs.*

ANSI O5.1-2002, Wood Poles – Specifications and Dimensions

*This standard provides minimum specifications for quality and dimensions of wood poles that are to be used in single-pole utility structures.*

ANSI O5.1a-2003, Wood Products - Specifications and Dimensions

*This standard provides minimum specifications for quality and dimensions of wood poles that are to be used in single-pole utility structures.*

ANSI O5.1b-2003, Specifications and Dimensions

*To update a requirement for Chilean radiata pine for kiln drying.*

ANSI O5.1c-2004, Supplement to ANSI O5.1-2002- Wood Poles - Structural Glued Laminated Timber for Utility Structures

*Updates to O5.1-2002 for modifications to Tables 1, 6, 6M, and C.1 for radiata pine.*

ANSI O5.2-2006, Structural Glued Laminated Timber for Utility Structures (for Wood Products)

*Requirements for manufacturing and quality control of structural glued laminated timber of Southern Pine, Coast Region Douglas Fir, Hem Fir and other species of similar treatability for electric power and communication structures.*

ANSI O5.3-2002, Wood Products – Solid Sawn Wood Crossarms and Braces – Specifications and Dimensions

*Consists of specifications covering solid sawn-wood crossarms and braces manufactured from coastal Douglas-fir (Pseudotsuga menziesii - variety menziesii) grown in the West Coast region, i.e., from the summit area of the Cascade Mountains of Washington and Oregon and from California; and from dense Southern pine of the following species: longleaf pine (Pinus palustris), shortleaf pine (Pinus echinata), loblolly pine (Pinus taeda), and slash pine (Pinus elliottii). The specifications are intended to cover communications crossarms, power crossarms, heavy-duty crossarms, and heavy-duty braces. Crossarms are intended primarily for use as beams. Heavy-duty crossarms may also be used as struts or columns in braced H-frames. Braces*

ANSI T1.102-1993 (R2005), Telecommunications – Digital Hierarchy – Electrical Interfaces

*The North American digital network is made up of sources of digital signals, including channel banks, digital switches, and multiplex equipment, interconnected by transmission facilities. These operate at several different bit rates. At any one level in the digital hierarchy there may be several signal sources with unique bit stream formats, but these need to have certain common characteristics to permit interconnection with transmission facilities at that level and with multiplex equipment connecting to a higher level.*

ANSI T1.102.01-1996 (R2001), Telecommunications – Digital Hierarchy – VT1.5 Electrical Interface

*Provides VT1.5 electrical interface specifications. The VT1.5 electrical interface line symbol rate is the same ternary 1.544-Mbaud rate used for existing DS1. However, the VT1.5 electrical interface is unique in that it replaces the traditional AMI and B8ZS DS1 line codes with a more efficient hybrid line coding scheme for the mapping of 2.056 Mbit/s binary information into a ternary 1.544-Mbaud DS1 line.*

ANSI T1.104-1991 (R2003), Telecommunications – Exchange-Interexchange Carrier Interfaces – Individual Channel Signaling Protocols

*Eenables a wireline exchange carrier (EC) entity and an interexchange carrier (IC), international carrier (INC), or consolidated carrier entity to provide interconnecting equipment that operates compatibly. This standard gives individual-channel signaling protocol requirements for the interface located between a public-switched EC network within an access area and an IC, INC, or consolidated carrier network.*

ANSI T1.105-2001, Telecommunications - Synchronous Optical Network (SONET) - Basic Description Including Multiplex Structures, Rates, and Formats

*Describes a base rate and format along with a multiplexing scheme that will result in a modular family of rates and formats available for use in optical interfaces. Supplement T1.105a adds definitions and references for FDDI; extends the definition of the payload identifier (signal label) fields in the path overhead for STS and VT level mappings of the SONET digital hierarchy; adds the definition of a new Super-Rate mapping to 12.3 for asynchronous transport of FDDI (ISO 9314) physical layer data at 125,000 Megabits per second, and adds figure 61a to illustrate this.*

ANSI T1.105.01-2000 (R200x), Telecommunications – Synchronous Optical Network (SONET) – Automatic Protection Switching

*This document describes the protection switching protocols and algorithms for optical interfaces referred to as SONET. The SONET optical interface standard is specified in American National Standard for Telecommunications - Digital Hierarchy - Synchronous Optical Network (SONET) - Basic description including multiplex structures, rates, and formats, T1.105-1995. In its initial version, this standard addresses protection switching for linear 1+1 and 1:n topologies, and bidirectional line-switched ring network topologies. Nested protection is for further study.*

ANSI T1.105.02-2001, Telecommunications – Synchronous Optical Network (SONET) – Payload Mappings

*Describes standard mappings of digital hierarchy and non-digital hierarchy signals into the various SONET synchronous payload envelopes defined in ANSI T1.105. This standard was listed for public review in the 12/31/1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI T1.105.02a-2002, Telecommunications - Synchronous Optical Network (SONET) - Payload Mappings (Mappings for GFP-based Signals)

*Provides the mapping information for tributary signals comprised of Generic Framing Procedure frames.*

ANSI T1.105.03-2003, Telecommunications – Synchronous Optical Network (SONET) - Jitter and Wander at Network and Equipment Interfaces

*This revised standard describes the jitter specifications that are applicable to SONET network and equipment interfaces (OC-N and STS-N), and jitter and wander specifications that are applicable to certain SONET payload signals (e.g., DS1 and DS3). This revision of the standard includes what was in the previous version of T1.105.03, T1.105.03 supplement A and T1.105.03 supplement B. It also updates the jitter specifications to include the SONET OC-192 interface.*

ANSI T1.105.04-1995 (R2005), Telecommunications – Synchronous Optical Network (SONET) – Data Communication Channel Protocols and Architectures

*This document describes the usage and communications protocol stack to be employed on the Section and Line Data Communications Channels (DCC) that are part of the SONET format. The intent is to provide a channel that meets currently defined needs and can also accept additional functions in the future. In addition, the protocol is specified such that the data communications channel can function as an integral part of the Telecommunications Management Network (TMN) as specified in ANSI and ITU-T documents.*

ANSI T1.105.05-2002, Telecommunications – Synchronous Optical Network (SONET) – Tandem Connection Maintenance

*Establishes specifications for Tandem Connection Monitoring using the optical interface standard specified in "American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Basic Description Including Multiplex Structures, Rates, and Formats," ANSI T1.105-2001. This standard defines the contents and use of the Tandem Connection Monitoring bytes within the SONET signal. Tandem Connection Monitoring provides enhanced maintenance capabilities for certain SONET applications.*

ANSI T1.105.06-2002, Telecommunications – Synchronous Optical Network (SONET): Physical Layer Specifications

*This standard describes a technical compatibility standard specification for a digital transmission interface. For optical applications, it addresses very short reach, short reach, intermediate reach, and long reach optical parameters at specific reference points (located close to the transmitter and receiver) in a manner consistent with ITU-T Recommendations G.957, G.691, and G.693. Except for OVTG, OC-1, and OC-24, all technical specifications are included in those ITU-T Recommendations.*

ANSI T1.105.07-1996 (R2005), Telecommunications - Synchronous Optical Network (SONET) - Sub STS-1 Interface Rates and Formats Specification

*This document describes the rates, formats, and transport overhead for interfaces referred to as SONET with a rate less than STS-1. Specifically, the additional transport overhead is defined that allows the transport of virtual tributary (VT) payloads at the VT1.5 and VT Group level across an interface. The SONET optical interface standard is defined in American National Standard for Telecommunications - Digital Hierarchy - Optical Interface Rates and Formats Specifications (SONET), ANSI T1.105-1995, although the interfaces defined in this docuemtn are nto restricted to either electrical or optical signals at the physical layer.*

ANSI T1.105.07a-1997 (R2003), Telecommunications - Synchronous Optical Network (SONET) - Sub STS-1 Interface Rates and Formats Specification (Inclusion of N X VT Group Interfaces)

*This supplement expands the range of sub STS-1 interfaces to include payloads that are multiples of the VT Group. Specifically, sub STS-1 payloads of N x VT Group shall be allowed with N = 1-5, inclusive. The same single column of Line overhead is used regardless of the value of N that is used.*

ANSI T1.105.08-2001 (R2005), Telecommunications - Synchronous Optical Network (SONET) - In-Band Forward Error Correction Code Specification

*This standard is for In-band Forward Error Correction (FEC) where the FEC check bits and status/control bits are carried within the existing Synchronous Optical NETwork (SONET) overhead. The scope of this standard is OC-48 and OC-192 SONET. Extensions to future higher rate systems are for further study.*

ANSI T1.105.09-1996 (R2002), Telecommunications – Synchronous Optical Network (SONET) – Network Element Timing and Synchronization

*Describes and specifies the minimum synchronization-related performance parameters for SONET network interfaces. These specifications apply to all electrical and optical SONET network interfaces as defined in ANSI T1.105, whereas ANSI T1.101 applies only to network interfaces for carrying synchronization between carriers.*

ANSI T1.105a-2002, Telecommunications - Synchronous Optical Network (SONET) - Basic Description including Multiplex Structure, Rates, and Formats (Link Capacity Adjustment Scheme (LCAS) Clarification and Signal Label Correction)

*This supplement provides revised text for the description of the Link Capacity Adjustment Scheme (LCAS).*

ANSI T1.107-2002 (R2006), Telecommunications – Digital Hierarchy – Formats Specifications

*Standard specifies digital hierarchy format requirements. Standard shall be used in conjunction with T1.102-1993 (R1999). May be updated in the future to be applicable to any layer-one application at other rates and formats.*

ANSI T1.109-1990 (R2004), Telecommunications – Exchange-Interexchange Carrier Interfaces – 950+XXXX EC-to-IC Access Signaling Protocols

*Enables an exchange carrier (EC) entity and an interexchange carrier (IC), international carrier (INC), or consolidated carrier entity to provide interconnecting equipment that operates compatibly.*

ANSI T1.110-1999 (R2005), Telecommunications – Signalling System No. 7 (SS7) – General Information

*ANSI T1.110-1999 was originally based on the 1988 Blue Book specification of Signalling System No.7 (SS7) for international use issued by the CCITT Study Group XI (Vol. VI Fascicles VI.7 and VI.8) and is intended to be generally compatible with the standard and its successors. It has been appropriately modified for use within and between U.S. networks to meet the anticipated needs and applications of those entities. In general these modifications fall into two categories: 1. The specification of options designated by the ITU-T (formerly CCITT) for national use; 2. Extentions to the 1992 protocol to provide for new applications of the SS7 protocol.*

ANSI T1.111a-2002, Numbering of Signalling Point Codes

*Describes the numbering scheme of signalling point codes for ANSI Common Signalling (CCS) System Number 7 (SS7) networks.*

ANSI T1.113b-2001, Telecommunications - Signaling System No. 7, ISDN User Part

*Revises ANSI T1.113-2000 to reflect the desired values of the SAP feature code indicator entries for Intercept - Trouble and Intercept - Blank Number.*

ANSI T1.113b-2001, Telecommunications - Signaling System No. 7, ISDN User Part

*Revises ANSI T1.113-2000 to reflect the desired values of the SAP feature code indicator entries for Intercept - Trouble and Intercept - Blank Number.*

ANSI T1.114-2004, Telecommunications – Signalling System Number 7 (SS7) – Transaction Capabilities Application Part (TCAP)

*This standard specifies Transaction Capabilities (TC) for Signalling System 7 (SS7). This specification is intended to provide, in an open-ended manner, the capabilities needed to support present and near-term ISDN and non ISDN services requiring transactions among exchanges, service control points, and databases.*

ANSI T1.116-1996 (R2005), Telecommunications - Signalling System Number 7 (SS7) - Operations, Maintenance, and Administration Part (OMAP)

*This series of standards on the Operations, Maintenance, and Administration Part (OMAP) define the functions, procedures, and entities for managing the Signalling System Number 7 (SS7) network.*

ANSI T1.116-2000, Telecommunications - Signalling System Number 7 (SS7) - Operations, Maintenance and Administration Part (OMAP)

*This Standard is based on the ITU-T Recommendations Q.750 through Q.756 of Signalling System No. 7 (SS7) for international use and is intended to be compatible with that standard. It has been modified for use within and between U.S. Networks to meet the anticipated needs and applications of those entities. In general, these modifications fall into two categories:*
*(1) The specification of options designated by the ITU-T for national use and*
*(2) Extensions to the 1988 protocol to provide for new applications of the SS7 protocol. This is in accordance with current and projected ITU-T activity. An electronic copy of this standard can be found at URL: ftp://ftp.t1.org/pub/ansi/bsr8/lb867.pdf*

ANSI T1.118-1992 (R2005), Telecommunications – Signalling System Number 7 (SS7) – Intermediate Signalling Network Identification (ISNI)

*The Intermediate Signalling Network Identification (ISNI) capability allows an application process in the origination network to specify intermediate signalling networks(s) for non-circuit-associated signalling messages, or to notify an application process in the destination network about such intermediate signalling network(s), or to do both. ISNI may be invoked by a variety of services.*

ANSI T1.202-2004, Telecommunications – Internetwork Operations – Guidelines tor Network Management of the Public Switched Networks Under Disaster Conditions

*These guidelines encompass the cooperative intercompany network management actions (that may be) required during emergency conditions associated with disasters that threaten life or property and cause congestion in the public telecommunications networks. These guidelines address the network actions required to relieve congestion in the public telecommunications networks caused by traffic overload and/or failure resultng from the disaster conditions.*

ANSI T1.204-1997 (R2003), Telecommunications - Operations, Administration, Maintenance, and Provisioning (OAM&P) - Lower-Layer Protocols for Telecommunications Management Network (TMN) Interfaces, Q3 and X Interfaces

*Part of a series of American National Standards specifying Telecommunications Management Network (TMN) requirements. Specifically, this document addresses the lower-layer protocols for use with TMN entities. TMN entities include Operations Systems (OSs), Mediation Devices (MDs), Network Elements (NEs), and Data Communication Networks (DCNs). This standard describes protocols for the Physical, Data Link, Network, and Transport layers and defines a set of protocol profiles for use in TMN entities.*

ANSI T1.206-2001 (R2005), Telecommunications – Digital Exchanges and PBXs – Digital Circuit Loopback Test Line with N X DS0 Capability

*In order to carry out maintenance in the public switchede telephone network of switched 64-kbit/s digital circuits, digital circuits at sub-rates of 64-kbit/s, and N DSO digital circuits (up to the maximum payload of a primary rate facility), a digital circuit test system is defined for digital exchanges and digital PBXs. Currently, only digital loopback testing is defined in this standard. Further study is required to develop other types of digital test lines (e.g., responder type testing).*

ANSI T1.207-2000 (R2004), Telecommunications – Operations, Administration, Maintenance, and Provisioning (OAM&P) – Terminating Test Line Capabilities and Access Arrangements

*Describes types of terminating test lines and their operational functions, and provides numbering plan arrangements to access these capabilities for testing across interconnections in the public switched network.*

ANSI T1.208-1997 (R2003), Telecommunications - Operations, Administration, Maintenance, and Provisioning (OAM&P) - Upper-Layer Protocols for Telecommunications Management Network (TMN) Interfaces, Q3 and X Interfaces

*Part of a series of standards that specifies interface requirements between OSs and NEs. It is intended to provide for the exchange of messages between Operations Systems (OSs) and Network Elements (NEs) for control, coordination, and monitoring of the Telecommunications Network.*

ANSI T1.209-2003, Telecommunications - Operations, Administration, Maintenance, and Provisioning (OAM&P) - Network Tones and Announcements

*This standard provides guidelines intended to standardize the application of tones and announcements to differentiate ineffective call conditions. This standard also provides guidelines to be used as a basis for the provisioning of tones and announcements in a Signaling System Number 7 (SS7) environment by interconnecting networks (ICNs).*

ANSI T1.210-2004, Telecommunications – Operations, Administration, Maintenance, and Provisioning (OAM&P) – Principles of Functions, Architectures, and Protocols for Telecommunications Management Network (TMN) Interfaces

*It is the intention of this standard to use and align with the relevant ITU-T Recommendations.*

ANSI T1.211-2001 (R2006), Information Interchange - Structure and Coded Representation of National Security and Emergency Preparedness (NS/EP) Telecommunications Service Priority (TSP) Codes for the North American Telecommunications System

*The Telecommunications Service Priority (TSP) codes for national security and emergency preparedness (NS/EP) have been developed to ensure priority treatment of North American's most important telecommunications services. These codes, when provided, require and authorize service providers to provision and restore certain services, which have been designated most critical to NS/EP. Services being requested for provisioning or restoration shall have full attention and priority over non-TSP service requests.*

ANSI T1.212-1995 (R2004), Telecommunications – Enhanced Telecommunications Charge Card Physical Characteristics and Numbering Structure

*This standard applies to enhanced telecommunication charge cards issued within North America. The determination of eligibility to issue telecommunication charge cards is beyond the scope of this standard.*

ANSI T1.216-1998 (R2003), Telecommunications – Integrated Services Digital Network (ISDN) Management – Basic Rate Physical Layer

*Establishes required capabilities for the maintenance and operations needed for the basic rate physical layer associated with access to Integrated Services Digital Networks (ISDNs). This standard establishes needed maintenance functionality in customer and network equipment, particularly from the perspective of maintenance functionality available at the network boundary and from Operations Systems.*

ANSI T1.217-1991 (R2003), Telecommunications – Integrated Services Digital Network (ISDN) Management – Primary Rate Physical Layer

*Provides the maintenance operations requirements for primary rate physical layer ISDN access. It provides functional requirements to support maintenance and is not meant to be an equipment specification.*

ANSI T1.218-1999 (R2004), Telecommunications – ISDN Management – Data Link and Network Layer

*Covers maintenance of the layer 2 (data-link-layer) and layer 3 (network-layer) peer relationships between the exchange termination (ET) and customer equipment. The layer2 and layer 3 peer relationships considered are signaling data on the D-channel, packet data on the D-channel, and packet data on a B-channel.*

ANSI T1.219-1991 (R2003), Telecommunications – ISDN Management – Overview and Principles

*Provides an overview of the set of standards on management operations for ISDNs and establishes the principles for the maintenance and operations needed for overall management of ISDNs. This document provides a general discussion of the models, terminology and principles utilized to define needed management functionality in customer and network equipment.*

ANSI T1.221-1995 (R2004), Telecommunications – Operations, Administration, Maintenance, and Provisioning (OAM&P) – In-Service, Nonintrusive Measurement Device (INMD) – Voice Service Measurements

*Provides specifications for transmission measurement devices utilized to measure various parameters of importance to voice service transmission maintenance of telecommunications networks.*

ANSI T1.223-2004, Telecommunications – Information Interchange – Structure and Representation of Network Channel (NC) and Network Channel Interface (NCI) Codes for the North American Telecommunications System

*This standard identifies the structure and the coded representation of Network Channel (NC) and Network Channel Interface (NCI) codes that shall be used to describe the channel and interface definitions. These codes are typically used by IntraLATA and InterLATA customers in their requests for service.*

ANSI T1.226-2001 (R2005), Telecommunications – Operations, Administration, Maintenance, and Provisioning (OAM&P) – Management of Functions for Signalling System No. 7 (SS7) Network Interconnections

*This standard addresses Operations, Administration, Maintenance, and Provisioning (OAM&P) for internetwork connections employing Common Channel Signalling (CCS) based on Signalling System Number 7 (SS7) protocol used in North America. The internetwork connection may be either within or between North American countries.*

ANSI T1.227-2000, Telecommunications - Operations, Administration, Maintenance, and Provisioning (OAM&P) - Extension to Generic Network Information Model for Interfaces between Operations Systems Across Jurisdictional Boundaries to Support Fault Management (Trouble

*Pertains to Operations System to Operations System interfaces for OSs used for network management and located in different jurisdictions. This Standard is one of a series of standards that will specify this interface. This document describes extensions to the Generic network information model needed for OS-OS Network Management interfaces across jurisdiction boundaries. The term, generic, is used here to imply that the managed object classes and their properties described are applicable across different network management technologies (between any managing system and any gateway system). Others in the series provide protocols, functions, and messages. OS-OS interfaces within jurisdictions are not specifically included. However, this Standard can be used for that purpose at the discretion of the jurisdiction. The scope is limited to OS-OS interfaces based*

ANSI T1.227a-2001 (R2006), Telecommunications - CORBA IDL Model for Interfaces Across Jurisdictional Boundaries to Support Fault Management (Trouble Administration) and Service Test

*This document defines an interface for the Trouble Administration (TA) and Service Test functions, as defined in T1.227-2000 and T1.228-1995 (R1999). The interface is specified using the Common Object request Broker Architecture (CORBA)/Interface Definition Language (IDL), as defined in The Common Object Request Broker Architecture and Specification, Revision 2.2, Object Management Group, Feb. 1998.*

ANSI T1.230-1994 (R2004), Telecommunications – Telecommunications Charge Card and Billed Number Screening Validation Message Components

*This standard applies to telecommunications charge card and billed number screening validation messages for use within the North American Telecommunications interchange environment. The use of validation systems and networks also involves apropriate agreements between card issuers and service providers. Additionally card issuers and service provider agreements must comply with legal and regulatory requirements. Such agreements and requirements are beyond the scope of this standard.*

ANSI T1.231-2003, Layer 1 In-Service Transmission Performance Monitoring

*This standard provides performance monitoring functions and requirements applicable to Layer 1 transmission signals for the covered levels of the North American transmission hierarchy. This standard provides functional requirements to support maintenance and is not meant to be an equipment specification. This standard, and its subparts supersedes and replaces ANSI T1.231-1997 in its entirety.*

ANSI T1.231.01-2003, Digital Subscriber Line (DSL) - Layer 1 In-Service Digital Transmission Performance Monitoring

*This standard provides performance monitoring functions and requirements applicable to DSL digital transmission lines. This standard provides functional requirements to support maintenance and is not meant to be an equipment specification. This standard is one of a set of standards which are applications utilizing the common criteria as specified in T1.231. This standard supersedes and replaces associated sections of T1.231-1997 in its entirety.*

ANSI T1.231.02-2003, DS1 - Layer 1 In-Service Digital Transmission Performance Monitoring

*This standard provides performance monitoring functions and requirements applicable to DS1 digital transmission signals. This standard provides functional requirements to support maintenance and is not meant to be an equipment specification. This standard is one of a set of standards which are applications utilizing a common criteria as specified in T1.231. This standard supersedes and replaces associated sections in T1.231-1997 in its entirety.*

ANSI T1.231.03-2003, DS3 - Layer 1 In-Service Digital Transmission Performance Monitoring

*This standard provides performance monitoring functions and requirements applicable to DS3 digital transmission. This standard provides functional requirements to support maintenance and is not meant to be an equipment specification. This standard is one of a set of standards which are applications utilizing the common criteria as specified in T1.231. This standard supersedes and replaces T1.231-1997 in its entirety.*

ANSI T1.231.04-2003, SONET - Layer 1 In-Service Digital Transmission Performance Monitoring

*This standard provides performance monitoring functions and requirements applicable to SONET digital transmission. This standard provides functional requirements to support maintenance and is not meant to be an equipment specification. This standard is one of a set of standards which are applications utilizing the common criteria as specified in T1.231. This standard supersedes and replaces associated sections in T1.231-1997 in its entirety.*

ANSI T1.233-2004, Telecommunications - Operations, Administration, Maintenance, and Provisioning (OAM&P) - Security Framework for Telecommunications Management Network (TMN) Interfaces

*It is the intention of this standard to use and align with the relevant ITU-T Recommendation. This alignment effort consists of adopting ITU-T Recommendation M-3016, TMN Security Overview, to replace the previously published version of T1.233-1993 (R1999).*

ANSI T1.234-2000 (R2004), Telecommunications – Signalling System Number 7 (SS7) – MTP Levels 2 and 3 Compatibility Testing

*Provides the testing requirements for internetwork connections employing Common Channel Signalling (CCS) based on Signalling System No. 7 (SS7) protocol used in North America. This standard provides a list of test scripts for testing the compatibility between the interconnecting networks for Message Transfer Part (MTP), level 2 and level 3, of the SS7 protocol. MTP level 1 tests are not included since they are transmission tests and are not related to the SS7 protocol. This standard references material in T1 SS7 protocol standards.*

ANSI T1.235-2000 (R2004), Telecommunications – Signalling System Number 7 (SS7) – SCCP Class 0 Compatibility Testing

*Addresses the testing required for internetwork connections employing Common Channel Signalling (CCS) based on Signalling System No. 7 (SS7) protocol used in North America. This standard provides a list of test scripts for testing compatibility between the interconnecting networks of the Signalling Connection Control Part (SCCP) Class O of the SS7 protocol. This standard references material in T1 SS7 protocol standards.*

ANSI T1.238-2003, Telecommunications – Information Interchange – Structure for the Identification of Telecommunications Facilities for the North American Telecommunications System

*This standard addresses the code and format structures for identifying various types of facilities, which include, but are not limited to cable, open wire, phantom groups, and analog/digital and fiber optic carriers. The facility format structures accommodate the depiction of facility data through four application-specific combinations of data unit representations (four format structures). The four format structures are: Cable facility format; Cable facility with pair identification format; Carrier facility format; and Carrier facility with channel/time slot identification slot.*

ANSI T1.239-1994 (R2004), Telecommunications -- Integrated Services Digital Network (ISDN) Management – User-Network Interface Protocol Profile

*Specifies the application protocol and the use of layer 1-3 protocols at the ISDN user-network interface to provide management capabilities. The protocols defined in this standard are suitable for management interactions involving transaction-type information exchanges.*

ANSI T1.240-1998 (R2003), Telecommunications – Operations, Administration, Maintenance, and Provisioning (OAM&P) – Generic Network Information Model for Interfaces between Operations Systems and Network Elements

*Part of a series of standards that specifies interface requirements for the interface between Operations Systems (OSs) and Network Elements (NEs). It describes a generic network model needed to develop OAM&P application message standrd for modern telecommunications networks.*

ANSI T1.241-1994 (R2004), Telecommunications -- Integrated Srevices Digital Network (ISDN) Management -- Service Profile Verification and Service Profile Management -- ISDN Interface Management Services

*Service Profile Verification and Service Profile Management (SPV and SPM) are optional ISDN Interface management services. They are provided by the network to the customer to allow some real-time customer network management capabilities and to allow some management across the user-network interface by the network provider.*

ANSI T1.245-1997 (R2003), Telecommunications - Directory Service for Telecommunications Management Network (TMN) and Synchronous Optical Network (SONET)

*Specifies the usage of the X.500 Directory, protocols and services for communications between Directory Users and Directory Servers. These specifications are for use of the Director in support of management communications within the Telecommunications Management Network (TMN), and for specific technologies, such as Synchronous Optical Network (SONET).*

ANSI T1.247-1998 (R2003), Telecommunications – Operations, Administation, Maintenance, and Provisioning (OAM&P) – Performance Management Functional Area Services and Information Model for Interfaces between Operations Systems and

*Part of a series of standards that specifies interface requirements between Operations Systems (OSs) and Network Elements (NEs). It describes a set of Performance Management functional area services and associated information model for Operations, Administration, Maintenance, and Provisioning (OAM&P) applications for DS1 and DS3 signals.*

ANSI T1.250-1996 (R2005), Telecommunications – Operations, Administration, Maintenance, and Provisioning (OAM&P) – Extension to Generic Network Information Model for Interfaces between Operations Systems and Network Elements to Support

*This standard is one of a series of standards that specify interface requirements for the interface between Operations Systems (OSs) and Network Elements (NEs). It describes a Customer Service Provisioning information model (object model and related Operations, Administration, Maintenance, and Provisioning (OAM&P) services) needed to configure analog and narrowband ISDN network service offerings for subscribers. This standard specializes and extends the ITU configuration model standards Q.824.0 to Q.824.2 to meet North American needs.*

ANSI T1.251-2001a, Telecommunications – Identification of Telecommunications Service Provider Codes for the North American Telecommunications System

*Provides the specifications and characteristics of codes used to represent telecommunications service providers operating in North America. Its intended use is to provide a telecommunications standard that facilitates information interchange among humans and machines.*

ANSI T1.252-1996 (R2002), Telecommunications – Operations, Administration, Maintenance, and Provisioning (OAM&P) – Security for the Telecommunications Management Network (TMN) Directory

*This standard defines the security scheme that is expected to be the basis of the TMN Directory security (where such security is deemed necessary). It is based on ITU-T Recommendation X.509, which includes a strong authentication scheme for the Directory based on public key encryption. This standard also proposes the use of X.500 Directory for the distribution of certified public keys to authorized entities. Communicating entities can use such keys for mutual authentication, integrity assurance, confidentiality, and non-repudiation.*

ANSI T1.255-2003, Telecommunications - In-Service, Nonintrusive Measurement Device (INMD) - Methodology for Applying INMD Measurements to Customer Opinion Models

*This standard provides algorithms for mapping measurements made with in-service, nonintrusive measurement devices (INMDs) to the parameters used in customer opinion models for voice services. These algorithms allow the INMD's measurements to be used to evaluate and compare the performance of connections and services carrying speech signals.*

ANSI T1.256-2002, Telecommunications - Operations, Administration, Maintenance, and Provisioning (OAM&P) - Model for Interface Across Jurisdictional Boundaries to Support Electronic Access Service Ordering: Inquiry Function

*This standard defines an information model using CORBA IDL for the TMN X-interface (M.3010) to support the access service inquiry functions. This standard uses CORBA for conveying inquiry information across an interactive interface. This standard allows access service customers to do: Connecting Facility Assignment, and Service Availability.*

ANSI T1.257-1997 (R2006), Telecommunications - Operations, Administration, Maintenance, and Provisioning (OAM&P) - Traffic Management Services and Information Model for Interfaces between Operations Systems and Network Elements

*This standard is part of a series of standards that specify interface requirements between Operations Systems (OSs) and Network Elements (NEs). It describes a set of Traffic Management services and an associated informaiton model for Operations, Administration, Maintenance, and Provisioning (OAM&P) applications for circuit-switched networks using hierarchical routing.*

ANSI T1.259-1997 (R2003), Telecommunications - STASE-ROSE (document is on hold pending committee resolution)

*Supports security services for ROSE PDUs within the application layer. It is independent of the underlying communications protocol stack. This standard defines a new Application Service Element (ASE) called Security Transformations Application Service Element for ROSE (STASE-ROSE), which resides between the ROSE and the Presentation Layer in the OSI Protocol Stack.*

ANSI T1.260-1998 (R2003), Telecommunications - Operations, Administration, Maintenance, and Provisioning (OAM&P) - Extension to Generic Network Information Model for Interfaces between Service Provider Administrative System and Network

*Specifies information models and functional requirements for the interface between Network Elements and a Service Provider Administrative System for Lawfully Authorized Electronic Surveillance. The network reference model defining the interface is specified in J-STD-025. Standard describes a Service Provider Telecommunications Management Network specific configuration management information information model needed to administer the establishment of a law enforcement surveillance.*

ANSI T1.261-1998 (R2004), Telecommunications - Operations, Administration, Management, and Provisioning (OAM&P) - Security for TMN Management Transactions over the TMN Q3 Interface

*Standard addresses the security of transaction oriented TMN management messages exchanged over tMN Q3 interfaces among Network Elements (NE) and Operations Systems (OSs). Offers the following four levels of security: authentication of the association initiator, peer entity authentication, data origin authentication, and access control and whole protocol data unit protection.*

ANSI T1.261a-2004, Security for TMN Management Transactions over the TMN Q3 Interface

*Standard addresses the security of transaction oriented TMN management messages exchanged over TMN Q3 interfaces among Network Elements (NE) and Operations Systems (OSs). Offers the following four levels of security: authentication of the association initiator, peer enity authentication, data origin authentication, and access control and whole protocol data protection.*

ANSI T1.262-1998 (R2002), Telecommunications - OAM&P - Extension to Generic Network Model for Interfaces Across Jurisdictional Boundaries to Support the Service Test Function

*This is the Service Test Function Standard. The object model contained in this standard allows the test function to be performed on Plain Old Telephone Service (POTS). The model was created based on requirements from the Trouble Administration subcommittee of the Electronic Communications Implementation Committee (ECIC).*

ANSI T1.262a-2001 (R2006), CORBA IDL Model for Interfaces Across Jurisdictional Boundaries to Support Service Test

*This document defines an interface for the Service Test functions, as defined in T1.262-1998. The interface is specified using the Common Object Request Broker Architecture (CORBA)/Interface Definition Language (IDL), as defined in The Common Object Request Broker Architecture and Specification, Revisiion 2.2, Object Management Group, Feb. 1998.*

ANSI T1.262b-2004, Operations, Administration, Maintenance, and Provisioning (OAM&P) - Extension to Geneic Network Model for Interface scross Jurisdictional Boundaries to support the Service Test Function

*Proposal to add two test types to T1.262-1998 (R2002) to allow for request of tone on a pair, across the X interface.*

ANSI T1.263-1998 (R2002), Telecommunications - Operations, Administration, Maintenance, and Provisioning (OAM&P) - Model for Interfaces Across Jurisdictional Boundaries to Support Service Level Connection Management

*This scope of this standard is to define information models and to specify the basic set of management functions needed to support Connection Management. The focus of this standard is on the point-to-point, Reconfigurable Lease Circuit Service (LCS). The Reconfigurable LCS may be offered by one or more service providers (SP) and many be controlled by the service customer (SC) with different levels of visibility. The LCS is defined between a single SC and a single SP.*

ANSI T1.267-2003, OAM&P - Model for Interface Across Jurisdictional Boundaries to Support the Local Service Inquiry Functions

*This standard defines an information model using CORBA IDL for the TMN X-interface (ITU-T Recommendation M.3010) to support the local service inquiry functions. This standard uses CORBA for conveying inquiry information across an interactive interface.*

ANSI T1.270a-2001, Telecommunications - CORBA Generic Network and NE Level Information Model

*Provides a supplement to the T1M1 CORBA Generic Network and NE Level information Model (T1M1/2000-270). This supplement modifies all use of object references for attributes (applicable in value type definitions) to name types.*

ANSI T1.272-2003, Information Interchange - Structure for the Identification of IP Network Elements for the North American Telecommunications System

*Provides the code and format structures necessary for identification of Internet Protocol network elements with location identification information as their domain names, and describe the code structures with various combinations of data units represented within those structures. This standard contains sections that cover its purpose and scope, and that describe data elements and format structures for identifying IP network elements. It also contains definitions and references. This standard was listed for public review in the 8/11/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI T1.274-2000 (R2005), Electronic Interactive Agent (IA)

*This document specifies a U.S. standard for an Electronic Interactive Agent (IA) to transport Electronic Data Interachange/Electronic Data Interchange For Administration, Commerce, and Transport (EDI/EDIFACT), extensible Markup Language (XML), and/or plain text messages over a Transmission Control Protocol/Internet Protocol (TCP/IP) based network environment utilizing Transport Layer Security (TLS). This standard is based on ITU-T Recommendations Q.814 and Q.815 but has minor differences to improve its efficiency in the U.S. community.*

ANSI T1.275-2003, Operations, Administration, Maintenance, and Provisioning (OAM&P) - Unified Ordering Model (UOM-ASR Volume III) for Interface Across Jurisdictional Boundaries to Support the Access Service Request Functions

*This standard defines tML for the TMN X-interface (M.3010) to support the UOM-ASR. This standard uses tML Schemas for conveying request, response, notification, acknowledgement, and exception response information across an interactive interface. This standard allows access service customers to do the following interactions: Request, Response, Notification, Acknowledgement, and Exception Response.*

ANSI T1.275.01-2003, Operations, Administration, Maintenance, and Provisioning (OAM&P) - Unified Ordering Model (UOM-ASR Volume III) for Interfaces Across Jurisdictional Boundaries to Support the Access Service Request Functions

*This standard defines tML Schemas for the TMN X-interface (M.3010) to support the UOM-ASR. This standard uses tML Schemas for conveying request, response, notification, acknowledgement, and exception response information across an interactive interface. This standard allows access service customers to do the following interactions: Request, Response, Notification, Acknowledgement, and Exception Response.*

ANSI T1.275.02-2004, Operations, Administration, Maintenance, and Provisioning (OAM&P) - Unified Ordering Model (UOM-ASR Volume III) for Interface Across Jurisdictional Boundaries to Support the Access Service Request ASR Version 28

*The scope of this specification is to develop an American National Standards Institute (ANSI) standard that specifies an interface for the Unified Ordering Model - Access Service Request (UOM-ASR). The interface is specified using the telecommunications Markup Language (an extension of XML), as defined in tML Framework Document (ITU-T M.3030).*

ANSI T1.276-2003, Operations, Administration, Maintenance, and Provisioning - Security Requirements for the Public Telecommunications Network: A Baseline of Security Requirements for the Management Plane

*Contains a set of baseline security requirements for the Management Plane. The President's National Security Telecommunications Advisory Committee (NSTAC) Network Security Information Exchange (NSIE) and Government NSIE jointly established a Security Requirements Working Group (SRWG) to examine the security requirements for controlling access to the public switched network, in particular with respect to the emerging next generation network.*

ANSI T1.302-1989 (R2006), Digital Processing of Voice-Band Signals-Line Format for 32 kbit/s Adaptive Differential Pulse-Code Modulation (ADPCM

*The purpose of this American National Standard is to standardize three line formats so that vendors can provide compatible equipment for the U.S. marketplace and so that both exchange and interchange carriers may operate compatibly. These line formats utlize Bundle, Transition, and Robbed-Bit signaling.*

ANSI T1.302a-1992 (R2006), Digital Processing of Voice-Band Signals-Line Format for 32 kbit/s Adaptive Differential Pulse-Code Modulation (ADPCM) (Channel-Control Templates and Robbed-bit Signaling Alarm Transmission

*Supplement addresses two oversights of T1.302-1989 to describe the line format for transcoders using the bundle format but does not specify a line format for channels that are programmed to bypass the ADPCM algorithm and that are transmitted as digital or PCM data.*

ANSI T1.307-2003, Telecommunications - Fire Resistance Criteria - Ignitability Requirements for Equipment Assemblies and Fire Spread Requirements for Wire and Cable

*Covers the fire resistance characteristics of equipment assemblies and selected products and materials used within telecommunications network equipment facilities and spaces of similar function. This standard along with T1.319 shall be used as the means of appraising fire risk within a telecommunications network equipment facility or space with similar function.*

ANSI T1.308-1996 (R2002), Telecommunications – Central Office Equipment – Electrostatic Discharge Immunity Requirements

*Provides electrostatic discharge (ESD) immunity criteria and test procedures for equipment assemblies intended for use in telephone central offices. It is intended to establish the capability of central office equipment to function normally after receiving typically encountered electrostatic discharges.*

ANSI T1.311-1998, DC Power Systems – Telecommunications Environment Protection

*Addresses the installation of dc power systems within controlled or limited access areas that convert from one dc level to another of 160 volts or less. Standard identifies reasonable means of minimizing hazards associated with the interconnection of dc power systems.*

ANSI T1.312-1991 (R2006), Voice Packetization – Packetized Voice Protocol

*This standard defines a Packet Voice Protocol (PVP) for speech packetization in permanent virtual circuit applications. The packetized voice protocol can be used, for example, at bit rates above 64 kbit/s and less than 150 Mbit/s and in fractional DS1 applications.*

ANSI T1.313-2003, Telecommunications – Electrical Protection for Telecommunications Central Offices and Similar Type Facilities

*Telecommunications central offices and similar type facilities are often subjected to disturbances from lightning and ac power line faults, either directly or indirectly, through the communications cables and ac power facilities that serve them. This standard proves the minimum electrical protection, grounding and bonding criteria necessary to mitigate the disruptive and damaging effects of lightning and ac power faults.*

ANSI T1.315-2001 (R2006), Voltage Levels for DC-Powered Equipment Used in the Telecommunications Environment

*This standard establishes requirements and objectives for voltage ranges and associated characteristics (transient and noise) of the input voltage for equipment powered from dc power systems in the telecommunications environment. This standard does not specify dc power plant voltage levels. Also, this standard does not specify the voltage applied to the interface between the network and customer installations (network interface.*

ANSI T1.316-2002, Telecommunications – Electrical Protection of Telecommunications Outside Plant

*Telecommunications outside plant, by nature of its outdoor location, and frequent joint-use or joint right-of-way installations with power utility facilities, is often subject to disturbances from lighting and ac power line faults. This standard provides the minimum electrical protection, grounding and bonding criteria necessary to mitigate the disruptive and damaging effects of lightning and ac power faults. It is intended to serve as a guide for designers of such facilities in the application of electrical protection, grounding and bonding, as a function of the electrical environment.*

ANSI T1.317-1993 (R1999), Telecommunications – Uniform Language for Accessing Power Plants – Human-Machine Language

*Permits a uniform method of communicating with power systems in a telecommunications environment. This standard specifically addresses command language elements necessary for human-to-machine communication with systems that monitor and control power equipment. This standard is applicable to the design of power system monitoring and control systems.*

ANSI T1.319-2002, Telecommunications – Fire Propagation Hazard Testing Procedure for Equipment

*The fire hazard risk assessment criteria defined in this standard considered applicable to frame and cabinet-mounted equipment intended to be installed in environmentally controlled telecommunications network facilities. Examples of such locations are Central Offices, Controlled Environmental Vaults, and above ground Huts.*

ANSI T1.328-2001, Protection of Telecommunications Links from Physical Stress and Radiation Effects and Associated Requirements for DC Power Systems

*Provides baseline measures describing the durability (survivability) of outside plant copper-conductor and optical-fiber telecommunications distribution links to various levels of physical stress and radiation effects. The standard applies to optical-fiber and metallic links for trunk, feeder, and local distribution. The standard includes information for the design and installation of aerial, buried, and underground plant, and applies to all telecommunications networks including but not limited to exchange carriers and interexchange carriers. The standard is intended for new installations, and not necessarily for replacement of existing systems. The standard addresses protection against threats such as wind, temperature, fire, water penetration, and the means to keep the links energized (telecommunications power). This standard was listed for public review in the 11/17/2000*

ANSI T1.329-2002, Telecommunications – Network Equipment – Earthquake Resistance

*This standard, when used with established earthquake qualification practices, sets forth test methods, performance requirements, and acceptance criteria for determining the earthquake resistance of telecommunications equipment. Earthquake resistance is the equipment's ability to maintain a defined level of functionality, without physical damage, disruption of service, or personnel hazard, during and after an earthquake.This standard, when used with established earthquake qualification practices, sets forth test methods, performance requirements, and acceptance criteria for determining the earthquake resistance of telecommunications equipment. Earthquake resistance is the equipment's ability to maintain a defined level of functionality, without physical damage, disruption of service, or personnel hazard, during and after an earthquake This standard*

ANSI T1.330-1997 (R2002), Telecommunications - Valve-Regulated Lead-Acid Batteries Used in the Telecommunications Environment

*This standard established requirements for Value-Regulated Lead-Acid (immobilized electrolyte) stationary cells and batteries used in telecommunications applications. It covers both absorbed as well as gelled electrolyte types and addresses the issues of gas recombination and thermal runaway.*

ANSI T1.331-1999 (R2004), Telecommunications - Description of Above-Baseline Physical Threats to Telecommunications Links

*This standard describes and defines above-baseline against stresses resulting from the threats. However, this standard does serve as a foundation to build specifications for concrete mitigative measures as needs arise. Such measures depend on specific stresses and are developed on a case-by-case basis. Because these are above-baseline threats, the stresses, application and methodology to mitigate against them shall be negotiated by the service requester with each individual carrier.*

ANSI T1.333-2001, Telecommunications - Grounding and Bonding of Telecommunications Equipment

*Defines and describe sthe grounding and bonding topologies commonly used for the installation of network telecommunications equipment in central offices and similar type facilities. It addresses the requirements for grounding and bonding of network telecommunication equipment, the associated dc and ac power facilities, and the interfacing of co-located telecommunications systems. This standard was listed for public review in the 6/30/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI T1.334-2002, Telecommunications - Electrical Protection of Communications Towers and Associated Structures

*Communications towers and the associated structures, by nature of their outdoor location, are often subject to disturbances from lighting. This standard provides the minimum electrical protection, grounding and bonding criteria necessary to mitigate the disruptive and damaging effects of lighting. It is intended to serve as a guide for designers or users of such facilities in the application of electrical protection, grounding and bonding.*

ANSI T1.336-2003, Engineering Requirements for a Universal Telecom Framework

*This standard sets forth-dimensional parameters, performance and the application criteria for the UTF when used to house electronics equipment in telecom facilities. The requirements shall be used in the design; construction and provisioning of UTF supplied to the telecommunications industry to house electronics equipment.*

ANSI T1.337-2004, Requirements for Maximum Voltage, Current, and Power Levels in Network-Powered Transport System

*This document provides maximum dc steady-state and duration limited voltage, current, and power limits to be observed when powering transport sytems over conventional network telecommmunications twisted-pair conductors.The technical requirements contained herein are based on industry-recognized safety and design standards, addresses both the network and customer premises environments, and are independent of the transport system technology employed.*

ANSI T1.338-2004, Electrical coordination of Primary and Secondary Surge Protective Devices for Use in Telecommunications Circuits

*This contribution provides basic information for the electrical coordination of primary and secondary surge protective devices.*

ANSI T1.401.01-2000 (R2005), Network to Customer Installation Interfaces - Analog Voicegrade Switched Access Lines using Loop-Start and Ground-Start Signaling with Line-Side Answer Supervision Feature

*This standard provides the siganling requirements associated with the line-side answer supervision feature on analog switched-access lines using loop-start or ground-start signaling when the network provides this capability. Requirements are specified at the interface between telecommunications carriers and customer premises wiring and equipment in.*

ANSI T1.401.02-2000 (R2005), Network to Customer Installation Interfaces - Analog Voicegrade Switched Access Lines with Distintive Ringing

*This standard defines the interface between network analog-switched access lines and customer installations for distinctive ringing features. This standard is a companion standard to American National Standard for Telecommunications - Network-to-Customer Installation Interfaces - Analog Voicegrade Switched Access Lines Using Loop-Start and Ground-Start Signaling, T1.401-2000.*

ANSI T1.401.03-1998 (R2005), Network to Customer Installation Interfaces - Analog Voicegrade Switched Access Lines with Calling Number Delivery, Calling Name Delivery, or Visual Message-Waiting Indicator Features

*This standard provides the signaling and data transmission requirements associated with the following supplemental features that utilize network-originated on-hook data transmission on analog voicegrade switched access lines that use loop-start signaling: Calling Number Delivery (CND); Calling Name Delivery (CNAM); and Visual Message-Waiting Indicator (VMWI.*

ANSI T1.401.04-2000 (R2005), Network to Customer Installation Interfaces - Analog Voicegrade Switched Access Lines with Call Waiting, Distinctive Call Waiting, or Calling Identity Delivery on Call Waiting Feature

*This standard provides the requirements associated with three different types of call waiting supplemental features that may be used on analog voicegrade switched access lines with loop-start signaling. The three features are called: Call Waiting (CW); Distinctive Call Waiting (DCW); Calling Identity Delivery on Call Waiting (CIDCW.*

ANSI T1.401.05-2000 (R2005), Network-to-Customer Installation Interfaces - Analog Voicegrade Switched Access Lines with Network-Implemented Coin-Operated Payphone Feature

*This standard provides the signaling requirements associated with analog, voicegrade, switched access lines with the network-implemented coin-operated payphone (NICOP) feature. This standard is intended to be used in conjunction with American National Standard for Telecommunications - Interface Between Carriers and Customer Installations - Analog Voicegrade Switched Access Lines Using Loop-Start and Ground-Start Signaling, T1.401.*

ANSI T1.403-1999, Telecommunications - Network and Customer Installation Interfaces - DS1 Electrical Interface

*Specifies a DS1-rate electrical interface at the network interface (NI) between the network and a customer installation (CI). Requirements include electrical characteristics, former parameters, and physical characteristics at the NI. Standard provides NI compatibility information and is not meant to be an equipment specification. Standard is a revision of ANSI T1.403-1995, and replaces it in its entirety.*

ANSI T1.403.01-1999 (R2005), Telecommunications - Network and Customer Installation Interfaces - Integrated Services Digital Network (ISDN) Primary Rate Layer 1 Electrical Interface Specification

*This standard establishes performance and technical criteria for interfacing and interconnecting the various functional groups shown in Figure 1. Compliance with this standard is intended to ensure compatibility at the interface points (Figure 1) and should not be construed as a constraint on the internal operation of the Network Terminations (NT), or Terminal Equipment (TE.*

ANSI T1.403.02-1999 (R2005), Network and Customer Installation Interfaces - DS1 Robbed-Bit Signaling State Definitions

*This standard specifies robbed-bit signaling state definitions at the DS1 electrical interface between the network and customer installations. It is intended for use in conjunction with ANSI T1.403.*

ANSI T1.403.02a-2001 (R2005), Network and Customer Installation Interfaces - DS1 Robbed-Bit Signaling State Definitions

*This supplement renames Annex A, Bibliography, of T1.403.02-1999 as Annex B, adds several references to renamed Annex B, and adds a new Annex A (informative) on V.90 modem compatibility.*

ANSI T1.403.03-2002 (R2006), Network and Customer Installation Interfaces - DS1 Physical Layer Interface and Mapping Specifications for ATM Applications

*Standard provides the physical layer (Layer 1) specifications for DS1 User-Network Interfaces (UNIs) that are used transport asynchronous transfer mode (ATM) cells in the DS1 payload. The term User-Network Interface (UNI) is used in this standard to refer to both the Network Interface (NI) and interfaces within the Customer Installation (CI.*

ANSI T1.403a-2001 (R2005), Supplement to T1.403-1999, Network and Customer Installation Interfaces - DS1 Electrical Interface

*This supplement adds a transverse balance requirement, an associated test figure, a related normative reference and an informative annex to T1.403-1999.*

ANSI T1.403b-2002 (R2005), Telecommunications - Network and Customer Installation Interfaces - DS1 Electrical Interface

*This supplement replaces Annex E of T1.403-1999 in its entirety. The replacement clarifies, but does not change, the requirements of Annex E.*

ANSI T1.404-2002 (R2006), Network and Customer Installation Interfaces - DS3 Metallic Interface Specification

*Standard describes network and customer installation DS3 metallic interfaces. Requirements on DS3 electrical parameters, basic framing format, M23 multiplex and C-Bit Parity applications, and physical signal characteristics are included or referenced.*

ANSI T1.404.01-2002 (R2006), Network and Customer Installation Interfaces - DS3 Physical Layer Interface and Mapping Specifications for ATM Applications

*This standard provides the physical layer (Layer 1) specifications for DS3 User-Network Interfaces (UNIs) that are used to transport asynchronous transfer mode (ATM) cells in the DS3 payload. The term User-Network Interface (UNI) is used in this standard to refer to both the Network Interface (NI) and interfaces within the Customer Installation (CI.*

ANSI T1.405-2002 (R2006),
Telecommunications –Installation Interfaces – Direct-Inward-Dialing Analog Voicegrade Switched Access Using Loop Reverse-Battery Signaling

*This standard provides network-to-customer installation (CI) interface requirements for Direct Inward Dialing (DID) analog voicegrade switched access using loop reverse-battery signaling. DID is a feature of PBX and Centrex systems that permits direct access to a terminal served by a PBX or Centrex system from a carrier network without assistance from the PBX or Centrex attendant. The interface described in this standard uses loop reverse-battery signaling in connection with a one-way trunk that is outgoing from the network and incoming to the CI (see Figure 1.*

ANSI T1.407-2002 (R2006),
Telecommunications - Network to Customer Installation Interfaces - Analog Voicegrade Special Access Lines Using Customer-Installation-Provided Loop-Start Supervision

*This standard describes an interface bwetween a telecommunication carrier network and a customer installation in terms of their interaction and electrical characteristics. In this standard, the telecommunication carrier netowrk is referred to as the Network and the customer premises wiring and equipment as the Customer Installation (CI). The interface between the Network and the CI will be known as the Network Interface (NI). The NI is the same as the demarcation point defined in Part 68 of the FCC Rules and Regulations.*

ANSI T1.409-2002 (R2006),
Telecommunications – Network to Customer Installation Interfaces – Analog Voicegrade Special Access Lines Using E&M Signaling

*This standard provides specifications for E&M signaling interfaces between telecommunications carrier networks and customer installations. In this standard, the telecommunications carrier network is referred to as the Network and the customer premises wiring and equipment as the Customer Installation (CI). The interface between the Network and the CI will be known as the Network Interface (NI). The NI is the same as the demarcation point defined in Part 68 of the FCC Rules and Regulations (see Annex A.*

ANSI T1.410-2001 (R2006),
Telecommunications – Carrier-to-Customer Metallic Interface – Digital Data at 64 kbit/s and Subrates

*This standard describes the electrical interface between a carrier and customer installation (CI), referred to as the network interface (NI), for synchronous digital data at 2.4, 4.8, 9.6, 19.2, 38.4, 56, and 64 kbit/s. This standard applies primarily to dedicated services but may also be applied to other services. It establishes requirements at the NI necessary for compatible operation between the carrier and the CI.*

ANSI T1.411-2001 (R2006),
Telecommunications - Network-to-Customer Installation Interfaces - Analog Voicegrade Enhanced 911 Switched Access Using Network-Provided Reverse-Battery Signaling

*This standard provides analog interface requirements for the connection of a Customer Installation (CI), such as Private Branch Exchanges, to an Enhanced 911 system. The analog interface allows the CI to transmit the caller's emergency service identification (CESID) information to an Enhanced 911 system in applications in which multiple terminals share Enhanced 911 switched access. The requirements of this standard apply to the Network Interface (NI). The NI is the point of interconnection between the telecommunication carrier network (the Network) and the customer premises wiring and equipment (the CI.*

ANSI T1.413-2004, ADSL

*Describes the interface between the telecommunications network and the customer installation in terms of their interaction and electrical characteristics. The requirements ofthis standard apply to a single asymmetric digital subscriber line (ADSL).*

ANSI T1.414-1998 (R2003),
Telecommunications - Network to Customer Installation Interfaces - Enhanced 911 Analog Voicegrade PSAP Access Using Loop Reverse-Battery Signaling

*Provides network-to-customer installation interface requirements for analog voicegrade Enhanced 911 switched access to a Public Safety Answering Point (PSAP) customer installation (CI). The interface allows a user of the Enhanced 911 System to communicate with the PSAP CI and allows the Enhanced 911 switching system to transmit the caller's emergency service identification information to the PSAP CI. These requirements are intended to assist carriers, end-users, and manufacturers.*

ANSI T1.416-1999 (R2005), Network to Customer Installation Interfaces - Synchronous Optical NETwork (SONET) Physical Layer Specification: Common Criteria

*This standard establishes common criteria for Synchronous Optical NETwork (SONET) interfaces at standard rates associated with the Network Interface (NI). Criteria covered in this standard include maintenance and operation functionality at the SONET Section, Line and Path layers, and other necessary criteria for compliance with the proper interfacing of the connecting customer installation equipment. Compliance with this standard is intended to ensure compatibility at the SONET NI and should not be construed as a constraint on the internal operations of the network or customer installation equipment.*

ANSI T1.416.01-1999 (R2005), Network to Customer Installation Interfaces - Synchronous Optical NETwork (SONET) Physical Media Dependent Specification: Multi-Mode Fiber

*This standard establishes physical media dependent (PMD) specifications for Multi-Mode Fiber Synchronous Optical NETwork (SONET) network to customer installation interfaces. Criteria covered herein include SONET PDM criteria (such as optical parameters and connectors), and other necessary criteria for compliance with the optical specification at the NI and the proper interfacing of the connecting customer installation equipment. Compliance with this standard is intended to ensure compatibility of the SONET NI and should not be construed as a constraint on the internal operations of the network or customer installation equipment.*

ANSI T1.416.02-1999 (R2005), Network to Customer Installation Interfaces - Synchronous Optical NETwork (SONET) Physical Media Dependent Specification : Single-Mode Fiber

*This standard establishes physical characteristics and technical criteria for Synchronous Optical NETwork (SONET) interfaces at standard rates associated with the network (NI) for Single Mode Fiber (SMF) applications. The criteria covered herein include SONET Physical Media Dependent (PMD) criteria (such as optical parameters and connectors), and other necessary criteria for compliance with the optical specification at the NI and the proper interfacing of the connecting customer installation equipment.*

ANSI T1.416.02a-2001 (R2005), Supplement to T1.416.02, Network to Customer Installation Interfaces - Synchronous Optical NETwork (SONET) Physical Media Dependent Specification: Single-Mode Fiber

*This supplement corrects references to other members of the T1.416 family of standards that are listed in the Foreword and in the Scope.*

ANSI T1.416.03-1999 (R2005), Network to Customer Installation Interfaces - Synchronous Optical NETwork (SONET) Physical Media Dependent Specification: Electrical

*This standard establishes physical characteristics and technical criteria for Synchronous Optical NETwork (SONET) interfaces at standard rates associated with the Network Interface (NI), for electrical interface applications. Covered herein are SONET Physical Media Dependent (PMD) specifications (such as electrical parameters and connectors). Other necessary criteria for compliance with the proper interfacing of the connecting customer installation equipment are found in the base document of this series.*

ANSI T1.416.04-2005, Network and Customer Installation Interfaces - SONET Physical Layer Interface and Mapping Specifications for ATM Applications

*This standard provides the physical layer (Layer 1) specifications for SONET User-Network Interfaces (UNIs) that are used to transport asynchronous transfer mode (ATM) cells in the SONET payload. The term User-Network Interface (UNI) is used in this standard to refer to both the Network Interface (NI) and interfaces within the Customer Installation (CI.*

ANSI T1.417-2003, Spectrum Management for Loop Transmission Systems

*This standard provides spectrum management requirements and recommendations for the administration of services and technologies that use metallic subscriber loop cables. Spectrum management is the administration of the loop plant in a way that provides spectral compatibility, services and technologies that use pairs in the same cable.*

ANSI T1.418-2002 (R2006), High Bit Rate Digital Subscriber Line - 2nd Generation (HDSL2)

*This standard describes two transmission methods for providing high-bit-rate digital subscriber line service over a single twisted pair (HDSL2) or two twisted pairs (HSDL4). The specifications of the standard provide for full-duplex transmission with a payload of 1.544 Mbps over the full Carrier Serving Area (CSA). HDSL2 transceivers that are compliant with the specifications are interoperable with another HDSL2 compliant transceiver independent of manufacturer.*

ANSI T1.418a-2004, High Bit Rate Subscriber Line - 2nd Generation (HDSL2/HDSL4) Issue 2

*This supplement provides an enhancement to T1.418-2000 to clarify the operation of the Embedded Operations Channel (EOE) for HDSL2 and HDSL4 equipment.*

ANSI T1.421-2001 (R2006), In-Line Filter for Use with Voiceband Terminal Equipment Operating on the Same Wire Pair with High Frequency (up to 10 MHz) Devices

*This standard addresses the steady-state operation of both Plain Old Telephone Service (POTS) and Digital Subscriber Line (DSL) services. Various tests and requirements are described to minimize mutual interactions in terms of continuous noise or signal degradation. Transient events such as implusive noise and large current spikes introduced by POTS signaling or DSL state changes have not been considered and are left for further study.*

ANSI T1.422-2001 (R2006), Telecommunications - Single-Pair High-Speed Digital Subscriber Line (SHDSL) Transceivers

*This standard specified the requirements for Single-Pair High-Speed Digital Subscriber Line (SHDSL) transceivers for use in the United States.*

ANSI T1.423-2001 (R2006), Telecommunications - Asymmetric Digital Subscriber Line (ADSL) Transceivers

*This standard specifies requirements for Asymmetric Digital Subscriber Line (ADSL) transceivers for use in the United States.*

ANSI T1.424-2004, Very-high-bit-rate Digital Subscriber Line (VDSL) Metallic Interface (DMT based)

*Describes the electrical and functional characteristics of Very high bit rate Digital Subscriber Line (VDSL). VDSL is designed to operate on a single pair of unshielded metallic cable. It offers a variety of bit rates (22/3 Mbps, 6/6 Mbps,...) on loops that are typically shorter than 4500 ft. VDSL can operate over loops of various gauges, including loops with brigeted taps.*

ANSI T1.426 -2004, Enhanced Single-Pair High Speed Digital Subscriber Line (E-SHDSL) Tranceivers

*This standard specifies the requirement for Single-Pair High-Speed Digital Subscriber Line (SHDSL) transceivers for use in the Unites States. This standard specifies ITU-T Recommmendation G.991.2, Single-Pair High-Speed Digital SUbscriber Line (SHDSL) Transceiver as a normative reference and identifies the requirements in ITU-T G991.2 that are different in the United States.*

ANSI T1.427.01-2004, ATM based Multi-pair Bonding

*This document provides requirements for advanced bonding of multiple digital subscriber lines (DSL) to transport ATM streams. The specifications of this standard provide a complete description of startup, operational, and contingency modes of operation which allows for interoperability between vendors.*

ANSI T1.427.02-2005, Ethernet-based Multi-Pair Bonding

*This standard specifies portions of Clause 61 of IEEE Standard 802-3ah-2004 Amendment to*

*Carrier Sense Multiple Access with Collision Detection (CSMA/CD) access method and physical layer specification as a normative reference and identifies the requirements for multi-pair bonding in IEEE 802.3ah-2004 that are different in the United States. Further, this standard specifies the requirements for extending the bonding methods in IEEE 802.3ah-2004 to xDSL technologies other than VDSL and SHDSL.*

ANSI T1.427.03 -2004, TDIM Bonding Protocol

*This standard defines the bonding function for the TDIM based bonding method, the purpose of which is to provide inverse multiplexing of various service data streams (Ethernet, ATM, TDM) over multiple DSL physical links and to retrieve the original stream at the far-end from these physical links.*

ANSI T1.501-1994 (R2004), Telecommunications – Network Performance – Tandem Encoding Limits for 32-kbit/s Adaptive Differential Pulse-Code Modulation (ADPCM)

*Addresses the use of 32-kbit/s Adaptive Differential Pulse-Code Modulation (G.726 32-kbit/s ADPCM) in 4-kHz voice-band network connections and limits the number of G.726 32-kbit/s ADPCM links allowed.*

ANSI T1.503-2002 (R2006), Network Performance Parameters for Dedicated Digital Services – Definitions and Measurements

*This standard applies to Layer 1, dedicated digital services, which are characterized by established transmission paths. This standard provides a list of the performance parameters and measurement methods needed by users, vendors, and providers of dedicated digital communications services, to characterize the user-observable performance of these services.*

ANSI T1.504-1998 (R2006), Performance Parameters for Packet Switched Data Communication Service

*The purpose of this standard is to define a set of parameters that may be used in specifying and measuring the performance of packet switched data communication services provided in accordance with ITU-T Recommendations X.25 and X.75.*

ANSI T1.506-1997 (R2006), Network Performance – Switched Exchange Access Network Transmission Specifications

*This standard provides specifications for the two-way digital or digital equivalent transmission path between an exchange carrier's end office and an interexchange carrier's point of termination. This standard defines performance-related transmission parameters and specifies limits.*

ANSI T1.507-2002 (R2006), Network Performance Parameters for Circuit Switched Digital Services – Definitions and Measurements

*This standard applies to circuit-switched digital services, and provides and defines the performance parameters and measurements needed by users, vendors, and providers of circuit-switched digital services, to characterize the user-observable performance of these services.*

ANSI T1.508-2003, Telecommunications – Network Performance – Loss Plan for Evolving Digital Networks

*Provides loss plan requirements for digital networks, including Digital End Offices, taking into account different network configurations and elements, and their associated transmission characteristics.*

ANSI T1.508a-2000, Network Performance - Loss Plan for Evolving Digital Networks (Guidelines for Implementation of Local Number Portability)

*Provides an extension of ANSI T1.508-1998 to incorporate new requirements to support the introduction of local number portability. This standard was first listed in the October 8, 1999 issue of Standards Action. It is being resubmitted due to substantive changes.To obtain an electronic draft: URL: ftp://ftp.t1.org/pub/ansi/bsr8/lb797-d.pdf*

ANSI T1.509-1995 (R2004), Telecommunications – Packetized Circuit Multiplication Equipment – Interface Specification

*Intended as a base document for the specification and interconnection of packetized circuit multiplication equipment (PCME) and Packet Circuit Multiplication Systems (PCMS) from various manufacturers.*

ANSI T1.510-1999 (R2004), Telecommunications – Network Performance Parameters for Dedicated Digital Services – Specifications

*Applies to Dedicated Digital Services operating at nominal rates of 56/64 kbit/s, 1.544 Mbit/s and 44.736 Mbit/s with objectives based on the longest and most complex circuits.*

ANSI T1.511-2003, Telecommunications - B-ISDN ATM Layer Cell Transfer Performance

*Defines speed, accuracy, and dependability performance parameters for cell transfer in the ATM layer of a national public B-ISDN through its normative reference to ITU-T Recommendation I.356; defines a national ATM performance model and provisionally allocates the ITU-T Recommendation I.356 performance values to defined portions of an end-to-end national ATM connection; and provides supplemental information intended to assist performance characterization of national ATM services.*

ANSI T1.512-1994 (R2004), Telecommunications – Network Performance – Point-to-Point Voice-Grade Special Access Network Voiceband Data Transmission Objectives

*Provides transmission performance objectives for point-to-point voiceband data (VBD), voice-grade special access (VGSA) services covering the bi-directional path between an exchange carrier's (EC) end-user network interface (NI) and an interexchange carrier's (IC) point of termination (POT).*

ANSI T1.513-2003, Telecommunications – Frame Relay Data Communication Service – User Information Transfer Performance Parameters

*This standard defines speed, accuracy, dependability, and availability parameters that may be used in specifying and assessing the performance of public frame relay data communication services. The defined parameters apply to end-to-end, point-to-point frame relay connections and to specified portions of such connections when provided in accordance with the American National Standards specified in clause 2.*

ANSI T1.514-2001 (R2006), Network Performance Parameters and Objectives for Dedicated Digital Services – SONET Bit Rates

*This standard defines the parameters and establishes objectives for assessing the performance of dedicated digital services operating at the nominal 51.84 Mbit/s, 155.52 Mbit/s, 622.08 Mbit/s, 2.488 Gbit/s, and 9.865 Gbit/s interface rates of the SONET (Synchronous Optical Network) digital hierarchy.*

ANSI T1.517-1995 (R2006), Integrated Services Digital Network (ISDN) - Performance Parameters and Objectives

*The purpose of this standard is to define a comprehensive basis for assessing the performance of Integrated Services Digital Networks (ISDNs) providing telecommunication service in accordance with the American National Standards and ITU-T Recommendations identified.*

ANSI T1.518-1998 (R2003), Telecommunications - Objective Measurement of Telephone Band Speech Quality Using Measuring Normalizing Blocks (MNBs)

*Subjective quality assessment of speech codecs can be made in listening-only (one-way) tests or in conversational (two-way) tests. The objective quality measurement described in this American National Standard (ANS) estimates the subjective quality in listening-only tests of telephone band speech.*

ANSI T1.519-1999 (R2004), Telecommunications - Specifications for Transport of Generic Packets (including MPEG-2 Transport Packets) Over the DS Hierarchy

*Describes the methods and practices for the transmission of a type of generic packet data over the digital hierarchy described in ANSI T1.107-1995.*

ANSI T1.522-2000 (R2004), Quality of Service for Business Multimedia Conferencing

*Specifies classes of Quality of Service (QOS) sufficient to support Business Multimedia Conferencing on Internet Protocol (IP) networks, defined as equivalent to legacy conference system performance.*

ANSI T1.523-2001, Telecommunications Glossary 2000

*Comprises terms and accompanying definitions that address the disciplines of: telephony, NS/EP (National Security/Emergency Preparedness), NII (National Information Infrastructure), spectrum sharing, radar, radio communications (including HF ALE radio), television (including UHF, VHF, cable TV, and HDTV), facsimile, networks (e.g., intelligent networks, open network architecture, ISDN, broadband ISDN, and network management), fiber optic communications, communications security, data processing, premises wiring, photonics, and telegraphy. The intent is to provide a uniform, up-to-date set of definitions for the general terminology used in telecommunications. The benefits of such a standard include: a) better communications among U.S. providers and user of telecommunications equipment and services, b) enhanced understanding of U.S.-developed*

ANSI T1.524-2004, Reliability-related Metrics and Terminology for Network Elements in Evolving Communications Networks

*Defines Functional Element (FE) and Network Element (NE) reliability-related terminology, metrics and features for evolving communications networks. The term 'reliability-related' refers to 'reliability, availability, maintainability, and survivability'. The standard is applicable to any layer 1 to 8 FE and NE.*

ANSI T1.601-1999 (R2004), Telecommunications – Integrated Services Digital Network (ISDN) – Basic Access Interface for Use on Metallic Loops for Application on the Network Side of the NT (Layer 1 Specification)

*The requirements of this standard apply to a single digital subscriber line (DSL) consisting of a line termination (LT), a two-wire metallic cable pair, and a network termination (NT) (see clause 3). The transmission system is designed to operate on two-wire twisted metallic cable pairs with mixed gauges.*

ANSI T1.602-1996 (R2004),
Telecommunications – Integrated Services Digital Network (ISDN) – Data-Link Layer Signaling Specification for Application at the User–Network Interface

*Specifies the Link Access Procedure on the D-channel, LAPD.*

ANSI T1.603-1990 (R2004),
Telecommunications – Integrated Services Digital Network (ISDN) - Minimal Set of Bearer Services for the ISDN Primary Rate Interface

*In this standard, the minimal set of bearer services for the primary rate interface for the integrated services digital network (ISDN) that conforms closely to the architectural concepts described by CCITT are defined.*

ANSI T1.604-1990 (R2004),
Telecommunications – Integrated Services Digital Network (ISDN) - Minimal Set of Bearer Services for the ISDN Basic Rate Interface

*In this standard, the minimal set of bearer services for the basic rate interface for the „„tegrated services digital network (ISDN) that conforms closely to the architectural concepts described by CCITT are defined.*

ANSI T1.605-1991 (R2004),
Telecommunications – Integrated Services Digital Network (ISDN) – Basic Access Interface for S and T Reference Points (Layer 1 Specification)

*This standard defines the layer 1 characteristics of the user-network interface to be applied at the S or T reference points for the*

*basic interface structure defined in CCITT Recommendation I.412. The reference configurations for the interface are defined in CCITT Recommendation I.411 and are reproduced in figure 1.*

ANSI T1.607-2000 (R2004),
Telecommunications - Integrated Services Digital Network (ISDN) - Layer 3 Signaling Specification for Circuit-Switched Bearer Service for Digital Subscriber Signaling System No. 1 (DSS1)

*This standard specifies the procedures for the establishing, maintaining, and clearing of network connections at the Integrated Services Digital Network (ISDN) user-network interface for support of circuit-switched calls. These procedures are defined in terms of messages exchanged over the D-channel. The functions and procedures of this protocol, and the relationship with other layers, are described in general terms in ITU-T Recommendation Q.930, ISDN User-Network Interface: Layer 3 General Aspects.*

ANSI T1.608-1991 (R2002),
Telecommunications – Integrated Services Digital Network (ISDN) – Signaling Specification for X.25 Packet-Switched Bearer Service for Digital Subscriber Signaling System Number 1 (DSS1)

*Presents the procedures at the S, T, or U reference point for B-channel, and D-channel access connection on basic rate interfaces and primary rate interfaces to a Packet-Handling (PH) function within the Integrated Services Digital Network (ISDN) to support ISDN virtual circuit service. Procedures at the S, T, or U reference point for B-channel access to a Packet-Switched Public Data Network (PSPDN) are also specified.*

ANSI T1.608a-1992 (R2002), Integrated Services Digital Network (ISDN) - Signaling Specification for X.25 Packet-Switched Bearer Service for Digital Subscriber Signaling System Number 1 (DSS1) (Terminal Initialization Procedures for Packet-Mode Data)

*This is a Supplement to ANSI T1.608-1991.*

ANSI T1.609-1999 (R2004),
Telecommunications – Interworking between the ISDN User–Network Interwork Interface Protocol and the Signalling System Number 7 ISDN User Part

*This standard defines the interworking relationship between the D-channel layer-3 functions and protocol employed across an ISDN User-Network Interface and the ISDN User Part functions and protocol of Signalling System Number 7 (SS7.*

ANSI T1.610-1998 (R2003),
Telecommunications – Generic Procedures for the Control of ISDN Supplementary Services

*This standard specifies the generic procedures applicable for the control of Integrated Services Digital Network (ISDN) supplementary services at the user-network interface. This standard is identical to the 1993 Recommendation Q.932 issued by the International Telecommunications Union - Telecommunications Standardization Sector (ITU-T) with the changes described in clause 3.*

ANSI T1.610a-1998 (R2003),
Telecommunications - Generic Procedures for the Control of ISDN Supplementary Services - Modification to the Redirecting Number Information Element

*This supplement to American National Standard for Telecommunications - Generic Procedures for the Control of ISDN Supplementary Services, ANSI T1.610-1998, revises the standard to improve and clarify the standard based on related advances in other standards bodies.*

ANSI T1.611-1991 (R2003),
Telecommunications – Signalling System Number 7 (SS7) – Supplementary Services for non-ISDN Subscribers

*Describes thirteen services for non-integrated services digital network (non-ISDN) subscribers along with their supporting SS7 protocols. They provide enhanced functionality for user with non-ISDN interfaces who access SS7 capable networks.*

ANSI T1.612-1992 (R2003),
Telecommunications – Integrated Services Digital Network (ISDN) – Terminal Adaptation Using Statistical Multiplexing

*This standard describes a protocol for use in ISDN point to point 64 kbit/s, H0, H10, H11 or D (for Frame Relay) connections to accommodate lower speed devices conforming to other standards. It does not define the specific mapping between those standards and the protocol defined as this is viewed as an implementation matter and does not require standardization.*

ANSI T1.613-1991 (R2002),
Telecommunications – Integrated Services Digital Network (ISDN) – Call Waiting Supplementary Service

*One of a series that defines and describes supplementary services within the context of an Integrated Services Digital Network (ISDN). The interaction of this service with other ISDN services is also included. The purpose of the standard is to allow maximum compatibility among network- and user- owned telecommunication equipment in order to :::crease the attractiveness and usefulness of ISDN-based capabilities.*

ANSI T1.614-1991 (R2002),
Telecommunications – Integrated Services Digital Network (ISDN) – Packet Mode Bearer Service Category Description

*Defines a recommended set of packet mode bearer service categories, describes individual packet mode bearer services, and recommends their provision as ISDN-based services in North America. The definitions and descriptions in this standard form the basis for defining the network capabilities required for the support of ISDN-based packet mode bearer services.*

ANSI T1.615-1992 (R2004),
Telecommunications – Digital Subscriber Signalling System No. 1 (DSS1) – Layer 3 Overview

*The Digital Subscriber Signalling System No. 1 (DSS1) is a suite of protocols that provide the means for users to invoke the full range of services and capabilities available from an ISDN.*

ANSI T1.616-1992 (R2004),
Telecommunications – Integrated Services Digital Network (ISDN) – Call Hold Supplementary Service

*Specifies the service capabilities of the Call Hold service within the context of an ISDN.*

ANSI T1.618-1991 (R2003),
Telecommunications – Integrated Services Digital Network (ISDN) – Core Aspects of Frame Protocol for Use with Frame Relay Bearer Service

*Provides a description of the protocol to support the data transfer phase of the Frame Relay bearer service as defined in ANSI T1.606, Frame relaying bearer service - Architectural framework and service description including Addendum 1. The protocol defined in this standard is a protocol operating in the lowest sublayer of the data link layer of the OSI reference model and is based on a subset of ANSI T1.602 (LAPD) called the "core aspects."*

ANSI T1.619-1992 (R2005),
Telecommunications – Integrated Services Digital Network (ISDN) – Multi-Level Precedence and Preemption (MLPP) Service Capability

*This standard is one of a series that defines and describes service capabilities within the context of an integrated services digital netowrk (ISDN). This service capability may be made available on a demand or subscription arrangements. The interaction of this service capability with other service capabilities defined in other American National Standards is also included. The purpose of this standard is to allow maximum compatibility among network and user-owned telecommunications equipments in order to increase the attractiveness and usefulness of ISDN-based capabilities.*

ANSI T1.619a-1994 (R1999),
Telecommunications – Integrated Services Digital Network (ISDN) – Multi-Level Precedence and Preemption (MLPP) Service Capability (MLPP Service Domain and Cause Value Changes)

*Revises the standard ANSI T1.619-1992 so that the exchange-to-exchange signaling is consistent with ITU-T Recommendations Q.955.3 (1993) and Q.735.3 (1993), which were approved after the publication of ANSI T1.619-1992.*

ANSI T1.620-1991 (R2002),
Telecommunications – Integrated Services Digital Network (ISDN) – Circuit-Mode Bearer Service Category Description

*Explains the ISDN Circuit-Mode Bearer Services from the user-s perspective. It covers on-demand circuit-mode 64-kbit/s services and on demand H0, H10, and H11 channels. This standard is based on the CCITT Recommendations I.220, I.230, and I.231 and applies to both ISDN Basic Rate Access and ISDN Primary Rate Access. It provides the service user with a description of what these services provide as well as possible options.*

ANSI T1.620a-1992 (R2003), Multi-Rate Circuit-Mode Bearer Service for ISDN - Addendum to the Circuit-Mode Bearer Service Category Description

*This supplement to American National Standard for Telecommunications - Integrated Services Digital Network (ISDN) - Circuit-Mode Bearer Service Category Description, ANSI T1.620-1991, revised the standard to add the category for the multi-rate circuit-mode bearer service.*

ANSI T1.621-1992 (R2004),
Telecommunications – Integrated Services Digital Network (ISDN) – User-to-User Signaling Supplementary Service

*The user-to-user signaling supplementary service provides a means of communication used to exchange user information between two users.*

ANSI T1.622-1999 (R2003),
Telecommunications - Message Waiting Indicator Control and Notification Supplementary Services and Associated Switching and Signaling Specifications

*This standard specifies the service capabilities of Message Waiting Indicator Control and Notification (MWICN) services within the context of an Integrated Services Digital Network (ISDN). Message Waiting Indicator Control and Notification service allows a Message Storage and Retrieval (MSR) System to inform its client users about the status of messages recorded at the MSR System.*

ANSI T1.622a-1998 (R2003),
Telecommunications - Message Waiting Indicator and Notification Supplementary Services and Associated Switching and Signaling Specifications

*This supplement to American National Standard for Telecommunications - Message Waiting Indicator and Notification Supplementary Services and Associated Switching and Signaling Specifications, ANSI T1.622-1992, revises the standard to improve and expand the applicability of this standard, in particular, when interfacing to an NT2.*

ANSI T1.623-1993 (R2004),
Telecommunications – Digital Subscriber Signalling System Number 1 (DSS1) – Signalling Specification for the User Signalling Bearer Service

*This interface standard was written to provide a set of requirements for User-Network Signalling for ISDN support of user signalling bearer service, while conforming, wherever possible, with the Q- and I- Series Recommendations of the International Telegraph and Telephone Consultative Committee (CCITT), and adhering to the principles of evolution expressed therein. Equipment may be implemented with additional functions and procedures.*

ANSI T1.625-1993 (R2003),
Telecommunications – Integrated Services Digital Network (ISDN) – Calling Line Identification Presentation and Restriction Supplementary Services

*The ISDN supplementary service called Calling Line Identification Presentation and Calling Line Identification Restriction are defined in three parts: 1) a description from the user's point of view, 2) an abstract analysis of the functional capabilities needed in network and user equipment, and 3) a precise specification of access and interexchange signaling capabilities that can be used to implement Calling Line Identification Presentation and Calling Line Identification Restriction.*

ANSI T1.625a-1998 (R2003),
Telecommunications - Integrated Services Digital Network (ISDN) - Calling Line Identification Presentation and Restriction Supplementary Services, Application of Standard to Wireless PCS Applications

*This supplement to American National Standard for Telecommunications - Integrated Services Digital Network (ISDN) - Calling Line Identification Presentation and Restriction Supplementary Services, ANSI T1.625-1993, revises the standard to add a statement to the Scope and Purpose indicating that the standard can also be applied to wireless PCS applications.*

ANSI T1.627-1993 (R2004),
Telecommunications – Broadband ISDN – ATM Layer Functionality and Specification

*One in a series of ANSI standards that describes the B-ISDN capabilities, architectural model, and network interfaces including protocol functionalities and specifications, and signaling characteristics.*

ANSI T1.628-2000 (R2005),
Telecommunications – Emergency Calling Service

*This standard specifies the capabilities required to support the passing of locatin and callback information associated with the calling user to a Public Safety Answering Point (PSAP) attendant, to provide network routing and transfer features associated with emergency service calls, and to deliver control indications (e.g. flashing display) to the PSAP attendant. Emergency Calling Service (ECS) allows emergency service calls to be completed through the network to an appropriate emergency service attendant, and to provide the PSAP attendant with location information (if available) regarding the calling user.*

ANSI T1.628a-2001 (R2005),
Telecommunications - Routing, Bridging, and Transfer of Emergency Service Calls (RBTESC)

*This addendum to T1.628-2000 specifies the use of the Connection Hold network capability by the Emergency Calling Service (ECS) to support ECS call hold and ring back. This addendum also specifies the TCAP messages exchanged between a switching node routing ECS calls and a Selective Routing Database (SRDB) that contains information determining the PSAP that should receive the emergency calls originating from a given caller or calling location.*

ANSI T1.630-1999 (R2005),
Telecommunications – Broadband ISDN – ATM Adaptation Layer for Constant Bit Rate Services Functionality and Specification

*This standard references the complete text of ITU-T (Formerly CCITT) AAL Type 1, Recommendation I.363.1, 1996. This standard describes a protocol of the Common Part of the ATM Adaptation Layer type 1 to support Constant Bit Rate (CBR) services.*

ANSI T1.630a-2002 (R2005), Broadband ISDN - ATM Adaptation Layer for Constant Bit Rate Services Functionality and Specifications

*This supplement to American National Standard for Telecommunications, T1.630-1999, Network - Broadband ISDN - ATM Adaptation Layer for Constant Bit Rate Services, provides an extension of this document to incorporate new requirements that define a new AAL Type 1 format to facilitate AAL Type 1 and AAL Type 2 interworking.*

ANSI T1.632-1993 (R2004), Telecommunications – ISDN Supplementary Service Normal Call Transfer

*Describes the ISDN Normal Call Transfer Service in terms of service definition and protocol and procedures needed for implementation.*

ANSI T1.634-1993 (R2006), Telecommunications – Frame Relaying Service Specific Convergence Sublayer (FR-SSCS)

*This standard specifies the Frame Relaying Service Specific Convergence Sublayer (FR-SSCS). The FR-SSCS is located in the upper part of the ATM Adaptation Layer on top of the Common Part Convergence Sublayer (CPCS) of AAL type 5, as specified in ITU-T (formerly CCITT) Recommendation 1.363, section 6. The FR-SSCS is used at the B-ISDN TE to emulate the Frame Relaying Bearer Service (FRBS) in B-ISDN. It is also used for interworking between a B-ISDN and a Frame Relaying Network.*

ANSI T1.635-1999 (R2005), Telecommunications – Broadband ISDN – ATM Adaptation Layer Type 5, Common Part Functions and Specification

*The requirements of this standard are the same as those contained in ITU-T Recommendation I.363.5 (08/96), B-ISDN ATM Adaptation Layer specification: type 5 AAL.*

ANSI T1.636-1999 (R2005), Telecommunications – B-ISDN Signaling ATM Adaptation Layer – Overview Description

*This standard briefly describes the various components that make up the AAL functions necessary to support signaling (SAAL). It is intended to serve as a guide to all other standards required by a user who intends to construct an AAL for the purpose of signaling.*

ANSI T1.637-1999 (R2005), B-ISDN ATM Adaptation Layer - Service Specific Connection Oriented Protocol (SSCOP)

*The intent of this standard is to provide a new protocol specification that can be used in the B-ISDN ATM Adaptation Layer (AAL). This protocol, called the Service Specific Connection Oriented Protocol (SSCOP), provides assured data delivery between AAL connection endpoints.*

ANSI T1.638-1999 (R2005), B-ISDN ATM Adaptation Layer - Service Specific Coordination Function for Support of Signaling at the User-to-Network Interface (SSCF at the UNI)

*The intent of this standard is to provide a function that is part of the ATM Adaptation Layer for the support of signaling (SAAL) at the UNI of the B-ISDN. This function is used to map the service of the Service Specific Connection Oriented Protocol (SSCOP) of the AAL to the needs of layer 3 protocols for access signaling across the UNI (e.g., Q.2931). This function is called Service Specific Coordination Function (SSCF) for signaling at the UNI.*

ANSI T1.639-1995 (R2006), Telecommunications – Calling Name Identification Restriction

*This standard is one of a series that defines and describes supplementary services. These services may be made available for users with non-ISDN interfaces who access SS7 capable networks and also within the context of an Integrated Services Digital Network (ISDN). This standard describes Calling Name Identification Restriction, which is an originating service that allows a user to alter the network stored or subscribed privacy status associated with the user's Calling Name.*

ANSI T1.639a-2001 (R2006), Supplement to Calling Name Identification Restriction

*This supplement to T1.639-1995 (R2001), American National Telecommunications - Calling Name Identification Restriction, addresses certain regulatory requirements that may exist regarding Caller Identification services. Such regulations may require the service provider to conceal the name of a caller when the caller requests his or her calling party number be concealed. In particular, this addendum adds the requirements for a service provider to link the presentation status of CLIR and CNIR. This supplement also includes a minor technical correction to error handling for the functional signaling procedures described in 6.3.3.1.*

ANSI T1.640-2001 (R2006), Telecommunications – Broadband ISDN Network Node Interfaces and Inter-Network Interfaces – Rates and Formats Specifications

*This standard provides specifications of the rates and formats of signals for use at Network Node Interfaces (NNIs) and Inter-Network Interfaces (INIs) in a Broadband Integrated Services Digital Network (B-ISDN). The term, NNI, was originally used in ITU-T (formerly CCITT) for the description of SDH-based systems, and its use has been carried over to SONET-based systems. The meaning of NNI is further expanded in these B-ISDN specifications to include non-SONET interfaces such as DS3. INI applies to interfaces between network nodes in different networks, and has been previously established in American National Standards for other applications.*

ANSI T1.641-1995 (R2004), Telecommunications – Calling Name Identification Presentation

*One of a series which defines and describes supplementary services.*

ANSI T1.641a-2002, Telecommunications - Calling Name Identification Presentation

*This supplement addresses certain regulatory requirements that may exist regarding Caller Identification services. Such regulations may require the service provider to conceal the name of a caller when the calling party number is to be concealed. In particular, this supplement adds new requirements for a service provider option to link the presentation of Calling Name with the presentation of a private Calling Number. An update to some references is also included.*

ANSI T1.642-1995 (R2004), Telecommunications – Integrated Services Digital Network (ISDN) – Call Deflection Supplementary Service

*One in a series that defines and describes supplementary services within the context of an ISDN.*

ANSI T1.643-1998 (R2003), Telecommunications – Integrated Services Digital Network (ISDN) – Explicit Call Transfer Supplementary Service

*This standard describes the ISDN Explicit Call Transfer (ECT) Service in terms of service definition and protocol and procedures needed for implementation. The ECT service allows the served user having two independent calls to connect together the distant parties of the two calls, thereby releasing the served user from the call, in a single request from the user.*

ANSI T1.644-1995 (R2005), Telecommunications – Broadband ISDN – Meta-Signalling Protocol

*This standard defines the B-ISDN meta-signalling protocol (Version 1) that is used to establish and maintain user-network signalling connections that are applicable for multipoint configurations at the SB or TB reference points.*

ANSI T1.645-1995 (R2003), Telecommunications – B-ISDN Signaling ATM Adaptation Layer – Service Specific Coordination Function for Support of Signaling at the Network Node Interface (SSCF at the NNI)

*Provides a function that is part of the ATM Adaptation layer for the support of signaling (SAAL) at the Network Node Interface (NNI) of the B-ISDN. This function is used to map the service of the Service Specific Connection Oriented Protocol (SSCOP) of the AAL to the requirements of an SAAL user at the NNI as defined in ANSI T1.111. These requirements cover the needs for signaling between network nodes and networks.*

ANSI T1.646-2003, Telecommunications – Broadband ISDN – Physical Layer Specification for User-Network Interfaces Including DS1/ATM

*This standard is a revision of the common criteria for broadband ISDN in T1.646-1995 and replaces the relevant clauses of that standard in their entirety. This standard provides NI compatibility information and is not meant to be an equipment specification. Information requirements specific to particular transmission technologies has been removed to standards associated with those technologies.*

ANSI T1.646a-1997, Telecommunications - Broadband ISDN - Physical Layer Specification for User-Network Interfaces Including DS1/ATM

*Adds a 622 Mbit/s Multi-mode fiber interface to ANSI T1.646. It also adds two normative annexes for 51.84 and 25.6 Mbit/s UTP Metallic Physical Layers to ANSI T1.646.*

ANSI T1.647-1995 (R2005), Telecommunications - Integrated Services Digital Network (ISDN) - Conference Calling Supplementary Service

*This standard is one of a series, which defines and describes supplementary services within the context of an Integrated Services Digital Network (ISDN). The interaction of this service with other ISDN services is also included. The purpose of the standard is to allow maximum compatibility among network and user owned telecommunications equipment in order to increase the attractiveness and usefulness of ISDN-based capabilities.*

ANSI T1.647a-1998 (R2005), Telecommunications - Integrated Services Digital Network (ISDN) - Conference Calling Supplementary Service - Operation Across Multiple Interfaces

*Enhancements to Conference Calling are provided to expand and improve the applicability of the ISDN Conference Calling service.*

ANSI T1.650-1995 (R2005), Telecommunications – Integrated Services Digital Network (ISDN) – Usage of the Cause Information Element in Digital Subscriber Signalling System Number 1 (DSS1)

*This standard defines the usage, format, and encoding of the cause information element within the context of the Digital Subscriber Signaling System Number 1 (DSS1) of an Integrated Services Digital Network (ISDN). It also defines the meaning of specific causes, and the usage of the location and diagnostic fields.*

ANSI T1.651-1996 (R2006),
Telecommunications – Mobility Management Application Protocol (MMAP)

*The Mobility Management Application Protocol (MMAP) is a communication protocol between a radio system and other network elements (e.g., mobility management platforms, switching systems, and other radio systems). The scope of the radio systems supported are the wireless Personal Communications Services (PCS) radio systems defined by T1 and TIA. The scope of the information and operations is the support of personal and terminal mobility in a wireless environment and includes functionality such as registration, location updating, authentication, roaming, and handover.*

ANSI T1.651a-1996 (R2006),
Telecommunications - Mobility Management Application Protocol (MMAP) - Extensions

*The Mobility Management Application Protocol (MMAP) is a communication protocol between a radio system and other network elements (e.g., mobility management platforms, switching systems, and other radio systems). The scope of the radio systems supported are the wireless Personal Communications Services (PCS) radio systems defined by T1 and TIA. The scope of the information and operations is the support of personal and terminal mobility in a wireless environment and includes functionality such as registration, location updating, authentication, roaming, handover, and billing.*

ANSI T1.652-1996 (R2006),
Telecommunications – B-ISDN Signaling ATM Adaptation Layer – Layer Management for the SAAL at the NNI

*This standard specifies the Layer Management functions for the Signaling ATM Adaptation Layer (SAAL) at the Network Node Interface (NNI). These include the interfaces to the Service Specific Connection Oriented Protocol (SSCOP), (ANSI T1.637), to the Service Specific Coordination Function (SSCF) at the NNI (ANSI T1.645), and to systems management. Layer Management provides, or supports, the following functions for the Service Specific Convergence Sublayer (SSCS) at the NNI: error processing; measurements; notification of processor outage status; determination of link quality during proving; and determination of link quality during normal operation.*

ANSI T1.653-1996 (R2005),
Telecommunciations – Integrated Services Digital Network (ISDN) – Call Park Supplementary Service

*This standard specifies the service capabilities of the Call Park service within the context of an Integrated Services Digital Network (ISDN). Call Park is a Circuit-Switched service that allows a user to interrupt a voice or voice-band data communication on an existing call, and then reestablish communications from the same or different terminal equipment within the same Call Park Subscriber Group.*

ANSI T1.653a-1998 (R2005),
Telecommunications - Generic Procedures for the Control of Integrated Services Digital Network (ISDN) Supplementary Services, Clarification of Number Identification

*This supplement to ANSI T1.653-1996, revises the standard to improve and clarify the standard based on related advances in other standards bodies.*

ANSI T1.654-1996 (R2003),
Telecommunications – Broadband Integrated Services Digital Network (B-ISDN) – Operations and Maintenance (OAM) Principles and Functions

*This standard specifies the Operations and Maintenance (OAM) principles and functions for the Broadband aspects of the Integrated Services Digital Network (B-ISDN). Specifically, it defines the OAM flow mechanisms for B-ISDNs and specifies OAM functions for the Physical and Asynchronous Transfer Mode (ATM) layers of the B-ISDN protocol reference model. The categories of operations addressed are Fault Management and Performance Management.*

ANSI T1.655-2001 (R2006),
Telecommunications – Signalling System Number 7 (SS7) – Upper Layer Security Capability

*The Security capability allows an end user service in the originating Signalling Point (SP) to invoke various security functions in the originating and/or destination SP. The Security capability can be used for identification and authentication of the communicating entities. It also provides information that supports resource access control, system access control, and encryption and decryption functions. The Security capability may be invoked by a variety of services.*

ANSI T1.659-1996 (R2006),
Telecommunications - Mobility Management Application Protocol (MMAP) RCF-RACF Operations

*The Mobility Management Application Protocol (MMAP) is a communication protocol between a radio system and other network elements (e.g. mobility management platforms, switching systems, and other radio systems). The scope of the radio systems supported are the wireless Personal Communications Services (PCS) radio systems defined by T1 and TIA. The scope of the information and operations is the support of personal and terminal mobility in a wireless environment and includes functionality such as registration, location updating, authentication, roaming, handover, and billing.*

ANSI T1.660-1998 (R2003), Telecommunications - Signalling System Number 7 (SS7) - Call Completion to a Portable Number - Integrated Text

*Describes the SS7 network capabilities for completing calls to end users with portable numbers. The SS7 network capability, known as CCPN provides the core functionality. CCPN also includes optional network capabilities for obtaining the routing information outlined in 4.1 and described in Annexes A-C to supplement the CCPN capability. These optional network capabilities are: NP Query-Response, NP Release to Pivot, and NP Query on Release.*

ANSI T1.661-2000 (R2005), Telecommunications - Signalling System Number 7 (SS7) - Release to Pivot (RTP)

*The Release To Pivot (RTP) network capability permits an SS7 Signalling Point that has received a call from another Node, and has determined the call should be connected to a Destination Node other than itself, to have the connection established from a Node earlier in the call path. RTP functionality is shared between the Release Node and the Pivot Node. The RTP capability may be invoked by an end user service or other network capability on a per call basis. The specific end user service or other network capability that may invoke RTP is not within the scope of this network capability description.*

ANSI T1.665-1997 (R2003), Telecommunications - Broadband ISDN - Overview of ANSI B-ISDN NNI Signaling Capability Set 2, Step 1

*Provides an overview of the capabilities of the ANSI Broadband ISDN Network Node Interface (B-ISDN NNI) for the Broadband ISDN Signaling Capability Set 2, Step 1 (B-ISDN NNI CS 2.1). This standard should thus be seen as an increment to ANSI T1.648, Section 1 which provides an overview of the B-ISUP for Signaling Capability Set 1.*

ANSI T1.666-1999 (R2004), Telecommunications - Signalling System Number 7 (SS7) - Operator Services Network Capabilities

*Describes the operator services originating connection network capability, which permits the establishment and release of a network connection between a user and an operator service or services. This capability builds upon the existing basic call control procedures, defined in ANSI T1.113, for establishing and releasing connections.*

ANSI T1.666a-2000 (R2004), Telecommunications - Interactions Between the Operator Services Network Capability and Release to Pivot

*This Annex describes the additional functions that the Operator Services Network Capability (OSNC)--described in T1.666-1999--will need to perform when invoking the Release to Pivot (RTP) network capability--described in T1.661-1997. These functions are activated on a per-switch basis and are only activated when the Release to Pivot network capabiltiy is also active. In particular, the originating end office and the operator services switch may activate these functions independently, though RTP will not be invoked for a given call unless both switches have these functions active.*

ANSI T1.667-2002, Telecommunications - Intelligent Network

*Establishes an architectural framework in which the model of the Intelligent Network (IN) is defined. The architecture is intended to provide the flexibility to support a wide range of services and facilitates the evolution of future IN functional capabilities through its evolvable, modular structure to achieve service independence.*

ANSI T1.668-1999 (R2005), Telecommunications - Signaling System Number 7 (SS7) - Facility Request to Pivot (FRP)

*The Facility Request to Pivot (FRP) network capability permits an ISUP-capable SS7 Signalling Point that has received a call from another ISUP capable node, and has determined that the call should be connected to a Destination node other than itself, to have the connection established from a node earlier in the call path. FRP functionality is shared between the Request and Pivot nodes. The FRP capability may be invoked by an end user service or other network capability on a per-call basis. The specific end-user service or other network capability that may invoke FRP is not within the scope of this network capability description.*

ANSI T1.669-1999 (R2005), Telecommunications - Intermediate Network Selection (INS) Network Capability

*The Intermediate Network Selection (INS) network capability allows an application process in the origination network to specify a single intermediate signalling network for non-circuit-associated signalling messages. The network capabilty also includes functionality that may be used to route non-circuit-associated messages in a number portability environment.*

ANSI T1.671-2000 (R2005), Signalling System Number 7 (SS7) - Carrier Service Provider Identification (CSPI)

*Carrier Service Provider Identification (CSPI) information is intended to identify to intermediate switches all presubscribed carriers associated with a calling party. Identifiable carrier service providers include the preferred intraLATA toll carrier, the preferred interLATA carrier, and the international carrier. Other carrier types may be included as the need arises.*

ANSI T1.672-2000 (R2005), Telecommunications - Bearer Independent Call Control

*This standard describes the adaptation of the narrowband ISDN User Part (ISUP) for the support of narrowband ISDN services independent of the bearer technology and signalling message transport technology used.*

ANSI T1.673-2002, T1.BICC Capability Set 1+

*Provides the signalling functions required to support narrowband ISDN services independent of the bearer technology and signalling transport technology used. The BICC protocol used the Signalling Transport Converter (STC) layer for signalling message transport. The STCs are defined in T1.stc. Several arrangements are possible for nodes that support BICC signalling. These nodes may have an associated Bearer Control Function (BCF) in which case they are referred to as Serving Nodes (SN). A node without an associated BCF is referred to as Call Mediation Node (CMN). Between Serving Nodes the control of bearers is provided by other protocols not specified by this standard.*

ANSI T1.674-2002, BICC CS1+: Signalling Transport Converters (STCs)

*Describes the Generic Signaling Transport Service. It allows the definition of signaling specifications without considerations of the idiosyncrasies of the underlying signaling transport mechanisms. This standard also describes the interface states and the definition of the service by a number of primitives. The Generic Signaling Transport Service can be deployed by means of Signaling Transport Converters over a range of signaling transport protocol stacks. This standard was listed for public review in the 6/15/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI T1.676-2001 (R2006), BICC IP Bearer Control Protocol (IPBCP)

*This standard defines IPBCP, which is suitable for use in IP network environments where the Bearer Independent Call Control (BICC) protocol is deployed. IPBCP can be used also in other environments. BICC IPBCP is used for the exchange of media stream characteristics, port numbers, and IP addresses of the source and sink of a media stream to establish and allow the modification of IP bearers. The exchange of information with IPBCP is done during BICC call establishment and after a call has been established. IPBCP uses the Session Description Protocol (SDP) defined in RFC 2327 to encode this information.*

ANSI T1.677-2001 (R2006), BICC Bearer Control Tunneling Protocol

*The purpose of this Standard is to define the BICC Bearer Control Tunneling Protocol. The BICC Bearer Control Tunneling Protocol is a generic tunneling mechanism for the purpose of tunneling Bearer control Protocols (BCP) over the "horizontal" BICC interface between CCUs.*

ANSI T1.679-2004, T1.SIPInterworking Output Baseline Document

*This Standard defines the signaling interworking between the Bearer Independent Call Control (BICC) or ISDN User Part (ISUP) protocols and Session Initiation Protocol (SIP) with its associated Session Description Protocol (SDP) at an Interworking Unit (IWU). The capabilities of SIP and SDP that are needed to interwork with BICC or ISUP are defined in Annex C of this Standard.*

ANSI T1.703-1995 (R2005), Telecommunications – Allocation of Letters to the Keys of Numeric Keypads

*Increasingly, telecommunications services are making use of letters, as well as numbers, on numeric keypads for tasks such as directory, dial-by-name, entry of alphabetic numbers, and the like. In addition, it is recognized that many users of telecommunication services prefer to use letters instead of digits to code and remember numbers. Hence, there is a need for a standard allocation of letters to they keys of numeric keypads used for telecommunications.*

ANSI T1.706-1997 (R2003), Stage 1 Service Description for Personal Communications Service - Enhanced Priority Access and Channel Assignment (PACA-E) Supplementary Service

*Defines and describes the Enhanced Priority Access and Channel Assignment (PACA-E) service for PCS. This service is intended to provide preferential treatment to a special group of PCS users, e.g., National Security and Emergency Preparedness (NS/EP) users. PACA-E requires modifications to basic PCS call set-up procedures in order to provide prioritization, by queuing, of the assignment of radio channel resources involved in call origination from a PACA-E subscriber (priority access) and, separately, call delivery to a PACA-E subscriber (priority egress).*

ANSI T1.708-1998 (R2003), Telecommunications - PCS 1900 Service Provider Number Portability

*Number Portability (NP) allows subscribers to retain their Directory Number (DN) when they change their service provider (service provider portability), location (location portability), or service (service portability). The focus of this specification is to allow PCS1900 systems to support "service provider portability." Location and service portability are outside the scope of this document.*

ANSI T1.711-1999 (R2004), Telecommunications - Number Portability for PCS 1900 Short Message Service and Other Services

*This standard defines the PCS 1900 requirements needed to support Short Message Service and other Services in a Number Portability environment. In this document, the phrase "Number Portability environment" refers to an environment where Service Provider Number Portability is active in the PCS 1900 networks. The phrase "Number Portability" and "Service Provider Number Portability" is used interchangeably throughout this document.*

ANSI T1.714-2000 (R2005), Stage 2 Service Description for Personal Communications Service - Enhanced Priority Access and Channel Assignment (PACA-E) Supplementary Service

*Defines and describes the stage 2 description for the Enhanced Priority Access and Channel Assignment (PACA-E) service to support call set-up requests invoked by authorized PACA-E subscribers (access) and call completion to a PACA-E subscriber (egress). PACA-E requires modifications to basic PCS call set-up procedures in order to provide prioritization, by queuing, of the assignment of radio channel resources involved in call origination from a PACA-E subscriber (priority access) and, separately, call delivery to a PACA-E subscriber (priority egress). To obtain an electronic draft: URL: ftp://ftp.t1.org/pub/ansi/bsr8/lb808-d2.pdf*

ANSI T1.715-2000 (R2006), IMT- 2000 CDMA DS and TDD Radio Interface Specifications

*This standard describes in detail the specification for the IMT-2000 Radio Access Network Interface suitable for a third generation wireless mobile system to operate in any licensed North American band of frequencies. The frequencies to be used for IMT-2000 operation in North Americaa will include the PCS band of frequencies at 1900 MHz. The list of 3GPP Radio Access Network Interface Specifications are defined and described in clause 2.*

ANSI T1.716-2000 (R2004), Broadband Direct Sequence CDMA for Fixed Wireless PSTN Access - Layer 1

*This document specifies the transmit functions of Layer 1 to define the air interface for a Broadband Direct Sequence CDMA system for Fixed Wireless PSTN Access (FWPA). This air interface satisfies the requirements defined in T1.TR.67-2001 for the single-line subscriber architecture. This standard provides the detailed definition of all component entities within Layer 1, and the services and primitives provided to other layers by Layer 1.*

ANSI T1.717-2000 (R2004), Broadband Direct Sequence CDMA for Fixed Wireless PSTN Access - Layer 2

*This standard specifies the transmit functions of Layer 2 to define the air interface for a Broadband Direct Sequence CDMA system for Fixed Wireless PSTN Access (FWPA). This air interface satisfies the requirements defined in T1.TR.67-2001 for the single-line subscriber architecture. This standard provides the detailed definition of all component entities within Layer 2, and the services and primitives provided to other layers by Layer 2.*

ANSI T1.721-2003, PCS1900 and GSM 850 References - GSM specifications (Release 99 & Release 4 & GTT)

*Provides the North American GSM industry with information on PCS1900 and GSM 850 technologies to ensure interoperability between equipment and includes core standards for PCS1900 and GSM 850 which are Radio Interface, A-Interface and MAP Specifications, which also provide support for 3-digit MNC and the Enhanced Full Rate Vocoder; and supports features for General Packet Radio Service, Enhanced Data Rate for GSM Evolution, Number Portability, Customized Application for Mobile Network Enhanced Logic and Location Services.*

ANSI T1.723-2002, I-CDMA Spread Spectrum Systems Air Interface Standard - Stage 3 Text

*This document contains all requirements of the air interface for I-CDMA compatible ATs and BSRs, either directly or by reference to another published document. The I-CDMA air interface is composed of three specific layers analogous to the OSI Network Layer model. These are specified in the following sections of this document: The Physical Layer is specified in Section 2, the Link Layer is specified in Section 3, and the Network Layer is specified in Section 4.*

ANSI T1.724-2004, UMTS Handover Interface for Lawful Interception

*This specification addresses the handover interfaces for Lawful Interception (LI) of Packet-Data Services, Circuit Switched Services, and Multimedia Services within GSM and UMTS. The handover interface in this context includes the delivery of Intercept Related Information (HI2) and Content of Communication (HI3) to the Law Enforcement Monitoring Facility.*

ANSI T1.801.01-1995 (R2006), Digital Transport of Video Teleconferencing/Video Telephony Signals - Video Test Scenes for Subjective and Objective Performance Assessment

*This standard specifies a collection of test scenes that have been used for subjective assessment and may be used in future objective assessment of Video Teleconferencing/Video Telephony (VTC/VT.*

ANSI T1.801.02-1996 (R2001), Telecommunications – Digital Transport of Video Teleconferencing/Video Telephony Signals – Performance Terms, Definitions, and Examples

*Specifies terms useful for describing the performance of video teleconferencing/video telephony systems and gives their definitions. The standard also supplies examples of the terms were appropriate, as an aid to understanding the definitions.*

ANSI T1.801.03-2003, Telecommunications – Digital Transport of One-Way Video Signals – Parameters for Objective Performance Assessment

*The purpose of this standard is to provide a standard performance measurement method for one-way signals transported digitally by portions of the telecommunications network. The standard provides a video performance measurement method necessary to support the interconnection and interoperability of telecommunications networks at interfaces with end-user systems, carriers, information and enhanced-service providers, and customer premise equipment.*

ANSI T1.802.01-1996 (R2006), North American Adaptation for Domestic-International Interfaces of ETSI 300 174 Digital Component Television Signals-Interface and Coding Specifications

*This standard is the North American adaptation for Domestic-International interfaces of the ETSI ETS 300 174 standard for the coding and transmission of digital component television signal at a bit rate of 45 mbit/s.*

ANSI T1.803-1998 (R2003), Telecommunications - Overview and Reference for GSTN Multimedia Terminals

*This document is to be a general overview of the implementation of multimedia terminals targeting audio-visual conferencing applications on the GSTN. This document also provides elaboration of implementation details in areas which the ITU-T documents have been found to be vague or unclear. Detailed standards for implementation of compatible terminals are provided by normative reference to approved ITU-T Recommendations.*

ANSI/ATIS 0300007-2005, Identification of Physical Network Resources

*The area of interest is the communication between operators about network interconnections, extended to include the identification of all pertinent Physical Network Resources (PNR). The objects of communications are physical network resources and their interconnection points. The application schema defined in this document provides correct terms for these objects.*

ANSI/ATIS 0632000-2005, Telecommunications – Above-Baseline Electrical Protection for Designated Telecommunications Central Offices and Similar-Type Facilities against High-Altitude Electromagnetic Pulse (HEMP)

*This above-baseline standard applies to central offices and similar-type facilities in public telecommunications networks in which a special measure of resistance to damage from high-altitude electromagnetic pulse (HEMP) is desired. It describes electrical protection measures that extend beyond the baseline-level measures against the normally encountered electromagnetic threats included in T1.308-1990 and T1.313-1991.*

ANSI/ATIS 0700001-2004, MCSB Physical, MAC/LLC, & Network Layer Specification

*This document describes the characteristics and requirements of the Multi-carrier Synchronous Beamforming (MCSB) Air Interface technology. The technology is based in part on existing Code Division Multiple Access (CDMA) and Smart Antenna technologies; however, a new protocol shall be developed to enhance transmission quality and security, and to achieve broadband data rates.*

## AWEA (American Wind Energy Association)

## AWPA (American Wood-Preservers' Association)

## AWS (American Welding Society)

ANSI Z49.1-2005, Welding, Cutting and Allied Processes, Safety in

*This standard covers all aspects of safety and health in the welding environment, emphasizing oxygen gas and arc welding processes with some coverage given to resistance welding. It contains information on protection of personnel and the general area, ventilation, fire prevention and protection, and confined spaces. A significant section is devoted to precautionary information, showing examples, and an extensive bibliography is included.*

AWS A1.1-2001, Metric Practice Guide for the Welding Industry

*Provides a metric practice guide that is based on the International System of Units (SI) as defined in the U. S. Federal Register notice of July 28, 1998, "Metric System of Measurement: Interpretation of the International System of Units for the United States". It includes the base units, derived units, and rules for their use. Also covered are conversion factors and rules for their use in converting inch-pound units to SI Units. Recommendations are presented for style and usage in such areas as prefixes, punctuation, number grouping, etc. There are also suggestions to industry for managing the transition.*

AWS A2.4-1998, Symbols for Welding, Brazing, and Nondestructive Examination

*Establishes a method of specifying certain welding, brazing, and nondestructive examination information by means of symbols. Detailed information and examples are provided for the construction and interpretation of these symbols. This system provides a means of specifying a sequence of welding or brazing operations and nondestructive examination, as well as the examination method, frequency, and extent.*

AWS A3.0-2001, Standard Welding Terms and Definitions

*Provides a glossary of the technical terms used in the welding industry. Its purpose is to establish standard terms to aid in the communication of welding information. Since it is intended to be a comprehensive compilation of welding terminology, nonstandard terms used in the welding industry are also included. This standard was listed for public review in the 9/22/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

AWS A4.2M/A4.2-1997, Calibrating Magnetic Instruments to Measure the Delta Ferrite Content of Austenitic and Duplex Austenitic-Ferrite Stainless Steel Weld Metal, Procedures for

*Specifies the calibration procedures for a number of commercial instruments that can then provide reproduceble measurements of the ferrite content of austenitic stainless steel weld metals. Some of these instruments can be further calibrated for measurements of the ferrite content of duplex ferritic-austenitic stainless steel weld metals. Calibration with primary standards (nonmagnetic coating thickness standards from the U.S. National Institute of Standards and Technology) is the preferred methods for appropriate instruments. Alternatively, these and other instruments can be calibrated with weld-metal-like secondary standards.*

AWS A4.2M/ISO 8249:2000-2006, Standard Procedures for Calibrating Magnetic Instruments to Measure the Delta Ferrite Content of Austenitic and Duplex Ferritic-Austenitic Stainless Steel Weld Metal

*Calibration procedures are specified for a number of commercial instruments that can then provide reproducible measurements of the ferrite content of austenitic stainless steel weld metals. Certain of these instruments can be further calibrated for measurements of the ferrite content of duplex ferritic-austenitic stainless steel weld metals. Calibration with primary standards (nonmagnetic coating thickness standards from the U.S. National Instituite of Standards and Technology ) is the preferred method for appropriate instruments. Alternatively, these and other instruments can be calibrated with weld-metal-like secondary standards.*

AWS A4.3-93 (R2006), Standard Methods for Determination of the Diffusible Hydrogen Content of Martensitic, Bainitic, and Ferritic Steel Weld Metal Produced by Arc Welding

*A standard 25 x 12 x 80 mm test specimen and method of preparation are set forth, along with two standard methods of diffusible hydrogen analysis, mercury displacement and gas chromatography. The methods are suitable for shielded metal arc welding, gas metal arc welding , flux cored arc welding, and submerged arc welding using welding conditions and electrodes given in several applicable American Welding Society filler metal specifications.*

AWS A4.4M-2001 (R2006), Standard Procedures for Determination of Moisture Content of Welding Fluxes and Welding Electrode Flux Coverings

*This document establishes standard procedures for determination of moisture content of welding fluxes and welding electrode coverings. The test involves combustion of a sample in an oxygen carrier gas at elevated temperature. Any water evolved from the sample or formed by the combustion process is measured by means of either Karl Fischer titration or infrared detection. The key differences between these methods and traditional thermo gravimetric techniques are the inclusion of instrument calibration procedures, system verification checks and use of more accurate analytical techniques for water detection.*

AWS A5.01-93 (R99), Filler Metal Procurement Guidelines

*Provides a means by which the information needed for the procurement of filler metals to an AWS filler metal specification can be stated clearly, concisely, and completely. It includes a method by which the heat, lot testing, and certification requirements that are essential to so many of today's welding applications can be specified in the procurement document.*

AWS A5.02/A5.02M-2006, Filler Metal Standard Sizes, Packaging, and Physical Attributes

*This specification prescribes the requirements for Standard Sizes and Packages of all types of welding filler metals, allowing these physical attributes to be incorporated by reference into the individual specification. The annex lists the manner by which the filler metal specification may refer to appropriate requirements in this specification. This specification makes use of both U.S. Customary Units and the International System of Units (SI). Since these are not equivalent, each system must be used independently of the other.*

AWS A5.1/A5.1M-2003, Carbon Steel Covered Arc-Welding Electrodes, Specification for

*This specification establishes the requirements for classification of carbon steel electrodes for shielded metal arc welding. The requirements include mechanical properties of weld metal, weld metal soundness, and usability of electrode. Requirements for composition of the weld metal, moisture content of low-hydrogen electrode coverings, standard sizes and lengths, marking, manufacturing, and packaging are also included. A guide to the use of the standard is included in an Annex.*

AWS A5.10/A5.10M-1999, Bare Aluminum and Aluminum Alloy Welding Electrodes and Rods, Specification for

*Provides a guideline and rules that must be followed by a candidate for AWS certification. Qualification and subsequent certification requires the use of an AWS accredited test facility.*

AWS A5.11-97/A5.11M-2005, Nickel and Nickel-Alloy Welding Electrodes for Shielded Metal Arc Welding, Specification for

*This specification prescribes the composition, dimensions, soundness, and properties of weld metal from more than 30 classifications of nickel and nickel-alloy covered electrodes. Major topics include general requirements, testing, manufacturing, identification, and packaging. A guide to using the specification is included in an annex. This specification makes use of both U.S. Customary Units and the International System of Units (SI). Since these are not equivalent, each system must be used independently of the other.*

AWS A5.12/A5.12M-98, Tungsten and Tungsten Alloy Electrodes for Arc Welding and Cutting

*Prescribes the requirements for the classifcation of bare tungsten and tungsten-alloy electrodes for gas tungsten arc welding and cutting and plasma arc welding and cutting. Classification is based upon the chemical composition of the electrode. Standard sizes, finish, lengths, quantities, product identification, color coding and chemical composition limits are specified. This specification make use of both U.S. Customary units and the International System of Units (SI). Since these are not equivalent, each system must be used independently of the other.*

AWS A5.13-2000, Specification for Surfacing Electrodes for Shielded Metal Arc Welding

*Prescribes the requirements for classification of surfacing electrodes for shielded metal arc welding. Classification is based upon the chemical composition of the deposited weld metal except for tungsten carbide electrodes where classification is based on the mesh range, quantity, and composition of the tungsten carbide granules. A guide is appended to the specification as a source of information as to the characteristics and applications of the classified electrodes. This standard was first listed in the July 19, 1996 issue of Standards Action. It is being resubmitted due to substantive changes.*

AWS A5.14/A5.14M-2005, Specification for Nickel and Nickel-Alloy Bare Welding Rods and Electrodes

*The chemical compositions of more than thirty nickel and nickel-alloy welding electrodes and rods are specified, including ten compositions not previously classified. Major topics include general requirements, testing, packaging and application guidelines. This specification makes use of both U.S. Customary Units and the International System of Units (SI). Since these are not equivalent, each system must be used independently of the other.*

## AWS A5.15-1990 (R2006), Specification for Welding Electrodes and Rods for Cast Iron

*The chemical composition requirements for electrodes and rods for welding cast iron are specified. Copper-base rods used or braze welding of cast iron are not included. Major topics include general requirements, testing, packaging, and application guidelines.*

## AWS A5.16/A5.16M-2003, Specification for Titanium and Titanium Alloy Welding Electrodes and Rods

*AWS A5.16/A5.16M:200X is a revision of the titanium welding electrode document last revised in 1990. The compositions specified for each classification represent the state of the art. The specification contains testing procedures, standard sizes and forms and identification and marking practices. This specification makes use of both U.S. Customary Units and the International System of Units (SI). Since these are not equivalent, each system must be used independently of the other.*

## AWS A5.17/A5.17M-97, Specification for Carbon Steel Electrodes and Fluxes for Submerged-Arc Welding

*Provides the requirements for the classification of solid and composite carbon steel electrodes and fluxes for submerged arc welding. Electrode classification is based on chemical composition of the solid electrode or low dilution weld metal produced with a composite electrode. Flux classification is based on the soundness and mechanical properties of weld metal produced with the flux and an electrode classified herein. Other requirements include sizes, marking, manufacturing, and packaging. The form and usability of the flux are also included.*

## AWS A5.18/A5.18M-2005, Specification for Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding

*This specification prescribes the requirements for classification of solid carbon steel electrodes and rods, composite stranded carbon steel electrodes, and composite metal cored carbon steel electrodes for gas shielded arc welding. Classification is based on chemical composition of the electrode for solid electrodes and rods, chemical composition of weld metal for composite stranded and composite metal cored electrodes and the as -welded mechanical properties of the weld metal for each. Additional requirements are included for manufacture, sizes, lengths, and packaging. A guide is appended to the specification as a source of information concerning the classification system employed and the intended use of the electrodes and rods.*
*This specification makes use of both U.S. Customary Units and the International System*

## AWS A5.19-1992 (R2006), Magnesium Alloy Welding Electrodes and Rods

*This specification prescribes requirements for the classification of bare magnesium alloy welding electrodes and rods for use with the gas metal arc, gas tungsten arc, oxyfuel gas, and plasma arc welding processes. Classification is based upon chemical composition of the welding wire. Standard sizes, finish, winding requirements, package forms and weights, product identification, and chemical composition limits are specified.*

## AWS A5.2-92 (R97), Specification for Carbon and Low Alloy Steel Rods for Oxyfuel Gas Welding

*Prescribes the requirements for classification of carbon and low alloy steel rods for oxyfuel gas welding. The classification requirements include the mechanical properties of the weld metal. Additional requirements are included for chemical composition of the rod and for manufacture, sizes, lengths, and packaging. A guide is appended to the specification as a source of information concerning the classification system employed and the intended use of the rods.*

## AWS A5.20-2005, Carbon Steel Electrodes for Flux Cored Arc Welding, Specification for

*This specification prescribes the requirements for classification of carbon steel electrodes for flux cored arc welding. The requirements include chemical composition and mechanical properties of the weld metal and certain usability characteristics. The AWS A5.20/A5.20M specification also includes optional, supplemental designators for improved toughness and diffusible hydrogen and to indicate conformance to special mechanical property requirements when the weld metal is deposited using both low heat input, fast cooling rate and high heat input, slow cooling rate procedures. Additional requirements are included for standard sizes, marking, manufacturing and packaging. A guide is appended o the specification as a source of information concerning the classification system employed and the intended use of carbon steel flux cored*

## AWS A5.21-2001, Specification for Bare Electrodes and Rods for Surfacing

*Prescribes the requirements for classification of bare electrodes and rods for surfacing. Solid surfacing electrodes and rods are classified on the basis of the composition of the material as manufactured. Metal-cored and flux-cored composite (tubular) surfacing electrodes and rods are classified on the basis of the chemical composition of the deposited weld metal. Tubular tungsten carbide bare rods are classified on the basis of the mesh range, quantity, and composition of the tungsten carbide granules. A guide is appended to the specification as a source of information concerning the characteristics and applications of the classified electrodes.*

AWS A5.22-2005, Specification for Stainless Steel Electrodes for Flux Cored Arc Welding and Stainless Steel Flux Cored Rods for Gas Tungsten Arc Welding

*Classification and other requirements are specified for more than 40 grades of flux cored stainless steel electrodes and rods. New classifications include duplex alloys not previously classified and flux cored rods for gas tungsten arc welding. Designations indicate the chemical composition of the weld metal, the position of welding (newly introduced in this revision of the standard), and the external shielding medium required (for those classifications for which one is required). A special designation (k) is used to identify those classifications that are intended specifically for cryogenic service. The requirements include general requirements, testing, and packaging. The Annex provides general application guidelines for individual alloys and other useful information about welding electrodes.*

AWS A5.23/A5.23M-97, Specification for Low-Alloy Steel Electrodes and Fluxes for Submerged Arc Welding

*Provides requirements for the classification of solid and composite low-alloy steel electrodes and fluxes for submerged arc welding. Electrode classification is based on chemical composition of the electrode for solid electrodes and chemical composition of the weld metal for composite electrodes. Flux classification is based on the mechanical properties and deposit composition of weld metal produced with the flux and an electrode (solid or composite) classified in this standard. Other requirements include sizes, marking, manufacturing, and packaging. The form and usability of the flux are also included.*

AWS A5.24/A5.24M-2004, Specification for Zirconium and Zirconium Alloy Welding Electrodes and Rods

*Prescribes the requirements for classification of zirconium and zirconium alloy electrodes and rods for GTA, GMA, and PA arc welding. AWS A5.24/A5.24M:200X is a revision of the zirconium welding electrode document last revised in 1990. The compositions specified for each classification represent the latest state-of -the-art. Additional requirements are included for testing procedures, manufacture, sizes, lengths, and packaging. A guide is appended to the specification as a source of information concerning the classification system employed and the intended use of the zirconium alloy filler metal.*

AWS A5.25/A.25M-1997 (R2003), Specification for Carbon and Low-Alloy Steel Electrodes and Fluxes for Electroslag Welding

*This specification prescribes requirements for the classification of electrodes (both solid and composite metal cored) and fluxes for electroslag welding of carbon and low-alloy steels.*

AWS A5.26/A5.26M-1997 (R2003), Specification for Consumables Used for Electrogas Welding of Carbon and High-Strength Low-Alloy Steels

*Prescribes requirements for the classification of carbon and low-alloy steel electrodes for electrogas welding. It covers solid and composite (flux cored and metal cored) electrodes used with external gas shielding, and composite (self-shielded flux cored ) electrodes used without external shielding.*

AWS A5.28/A5.28M-2005, Low-Alloy Steel Electrodes and Rods for Gas Shielded Arc Welding

*This specification prescribes the requirements for classification of solid low-alloy steel electrodes and rods, composite stranded low-alloy steel electrodes, and composite metal cored low-alloy steel electrodes for gas shielded arc welding. Classification is based on chemical composition of the electrode for solid electrodes and rods, chemical composition of weld metal for composite stranded and composite metal cored electrodes and the as-welded or postweld heat treated mechanical properties of the weld metal for each. Additional requirements are included for manufacture, sizes, lengths and packaging. A guide is appended to the specification as a source of information concerning the classification system employed and the intended use of the electrodes and rods. This specification makes use of both U.S. Customary Units and the International System*

AWS A5.29/A5.29M-2005, Specification for Low-Alloy Steel Electrodes for Flux Cored Arc Welding

*This specification prescribes the requirements for classification of low-alloy steel electrodes for flux cored arc welding. The requirements include chemical composition and mechanical properties of the weld metal and certain usability characteristics. Optional, supplemental designators are also included for improved toughness and diffusible hydrogen. Additional requirements are included for standard sizes, marking, manufacturing and packaging. A guide is appended to the specification as a source of information concerning the classification system employed and the intended use of low-alloy steel flux cored electrodes. This specification makes use of both U.S. Customary Units and the International System of Units (SI). Since these are not equivalent, each system must be used independently of the other.*

### AWS A5.3/A5.3M-99, Aluminum and Aluminum Alloy Electrodes for Shielded Metal Arc Welding

*Prescribes requirements for the classification of covered (flux coated) E1100, E3003 and E4043 aluminum alloy electrodes for shielded metal arc welding. Tests conducted for classification are chemical analysis of the core and tensile and bend tests on specimens from a groove weld test assembly fabricated with two sizes of electrodes for each classification. Standard electrode sizes, electrode indentification, and chemical composition limits are specified.*
*This standard makes use of both U.S. Customary Units and the International System of Units (SI). Since these are not equivalent, each system must be used independently of the other.*

### AWS A5.30/A5.30M:2007, Specification for Consumable Inserts

*Five classes (cross-sectional design) of consumable inserts of various chemical compositions are described. Each class is subdivided into two or three styles (based on the shape of the insert). Topics include the chemical composition, general dimensional requirements, packaging ,and application guidelines.*

### AWS A5.31-1993 (R2003), Fluxes for Brazing and Braze Welding

*Fifteen fluxes for brazing and braze welding are classified according to the filler metal, form, and activity temperature range. Classification is in accordance with a new classification system that employs the designator "FB" to indicate fluxes for brazing and braze welding applications. In addition to selected tests for each classification, major topics include general requirements, testing procedures, and packaging requirements. The Appendix suggests some general application guidelines.*

### AWS A5.32/A5.32M-1997 (R2007), Specifications for Welding Shielding Gases

*This specification for welding shielding gases specifies minimum requirements for the composition and purity of the most popular single-component shielding gases. Classification designators for both single and mlulticomponent gases are introduced. Other topics include testing procedures, package marking, and general application guidelines.*

### AWS A5.4/A5.4M-2006, Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

*Composition and other requirements are specified for more than forty classifications of covered stainless steel welding electrodes. The requirements include general requirements, testing, and packaging. The Annex provides application guidelines and other useful information about the electrodes. This specification makes use of both U.S. Customary Units and the International System of Units [SI]. Since these are not equivalent, each system must be used independently of the other.*

### AWS A5.5/A5.5M-2006, Specification for Low-Alloy Steel Electrodes for Shielded Metal Arc Welding

*This specification prescribes the requirements for classification of low-alloy steel covered electrodes used for shielded metal arc welding. The requirements include chemical composition and mechanical properties of weld metal, weld metal soundness, usability tests of electrodes, and moisture tests of the low-hydrogen electrode covering. Requirements for standard sizes and lengths, marking, manufacturing, and packaging are also included.*

### AWS A5.6-84 (R2000), Copper and Copper-Alloy, Covered Electrodes, Specification for

*Prescribes requirements for the classification of covered copper and copper alloy electrodes for shielded metal arc welding. It includes compositions in which the copper content exceeds that of any other element.*

### AWS A5.7-1984 (R2000), Copper and Copper-Alloy Bare Welding Rods, and Electrodes, Specification for

*Prescribes requirements for the classification of copper and copper alloy bare welding rods and electrodes for plasma arc, gas metal arc, and gas tungsten arc welding. It includes compositions in which the copper content exceeds that of any other element.*

### AWS A5.8/A5.8M-2004, Specification for Brazing Filler Metals

*Prescribes the requirements for the classification of filler metals for brazing and braze welding. The chemical composition, physical form, and packaging of more than 75 brazing filler metals are specified. The filler metal groups described include aluminum, cobalt, copper, gold, magnesium, nickel, silver, and brazing filler metals for vacuum service. Information is provided concerning the liquidus, the solidus, the brazing temperature range, and general areas of application recommended for each filler metal. Additional requirements are included for manufacture, sizes, lengths, and packaging. A guide is appended to the specification as a source of information concerning the classification system employed and the intended use of the filler metals for brazing and braze welding.*

### AWS A5.9/A5.9M-2006, Specification for Bare Stainless Steel Welding Electrodes and Rods

*This specification prescribes the requirements for classification of solid and composite stainless steel electrodes (both as wire and strip) for gas metal arc welding, submerged arc welding, and other fusion welding processes. It also includes wire and rods for use in gas tungsten arc welding. Classificaiton is based on chemical composition of the filler metal. Additional requirements are included for manufacture, sizes, lengths, and packaging. A guide is appended to the specificaiton as a source of information concerning the classification system employed and the intended use of the stainless steel filler metal.*

AWS B1.10-1999, Inspection of Welds, Guide for the Nondestructive

*Acquaints the reader with the common nondestructive inspection (NDT) methods available, and aids in selecting the method best suited for inspection of a given weld. The inspection methods included are Visual, Penetrant, Magnetic Particle, Radiography, Ultrasonic, and Eddy Current Inspection. This standard was first listed in the August 16, 1996 issue of Standards Action. It is being resubmitted due to substantive changes.*

AWS B1.11-2000, Guide for the Visual Inspection of Welds

*Contains information to assist in the visual examination of welds. Included are sections on prerequisites, fundamentals, surface conditions, and equipment. Sketches and full-color photographs illustrate weld discontinuities commonly found in welds.*

AWS B2.1-1-001-2006, Standard Welding Procedure Specification (WPS) Shielded Metal Arc Welding of Carbon Steel, (M-1/P-1, Group 1 or 2), 3/16 through 3/4 inch, in the As-Welded Condition, With Backing

*This standard contains the essential welding variables for carbon steel plate and pipe in the thickness range of 3/16 through 3/4 in., using manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint design for filler and groove welds.*

AWS B2.1-1-002-2006, Standard Welding Procedure Specification (WPS) Gas Tungsten Arc Welding of Carbon Steel, (M-1/P-1, Group 1 or 2), 3/16 through 7/8 inch, in the As-Welded Condition, With or Without Backing

*This standard contains the essential welding variables for carbon steel plate and pipe in the thickness range of 3/16 through 7/8 in., using manual gas tungsten arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet and groove welds.*

AWS B2.1-1-003-2002, Gas Metal Arc Welding of Galvanized Steel, 10 through 18 Gage, in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for welding galvanized steel in the thickness range of 18 gauge through 10 gauge, using semiautomatic gas metal arc welding (short circuiting transfer mode). It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds and fillet welds.*

AWS B2.1-1-004-2002, Gas Metal Arc Welding of Carbon Steel (M1, Group 1), 10 through 18 Gage, in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for welding carbon steel in the thickness range of 18 gauge through 10 gauge, using semiautomatic gas metal arc welding (short circuiting transfer mode). It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.*

AWS B2.1-1-007-2002, Gas Tungsten Arc Welding of Galvanized Steel, 10 through 18 Gage, in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for welding galvanized steel in the thickness range of 18 gauge through 10 gauge, using manual gas tungsten arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.*

AWS B2.1-1-008-2002, Gas Tungsten Arc Welding of Carbon Steel (M-1, Group 1), 10 through 18 Gage, in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for welding carbon steel in the thickness range of 18 gauge through 10 gauge, using manual gas tungsten arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.*

AWS B2.1-1-011-2002, Standard Welding Procedure Specification – Shielded Metal Arc Welding of Galvanized Steel, 10 through 18 Gage, in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for welding galvanized steel in the thickness range of 10 gauge through 18 gauge, using manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.*

AWS B2.1-1-012-2002, Standard Welding Procedure Specification – Shielded Metal Arc Welding of Carbon Steel (M-1, Group 1), 10 through 18 Gage in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for welding carbon steel in the thickness range of 10 gauge through 18 gauge, using manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.*

AWS B2.1-1-016-05, Standard Welding Procedure Specification (WPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E7018, As-Welded or PWHT Condition

*This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet and groove welds. This WPS was developed primarily for plate and structural applications.*

AWS B2.1-1-017-05, Standard Welding Procedure Specification (WPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010, As-Welded or PWHT Condition

*This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet and groove welds. This WPS was developed primarily for plate and structural applications.*

AWS B2.1-1-018-05, Standard Welding Procedure Specification (WPS) for Self-Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E71T-8, As-Welded Condition

*This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using semiautomatic self-shielded flux cored arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet and groove welds. This WPS was developed primarily for plate and structural applications.*

AWS B2.1-1-019-05, Standard Welding Procedure Specification (WPS) for CO2 Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E70T-1 and E71T-1, As-Welded Condition

*This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using semiautomatic CO2 shielded flux cored arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet and groove welds. This WPS was developed primarily for plate and structural applications.*

AWS B2.1-1-020-05, Standard Welding Procedure Specification (WPS) for 75% Ar/25% CO2 Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E70T-1 and E71T-1, As-Welded or PWHT Condition

*This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using semiautomatic Ar/CO2 shielded flux cored arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet and groove welds. This WPS was developed primarily for plate and structural applications.*

AWS B2.1-1-021-05, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, ER70S-2 and E7018, As-Welded or PWHT Condition

*This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using manual gas tungsten arc welding followed by shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet and groove welds. This WPS was developed primarily for plate and structural applications.*

AWS B2.1-1-022-05, Standard Welding Procedure Specification (WPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010 (Vertical Uphill) Followed by E7018, As-Welded or PWHT Condition

*This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet and groove welds. This WPS was developed primarily for plate and structural applications.*

AWS B2.1-1-026-05, Standard Welding Procedure Specification (WPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010 (Vertical Downhill) Followed by E7018, As-Welded or PWHT Condition

*This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet and groove welds. This WPS was developed primarily for plate and structural applications.*

AWS B2.1-1-027-1998, Welding Procedure Specification (WPS) for Self-Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2) 1/8 through 3/4 inch Thick, E71T-11 As-Welded Condition

*Contains the essential welding variables for carbon steel in the thickness range of 1/8 through 3/4 inch, using semi-welding, necessary to make the weld-ments, the filler metal specifications and the allowable joint designs for fillet and groove welds. This WPS is intended primarily for plate and structural applications.*

AWS B2.1-1-210:2001, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding with Consumable Inserts of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, INMs-1 and ER70S-2, As-Welded or PWHT Condition, Primarily Pipe

*Provides specific instructions for GTAW welding with a consumable insert root pass of carbon steel pipe.*

AWS B2.1-1-211:2001, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding with Consumable Inserts Followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, INMs-1, ER70S-2, and E7018

*Provides specific instructions for GTAW welding with a consumable insert root pass of carbon steel pipe.*

AWS B2.1-1-232-2006, Standard Welding Procedure Specification (SWPS) for Argon Plus 25% Carbon Dioxide Shielded Gas Metal Arc Welding (Short Circuiting Transfer Mode) followed by Argon Plus 25% Carbon Dioxide Shielded Flux Cored Arc Welding of Carbon Steel

*This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using gas metal arc welding (short circuiting transfer mode) with Argon plus 25% Carbon Dioxide shielding for the root followed by flux cored arc welding (globular transfer mode) with Argon plus 25% Carbon Dioxide shielding for the balance. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This WPS was developed primarily for pipe application.*

AWS B2.1-1-233-2006, Standard Welding Procedure Specification (SWPS) for Argon Plus 25% Carbon Dioxide Shielded Gas Metal Arc Welding (Short Circuiting Transfer Mode) followed by Argon Plus 2% Oxygen Shielded Gas Metal Arc Welding (Spray Transfer Mode) of Carbon

*This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using Argon plus 25% CO2 shielded gas metal arc welding (short circuiting transfer mode) for the root followed by Argon plus 2% 02 shielded gas metal arc welding (spray transfer mode) for the balance. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-1-234-2006, Standard Welding Procedure Specification (SWPS) for Argon plus 25% Carbon Dioxide Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1/S-1) Groups 1 and 2, 1/8 through 1-1/2 inch thick, E7XT-X, As-Welded or PWHT Condition, Primarily

*This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using Argon plus 25% CO2 shielded flux cored arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove and fillet welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-1-235-2006, Standard Welding Procedure Specification (SWPS) for Argon plus 2% Oxygen Shielded Gas Metal Arc Welding (Spray Transfer Mode) of Carbon Steel (M-1/P-1/S-1) Groups 1 and 2, 1/8 through 1-1/2 inch thick, ER70S-3, Flat Position Only, As-Welded

*This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using Argon plus 2% Oxygen shielded gas metal arc welding (spray transfer mode). It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove and fillt welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-1/8-006-2002, Gas Metal Arc Welding of Carbon Steel to Austentic Stainless Steel (M-1 to M-18, or P-8), 10 through 18 Gage, in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for welding carbon steel to austenitic stainless steel in the thickness range of 18 gauge through 10 gauge, using semiautomatic gas metal arc welding (short circuiting transfer mode). It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.*

AWS B2.1-1/8-010-2002, Gas Tungsten Arc Welding of Carbon Steel to Austentic Stainless Steel (M-1 to M-8 or P-8), 10 through 18 Gage, in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for welding carbon steel to austenitic stainless steel in the thickness range of 18 gauge through 10 gauge, using manual gas tungsten arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.*

AWS B2.1-1/8-014-2002, Standard Welding Procedure Specification – Shielded Metal Arc Welding of Carbon Steel to Austenitic Stainless Steel (M-1 to M-8 or P-8), 10 through 18 Gage, in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for welding carbon steel to austenitic stainless steel in the thickness range of 10 gauge through 18 gauge, using manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.*

AWS B2.1-1/8-227-2002, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding of Carbon Steel to Austenitic Stainless Steel (M-1/P-1/S-1 Groups 1 and 2 Welded to M-8/P-8/S-8, Group 1) 1/16 through 1-1/2 inch thick, ER309, As-Welded Condition, Primarily

*This standard contains the essential welding variables for carbon steel to austenitic stainless steel in the thickness range of 1/16 through 1-1/2 inch, using manual gas tungsten arc welding. It cites the base metals and operating conditions necessary to make the weldment. The filler metal specifications, and the allowable joint designs for groove and fillet welds. This SWPS was developed primarily for pipe applications.*

AWS B2.1-1/8-228-2002, Welding Procedure Specification (WPS) for Shielded Metal Arc Welding of Carbon Steel to Austenitic Stainless Steel (M-1/P-1/S-1 Groups 1 and 2 Welded to M-8/P-8/S-8, Group 1) 1/8 through 1-1/2 inch thick, ER309-15, 16 or 17

*This standard contains the essential welding variables for welding carbon steel to austenitic stainless steel in the thickness range of 1/8 through 1-1/2 inch, using manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment. The filler metal specifications, and the allowable joint designs for groove and fillet welds. This SWPS was developed primarily for pipe applications.*

AWS B2.1-1/8-229-2002, Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding Followed by Carbon Steel to Austenitic Stainless Steel (M-1/P-1/S-1 Groups 1 and 2 Welded to M-8/P-8/S-8, Group 1) 1/8 through 1-1/2 inch thick, ER309 and E309-15, 16, or 17

*This standard contains the essential welding variables for welding carbon steel to austenitic stainless steel in the thickness range of 1/8 through 1-1/2 inch, using manual gas tungsten arc welding followed by shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment. The filler metal specifications, and the allowable joint designs for groove and fillet welds. This SWPS was developed primarily for pipe applications.*

AWS B2.1-1/8-230-2002, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding, with Consumable Insert Root, of Carbon Steel to Austenitic Stainless Steel (M-1/P-1/S-1, Groups 1 and 2 Welded to M-8/P-8/S-8, Group 1) 1/16 through 1-1/2 inch thick, IN309 and

*Contains the essential welding variables for welding carbon steel to austenitic stainless steel in the thickness range of 1/16 through 1-1/2 inch, using manual gas tungsten arc welding with consumable insert root. It cites the base metals and operating conditions necessary to make the weldment. The filler metal specifications, and the allowable joint designs for groove welds. This SWPS was developed primarily for pipe applications.*

AWS B2.1-1/8-231-2002, Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding, with Consumable Insert Root, Followed by Shielded Metal Arc Welding of Carbon Steel to Austenitic Stainless Steel (M-1/P-1/S-1, Groups 1 and 2 Welded to M-8/P-8/S-8, Group 1)

*This standard contains the essential welding variables for welding carbon steel to austenitic stainless steel in the thickness range of 1/8 through 1-1/2 inch, using manual gas tungsten arc welding with consumable insert root, followed by shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment. The filler metal specifications, and the allowable joint designs for groove welds. This SWPS was developed primarily for pipe applications.*

AWS B2.1-2004, Specification for Welding Procedure and Performance Qualification

*Provides rules for qualifying welding procedure specifications and for using Standard Welding Procedure Specifications. The standard also provides rules to qualify welders, and welding operators.*

AWS B2.1-4-217-1999, Standard Welding Procedure Specification (WPS) Gas Tungsten Arc Welding of Chromium-Molybdenum Steel (M-4/P-4/S-4, Group 1 or 2) ER80S-B2, 1/8 through 1/2-in. Thick, As-Welded Condition or 1/8 through 3/4-in. Thick

*Contains the essential welding variables for chromium-molybdenum steel in the thickness range of 1/8 through 1/2 inch in the as-welded condition, or 1/8 through 3/4 inch in the PWHT condition using manual gas tungsten arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-4-218-1999, Standard Welding Procedure Specification (WPS) Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-4/P-4/S-4, Group 1 or 2) E8018-B2, 1/8 through 1/2 in. Thick, As-Welded Condition or 1/8 through 1-1/2 in. Thick

*Contains the essential welding variables for chromium-molybdenum steel in the thickness range of 1/8 through 1/2 inch in the as-welded condition, or 1/8 through 1-1/2 inch in the PWHT condition, using manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications and the allowable joint designs for groove welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-4-219-1999, Standard Welding Procedure Specification (WPS) Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-4/P-4/S-4, Group 1 or 2) 1/8 through 12/2 in. thick, As-Welded Condition or 1/8

*Contains the essential welding variables for chromium-molybdenum steel in the thickness range of 1/8 through 1/2 inch in the as-welded condition, or 1/8 through 1-1/2 inch in the PWHT condition, using manual gas tungsten arc welding followed by manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-4-220-1999, Standard Welding Procedure Specification (WPS) Gas Tungsten Arc Welding (Consumable Insert Root) of Chromium-Molybdenum Steel (M-4/P-4/S-4, Group 1 or 2) 1/8 through 1/2-in. Thick, As-Welded Condition or 1/8 through 3/4-in. Thick

*Contains the essential welding variables for chromium-molybdenum steel in the thickness range of 1/8 through 1/2 inch in the as-welded condition, or 1/8 through 3/4 inch in the PWHT condition, using manual gas tungsten arc welding with a consumable insert root. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-4-221-1999, Standard Welding Procedure Specification (WPS) Gas Tungsten Arc Welding (Consumable Insert Root) Followed by Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-4/P-4/S-4, Group 1 or 2) 1/8 through 1/2-in. Thick, As-Welded

*Contains the essential welding variables for chromium-molybdenum steel in the thickness range of 1/8 through 1/2 inch in the as-welded condition, or 1/8 through 1-1/2 inch in the PWHT condition, using manual gas tungsten arc welding with a consumable insert root, followed by shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-5A-222-1999, Standard Welding Procedure Specification (WPS) Gas Tungsten Arc Welding of Chromium-Molybdenum Steel (M-5A or P-5A) ER90S-B3 1/8 through 1/2-in. Thick, As-Welded Condition or 1/8 through 3/4-in. Thick, PWHT Condition

*Contains the essential welding variables for chromium-molybdenum steel in the thickness range of 1/8 through 1/2 inch in the as-welded condition, or 1/8 through 3/4 inch in the PWHT condition, using manual gas tungsten arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-5A-223-1999, Standard Welding Procedure Specification (WPS) Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-5A or P-5A) ER9018-B3 1/8 through 1/2-in. Thick, As-Welded Condition or 1/8 through 1-1/2-in. Thick, PWHT Condition

*Contains the essential welding variables for chromium-molybdenum steel in the thickness range of 1/8 through 1/2 inch in the as-welded condition, or 1/8 through 1-1/2 inch in the PWHT condition, using manual gas shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-5A-224-1999, Standard Welding Procedure Specification (WPS) Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-5A or P-5A) 1/8 through 1/2-in. Thick As-Welded Condition, or 1/8 through

*Contains the essential welding variables for chromium-molybdenum steel in the thickness range of 1/8 through 1/2 inch in the as-welded condition or 1/8 through 1-1/2 inch in the PWHT condition, using manual gas tungsten arc welding followed by manual shielded arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-5A-225-1999, Standard Welding Procedure Specification (WPS) Gas Tungsten Arc Welding (Consumable Insert Root) of Chromium-Molybdenum Steel (M-5A or P-5A) 1/8 through 1/2 in. thick, As-Welded Condition or 1/8 through 3/4 in. thick, PWHT Condition IN521

*Contains the essential welding variables for chromium-molybdenum steel in the thickness range of 1/8 through 1/2 inch in the as-welded condition, or 1/8 through 3/4 inch in the PWHT condition, using manual gas tungsten arc welding with a consumable insert root. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This WPS was developed primarily for pipe applications*

AWS B2.1-5A-226-1999, Standard Welding Procedure Specification (WPS) Gas Tungsten Arc Welding (Consumable Insert Root) Followed by Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-5A or P-5A) 1/8 through 1/2-in. Thick As-Welded Condition, or 1/8

*Contains the essential welding variables for chromium-molybdenum steel in the thickness range of 1/8 through 1/2 inch in the as-welded condition, or 1/8 through 1-1/2 inch in the PWHT condition, using manual gas tungsten arc welding with a consumable insert root followed by shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-8-005-2002, Gas Metal Arc Welding of Austentic Stainless Steel (M-8 or P-8) 10 through 18 Gage, in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for welding austenitic stainless steel in the thickness range of 18 gauge through 10 gauge, using semiautomatic gas metal arc welding (short circuiting transfer mode). It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.*

AWS B2.1-8-009-2002, Gas Tungsten Arc Welding of Stainless Steel (M-8 or P-8), 10 through 18 Gage, in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for welding austenitic stainless steel in the thickness range of 18 gauge through 10 gauge, using manual gas tungsten arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.*

AWS B2.1-8-013-2002, Standard Welding Procedure Specification – Shielded Metal Arc Welding of Austenitic – Stainless Steel (M-8/P-8), 10 through 18 Gage, in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for welding austenitic stainless steel in the thickness range of 18 gauge through 10 gauge, using manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.*

AWS B2.1-8-023-05, Standard Welding Procedure Specification (WPS) for Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, As-Welded Condition

*This standard contains the essential welding variables for austenitic stainless steel in the thickness range of 1/8 through 1-1/2 inch, using manual shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet and groove welds. This WPS was developed primarily for plate and structural applications.*

AWS B2.1-8-024:2001, Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch thick, As-Welded Condition

*Provides specific instructions for GTAW welding with a consumable insert root pass of carbon steel pipe.*

AWS B2.1-8-025:2001, Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1) 1/8 through 1-1/2 inch thick, As-Welded Condition

*Provides specific instructions for GTAW welding with a consumable insert root pass of carbon steel pipe.*

AWS B2.1-8-212:2001, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group), 1/8 through 1-1/2 inch Thick ERXX, As-Welded Condition, Primarily Pipe Applications

*Provides specific instructions for GTAW welding with a consumable insert root pass of carbon steel pipe.*

AWS B2.1-8-213-97 (R2007), Standard Welding Procedure Specification (WPS) for Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group), 1/8 through 1-1/2 inch Thick E3XX-XX, As-Welded Condition, Primarily Pipe Applications

*This standard contains the essential welding variables for austenitic stainless steel in the thickness range of 1/8 through 1-1/2 inch, using manual metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet and groove welds. This WPS was developed primarily for pipe applications.*

AWS B2.1-8-214:2001, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group), 1/8 through 1-1/2 Inch Thick ER3XX, E3XX-XX, As-Welded Condition, Primarily

*Provides specific instructions for GTAW welding with a consumable insert root pass of carbon steel pipe.*

AWS B2.1-8-215:2001, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding, with Consumable Insert of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1) 1/8 through 1-1/2 Inch Thick IN3XX and ER3XX, As-Welded Condition

*Provides specific instructions for GTAW welding with a consumable insert root pass of carbon steel pipe.*

AWS B2.1-8-216:2001, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding, with Consumable Insert Followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1) 1/8 through 1-1/2 inch Thick IN3XX, ER3XX, and E3XX-XX

*Provides specific instructions for GTAW welding with a consumable insert root pass of carbon steel pipe.*

AWS B2.1.22-015-2002, Standard Welding Procedure Specification – Gas Tungsten Arc Welding of Aluminum (M-22 or P-22), 10 through 18 Gage, in the as-Welded Condition, with or without Backing

*Contains the essential welding variables for aluminum in the thickness range of 10 gauge through 18 gauge, using manual gas tungsten arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.*

AWS B2.4-2006, Specification for Welding Procedure and Performance Qualification for Thermoplastics

*This specification provides the requirements for qualification of welding procedure specifications, welders, and welding operators for manual, semi-automatic, mechanized, and automatic welding. The welding processes included are electrofusion, hot gas, socket fusion, butt contact fusion, infrared, extrusion welding and flow fusion welding. Base materials, filler materials, qualification variables, and testing requirements are also included.*

AWS B4.0M-2000, Methods for Mechanical Testing of Welds

*Describes mechanical test methods that are applicable to welds and welded joints. For each testing method, information is provided concerning applicable American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), and American Petroleum Institute (API) documents; the required testing apparatus, specimen preparation, procedure to be followed, and report requirements are also described.*

AWS B5.1-2003, Specification for the Qualification of Welding Inspectors

*Defines the qualification requirements to qualify welding inspectors. The qualification requirements for visual welding inspectors include experience, satisfactory completion of an examination, which includes demonstrated capabilities, and proof of visual acuity. The examination tests the inspector's knowledge of welding processes, welding procedures, nondestructive examinations, destructive tests, terms definitions, symbols, reports, welding metallurgy, related mathematics, safety, quality assurance and responsibility.*

### AWS B5.14-2002, Specification for the Qualification of Welding Sales Representatives

*This specification defines the requirements for qualification of Welding Sales Representatives employed in the welding industry. The typical functions, required education and experience, examination requirements, requalification, and suggested reference material are defined herein.*

### AWS B5.15-2003, Specification for the Qualification of Radiographic Interpreters

*Establishes the requirements for qualification of radiographic interpreters. It describes how these personnel shall be qualified, establishes training requirements, defines experience requirements, and establishes areas and levels of knowledge required to perform the functions related to radiographic interpretation.*

### AWS B5.16-2006, Specification for the Qualification of Welding Engineers

*This specification establishes the requirements for qualification of Welding Engineers employed in the welding industry. The minimum experience, examination, application, qualification, and requalification requirements and methods are defined herein. This specification is a method for engineers to establish a record of their qualification and abilities in welding industry work such as development of procedures, processes controls, quality standards, problem solving, etc.*

### AWS B5.17-2004, Specification for the Qualification of Welding Fabricators

*Establishes the minimum requirements necessary to qualify as a Welding Fabricator.*

*The qualification is determined based on an examination of the implementation of its quality control manual to verify compliance to the requirements defined in this specification. This document also defines the Welding Fabricator's functions and lists the minimum reference materials that the Welding Fabricator should possess.*

### AWS B5.2-2001, Specification for the Qualification of Welding Inspector Specialists and Welding Inspector Assistants

*Defines the requirements and program for an employer (company) to qualify Welding Inspector Specialists and Welding Inspector Assistants to contract or industry-specific inspector standards. The qualification program is developed and controlled by an employer. The qualification requires documentation of experience, training, and satisfactory completion of an examination. The examination tests knowledge of welding processes, welding procedures, welder qualification, destructive testing, nondestructive testing, terms, definitions, symbols, reports, records, safety, and responsibility as specifically applied by the contract or industry standards applicable to the employer.*

### AWS B5.4-2005, Specification for the Qualification of Welder Test Facilities

*Defines the requirements to qualify welder test facilities. It details the methods of qualification, test facility requirements, and the assessment requirements. A mandatory annex is included on the qualification of assessors.*

### AWS B5.5-2000, Specification for the Qualification of Welding Educators

*Defines the requirements and program to qualify Welding Educators. The qualification of a Welding Educator is determined by a combination of education and experience, satisfactory demonstration of welding performance qualification tests, and written and practical examinations. The written examination demonstrates the educator's knowledge of welding processes, weld discontinuities, destructive and nondestructive test methods, safety, welding metallurgy, weld symbols, basic arithmetic, codes, and other standards.This is the second public review for this standard. It was first listed in the November 20, 1998 issue of Standards Action. It is being resubmitted due to substantive changes.*

### AWS B5.9-2006, Specification for the Qualification of Welding Supervisor

*This standard describes the requirements for qualification as a Welding Supervisor. The requirements include education, experience, and a written examination. This standard also covers the job functions a qualified Welding Supervisor should be able to perform.*

### AWS C1.1M/C1.1-2000 (R2006), Recommended Practices for Resistance Welding

*This Recommended Practice is a collection of data and procedures that are intended to assist the user in setting up resistance welding equipment to produce resistance welded production parts. While the recommendations included are not expected to be final procedures for every production part or every welding machine, they dserve as starting points from which a user can establish acceptable welding machine settings for specific production welding applications. In some cases, recommended machine data is not available. In these instances, some description of the process is given to assist the reader in determining if the process might be suitable for application.*

### AWS C1.4M/C1.4-2000, Specification for Resistance Welding of Carbon and Low-alloy Steels

*Provides the minimum shear strength and weld button diameter requirements for carbon steel and low-alloy steel sheet resistance and projection welds. This standard is intended to replace MIL-W-12332A, Welding, Resistance, Spot, Seam and Projection, for Fabricating Assemblies of Low Carbon Steel; MIL-W-45223A, Welding, Spot, Hardenable Steel; and MIL-W-46154, Welding, Resistance, Spot and Projection for Fabricating Assemblies of Carbon Steel Sheets. For certain applications, MIL-W-6858 may take precedence over this standard.*

### AWS C1.5-2005, Specification for the Qualification of Resistance Welding Technician

*This specification establishes the requirements for qualification of Resistance Welding Technicians employed in the welding industry. The minimum experience, examination, application, qualification, and requalification requirements and methods are defined herein. This specification is a method for technicians to establish a record of their qualification and abilities in welding industry work such as development of machine trouble shooting, processes controls, quality standards, problem solving, etc.*

AWS C2.16-2002, Guide for Thermal Spray Operator Qualification

*This guide contains recommendations for thermal-spray-operator qualification based on knowledge and skill testing. Twelve individual thermal-spray operator qualification tests (TSOQT) are included for engineering and corrosion control applications: one each for job knowledge, high velocity oxygen fuel (HVOF) spraying and flame spray-fusing, two for arc spraying, and three each for flame spraying and air-plasma spraying.*

AWS C2.18-93 (R2000), Protection of Steel with Thermal Sprayed Coatings of Aluminum and Zinc and their Alloys and Composites

*Presents an industrial process for the application of thermal spray coatings (TSC) on steel. It covers safety, job/contract description, background and requirements, selection of TSCs, TSC operator qualification, materials and equipment, application-process method with quality-control check points, Job Control Record, maintenance and repair of TSCs, records, debris containment and control, warranty.*

AWS C2.20/C2.20M-2002, Specification for Thermal Spraying Zinc Anodes on Steel Reinforced Concrete

*Specification for thermal spraying zinc anodes on steel reinforced concrete. This standard is formatted as an industrial process instruction. The scope includes: job description, safety, pass/fail job reference standards, feedstock materials, equipment, a step-by-step process instruction for surface preparation, thermal spraying, and quality control. There are two annexes: job control record, and portable adhesion testing.*

AWS C2.21M/C2.21-2003, Specification for Thermal Spray Equipment Acceptance Inspection

*This document specifies the thermal spray equipment acceptance requirements for plasma, arc-wire, flame-powder, -wire, -rod, and -cord, high velocity oxygen fuel (HVOF) equipment. Proof of suitability shall be provided by the equipment supplier,. Inspection reports are provided in five mandatory annexes.*

AWS C2.23/C2.23M-2003, Specification for the Application of Thermal Spray Coatings (Metallizing) of Aluminum, Zinc, and Their Alloys and Composites for the Corrosion Protection of Steel

*Presents an industrial process for the application of thermal spray coating (TSC) on steel. It covers safety, job reference standards, equipment setup and preparation, surface preparation, Aluminum and Zinc Application and Sealer and Topcoat Application.*

AWS C2.25/C2.25M-2002, Specification for Thermal Spray Feedstock - Solid and Composite Wire and Ceramic Rods

*This specification provides the as-manufactured chemical composition classification requirements for solid and composite wires and ceramic rods for thermal spraying. Requirements for standard sizes, marking, manufacturing, and packaging are included.*

AWS C3.2-2001, Method for Evaluating the Strength of Brazed Joints in Shear

*Pertains to specimen preparation methods, brazing procedures, testing techniques, and methods for data analysis, which are detailed. A standardized single lap shear brazed specimen was developed as the result of inter-laboratory testing program. Additional test specimens have been added to obtain brazed strength data in butt tension, stress rupture, creep strength and four-point bending. Sample forms for recording data are presented. A graphical method of data presentation relates shear stress to overlap distance.*

AWS C3.3/C3.3M-2002, Brazed Components, Design, Manufacture, and Inspection of Critical

*Lists the necessary steps to assure the suitabillity of brazed components for critical applications. Although such applications vary widely, they have certain common considerations with respect to materials, design, manufacture, and inspection. It is the intent of this document to identify and explain these common considerations and the best techniques for dealing with them. It is beyond the scope of this document to provide specific details to these techniques, which the user must adapt to fit each particular application.*

AWS C3.4-1999, Specification for Torch Brazing

*Provides minimum fabrication, material, process procedure requirements, and inspection requirements for the torch brazing of steels, copper, copper alloys, and heat- and corrosion-resistant alloys and other materials that can be adequately torch brazed.*

AWS C3.5-1999, Specification for Induction Brazing

*Provides minimum fabrication, equipment, material, process procedure requirements, and inspection requirements for the induction brazing of steels, copper alloys, and heat- and corrosion-resistant alloys and other materials that can be adequately induction brazed.*

AWS C3.6-1999, Specification for Furnace Brazing

*Provides minimum fabrication, equipment, material, process procedure requirements, and inspection requirements for the furnace brazing of steels, copper, copper alloys, and heat- and corrosion-resistant alloys and other materials that can be adequately furnace brazed.*

AWS C3.7M/C3.7-2005, Specification for Aluminum Brazing

*This specification presents the minimum fabrication, equipment, material, process procedure and inspection requirements for the brazing of aluminum by all of the processes commonly used - atmosphere furnace, vacuum furnace, and flux processes. Its purpose is to standardize aluminum brazing requirements for all applications in which brazed aluminum joints of assured quality are required. It provides criteria for classifying aluminum brazed joints based on loading and the consequences of failure and quality assurance criteria defining the limits of acceptability of each class. The specification defines acceptable brazing equipment, materials and procedures, as well as the required inspection for each class of joint.*

AWS C3.8M/C3.8-2005, Recommended Practices for the Ultrasonic Examination of Brazed Joints

*This specification presents minimum fabrication, equipment, and process procedure requirements for the ultrasonic examination of brazed joints. Its purpose is to standardize brazed joint ultrasonic examination requirements for all applications in which brazed joints of assured quality are required. It provides minimum requirements for equipment, procedures, and the documentation of such tests.*

AWS C4.2/C4.2M-2006, Recommended Practices for Safe Oxyfuel Gas Cutting Torch Operation

*The new revised manual for oxyfuel gas cutting includes the latest procedures to be used in conjunction with oxyfuel gas cutting equipment. The manual also includes the latest safety recommendations. Complete lists of equipment are available from individual manufacturers.*

AWS C4.3/C4.3M-2004, Recommended Practices for Safe Oxyfuel Gas Heating Torch Operation

*The newly revised manual for oxyfuel gas heating torch operation includes the latest procedure to be used in conjunction with oxyfuel gas heating equipment. The manual also includes the latest safety requirements. Complete lists of equipment are available form individual manufactures.*

AWS C4.4/C4.4M-2004, Recommended Practices for Heat Shaping and Straightening with Oxyfuel Gas Heating Torches

*This Recommended Practices for Heat Shaping and Straightening covers the shaping of metal products by prudent use of heat to obtain a desired configuration. The text reviews the theory and analytical calculations that explain how heat shaping and straightening occurs. Sample calculations and tables are presented for typical materials. General heating patterns and heat shaping and straightening techniques are discussed. Specific heating applications are illustrated for various sections.*

AWS C4.5M-2006, Uniform Designation System for Oxyfuel Nozzles

*This document presents recommendations to oxyfuel welding, cutting, and heating/brazing torch nozzle manufacturers regarding the identification markings to be permanently applied to the torch nozzle to identify it's intended application. The identification will provide information to improve the safe operation and application of nozzles by torch operators. This standard makes use of the International /System of Units (SI).*

AWS C4.6M (ISO 9013:2002)-2006, Thermal Cutting -- Classification of Thermal Cuts -- Geometric Product Specification and Quality Tolerances

*This is the U.S. national adoption of ISO 9013:2002, Thermal cutting -- Classification of Thermal Cuts -- Geometric product specification and quality tolerances. It includes three national annexes, Criteria for Describing Oxygen-Cut Surfaces with a photograph of a Surface Roughness Guide, a list of reference documents available for individuals involved with Oxyfuel Gas Cutting, a guide for preparing an inquiry to the AWS on Oxyfuel Gas Cutting, and a list of AWS published documents on Oxyfuel Gas Cutting.*

AWS C4.6M (ISO 9013:2002)-2006, Thermal Cutting -- Classification of Thermal Cuts -- Geometric Product Specification and Quality Tolerances

*This is the U.S. national adoption of ISO 9013:2002, Thermal cutting -- Classification of Thermal Cuts -- Geometric product specification and quality tolerances. It includes three national annexes, Criteria for Describing Oxygen-Cut Surfaces with a photograph of a Surface Roughness Guide, a list of reference documents available for individuals involved with Oxyfuel Gas Cutting, a guide for preparing an inquiry to the AWS on Oxyfuel Gas Cutting, and a list of AWS published documents on Oxyfuel Gas Cutting.*

AWS C5.10/C5.10M-2003, Recommended Practices for Shielding Gases for Welding and Plasma Arc Cutting

*Concerned with six industrial gases: argon (Ar), carbon dioxide (CO2 ), helium (He), hydrogen (H2), Nitrogen (N2), and oxygen (O2). Properties, uses, safe handling, distribution, mixtures and effects on arc characteristics and welds are presented for flux cored arc welding (FCAW), gas tungsten arc welding (GTAW), gas metal arc welding (GMAW), electrogas welding (EGW), plasma arc welding (PAW), plasma arc cutting (PAC), laser welding (LW) and laser cutting (LC). Gas purging, gas distribution and safety practices are also covered.*

AWS C5.2-2001, Plasma-Arc Cutting, Recommended Practices for

*Provides information regarding current practices for plasma arc cutting and gouging. The document explains the basic principles of operation, methods of operation, system components and their installation, optimization of cut quality, and cost considerations. Safety aspects associated with the process are also discussed.*

AWS C5.3-2000, Recommended Practices for Air-Carbon-Arc Gouging and Cutting

*Establishes a method of conveying to the welder/operator the proper setup and use of air carbon arc gouging and cutting. Instructions and procedures are supplied in detail so the welder/operator can establish the correct air pressure, amperage, voltage, and techniques. This standard was originally listed for public review in the June 20, 1997 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

AWS C5.5/C5.5M-2003, Recommended Practices for Gas-Tungsten-Arc Welding

*This document is designed to assist anyone who is associated with gas tungsten arc welding (GTAW). This includes welders, welding technicians, welding engineers, quality control personnel, welding supervisors, purchasing personnel, educators, and students. This document discusses welding principles, equipment, gas shielding , and techniques for manual and automatic GTAW. Welding safety, trouble shooting, and related items are included for understanding by all types of personnel in establishing better production welding operations.*

### AWS C5.7-2000 (R2006), Recommended Practices for Electrogas Welding

*Fundamentals of the process, including the various methods of welding, are presented. A discussion of equipment, consumables, applications, and metallurgical advantages and limitations is provided. The selection of process variables and operating conditions and typical EGW procedures is then presented. Inspection of welds, and training and qualification of welding procedures and operators are described. Finally, a troubleshooting guide, safety considerations, and a supplemantary reading list are presented.*

### AWS C6.1-89 (R1998), Recommended Practices for Friction Welding

*Describes friction welding fundamentals and basic equipment requirements. Suggested procedure qualification, inspection methods, and joint designs are detailed. Typical mechanical property data are referenced.*

### AWS C6.2/C6.2M-2006, Specification for Qualification of Friction Welding of Metals

*This specification provides for the qualification of friction welding machines, procedures, and training of welding operators. Qualification of the welding procedure specification (WPS) includes the material specifications involved, weld joint design, destructive and nondestructive testing requirements, as well as guidelines for different categories of quality assurance. Qualification of welding equipment includes weld parameter control, weld reproducibility, and basic safety requirements.*

*Welding operators require training in the proper operation of friction welding equipment and general safety procedures. The requirements for requalification of the WPS and equipment are also given.*

### AWS C7.1M/C7.1-2004, Recommended Practices for Electron Beam Welding

*This document presents recommended practices for electron beam welding. It is intended to cover common applications of the process. Processes definitions, safe practices, general process requirements, and inspection criteria are provided.*

### AWS C7.2-1998, Recommended Practices for Laser Beam Welding, Cutting, and Drilling

*Presents recommended practices for laser beam welding, cutting, and drilling. Intended to cover common applications of the process. Process definitions, safe practices, general process requirements and inspection criteria are provided. This standard was first listed for public review in the February 28, 1997 issue of Standards Action. It is being resubmitted now due to substantive changes to the text.*

### AWS C7.3-1999 (R2003), Process Specification for Electron Beam Welding

*This specification on electron beam welding discusses applicable specifications, safety, requirements, fabrication, quality examination, equipment calibration and maintenance, approval of work, and delivery of work.*

### AWS D1.1/D1.1M-2006, Structural Welding Code – Steel

*This code covers the welding requirements for any type of welded structure made from the commonly used carbon and low-alloy constructional steels. Sections 1 through 8 constitute a body of rules for the regulation of welding in steel construction. There are twelve mandatory and fourteen nonmandatory annexes in this code. A Commentary of the code is included with the document.*

### AWS D1.2/D1.2M-2003, Structural Welding Code – Aluminum (includes ANSI/AWS D1.2A-83, Commentary)

*This code covers the welding requirements for any type structure made from aluminum structural alloys, except for aluminum pressure vessels and fluid-carrying pipe lines. Sections 1 through 7 constitute a body of rules for the regulation of welding in aluminum construction. This edition has been reorganized extensively for the 1997 edition. A commentary on the code is also included with the document.*

### AWS D1.3-1998, Structural Welding Code – Sheet Steel

*Covers the requirements associated with welding sheet steel having a minimum specified yield point no greater than 80 000 psi. The Code requirements cover any welded joint made from the commonly used structural quality low carbon hot rolled sheet and strip steel with or without zinc coating (galvanized).*

### AWS D1.4/D1.4M-2005, Structural Welding Code – Reinforcing Steel

*This code covers the requirements for welding reinforcing steel in most reinforced concrete applications. It contains a body of rules for the regulations of welding reinforcing steel and provides suitable acceptance criteria for such welds.*

### AWS D1.5-2002, Bridge Welding Code

*Covers the welding requirements for AASHTO welded highway bridges made from carbon and low-alloy constructional steels. This 2001 edition contains dimensions in metric SI Units and U.S. Customary Units. Sections 1 through 7 constitute a body of rules for the regulation of welding in steel construction. Section 9 of the previous edition has had it provisions distributed throughout the 2001 edition. Sections 8, 10, and 11 do not contain provisions, as their analogue D1.1 sections are not applicable to the D1.5 Code. Section 12 contains the requirements for fabricating fracture critical members.*

### AWS D1.6-2007, Structural Welding Code - Stainless Steel

*This code covers the requirements for welding stainless steel structural assemblies.*

### AWS D1.8/D1.8M-2005, Structural Welding Code - Seismic Supplement

*This code supplements the requirements of AWS D1.1, Structural Welding Code - Steel. This code is intended to be applicable to welded joints in seismic load resisting systems designed in accordance with the AISC Seismic Provisions. Sections 1-5 constitute a body of rules for the regulation of welding in seismic load resisting systems. There are seven mandatory annexes in this code. A commentary of the code is included with the document.*

### AWS D10.10-1999, Recommended Practices for Local Heating of Welds in Piping and Tubing

*Provides information on equipment, temperature control, insulation, and advantages and disadvantages for the methods presently available for local heat treating of welded joints in pipe and tubing.*

AWS D10.11M/D10.11-2007, Guide for Root Pass Welding of Pipe Without Backing

*This standard presents guidelines for welding the root pass of metal pipe butt joints with an open root or a consumable insert. Joint designs, assembly, consumable insert configurations, base metals, filler metals, and purging are discussed. Applicable arc welding processes and techniques are described.*

AWS D10.12M/D10.12-2000, Guide for Welding Mild Steel Pipe

*Presents recommended practices for welding low-carbon steel pipe. It is intended to cover piping systems such as for low-pressure heating, air-conditioning, refrigeration, water supplies, as well as some gas or chemical systems. It provides welding techinques for oxyacetylene shielded metal arc and gas metal arc welding. This document does not address the needs of pipe steels or service conditions which may require postweld heat treatment.*

AWS D10.13/D10.13M-2001, Recommended Practices for the Brazing of Copper Pipe and Tubing for Medical Gas Systems

*Provides the minimum requirements for brazing of copper tubing for use in medical gas distribution systems and also contains criteria for cleanliness, fabrication, and installation and various inspection and testing options.*

AWS D10.4-86 (R2000), Welding Austenitic Chromium-Nickel Stainless Steel Piping and Tubing, Recommended Practices for

*Presents a detailed discussion of the metallurgical characteristics and weldability of many grades of austenitic stainless steel used in piping and tubing. The delta ferrite content as expresse4d by ferrite number (FN) is explained, and its importance in minimizing hot cracking is discussed.*
*A number of Figures and Tables illustrate recommended joint designs and procedures. Appendix A presents information on the welding of high-carbon stainless steel cast pipe fittings.*

AWS D10.6-2000, Gas Tungsten Arc Welding of Titanium Piping and Tubing, Recommended Practice for

*Summarizes information on the welding of titanium. Explains the special precautions necessary to shield the molten and hot metal from atmospheric contamination. Various methods of checking weld quality are also presented.*

AWS D10.7M/D10.7-2000, Gas Shielded Arc Welding of Aluminum and Aluminum Alloy Pipe, Recommended Practices for

*Presents information concerning those properties of aluminum that affect its weldability and that cause specific problems in the fabrication of aluminum pipe. Recommendations are made for solving these problems and suggested procedures are presented for welding aluminum pipe joints with the Gas Tungsten Arc and Gas Metal Arc Welding Processes.*

AWS D11.2-2006, Guide for Welding Iron Castings

*Presents briefly the history and metallurgy of cast iron and the welding processes applicable to it. A newly developed weldability test is described in detail and instructions given for its application in specific cases. Provision is made for qualification of welding procedures and welders when necessary; quality control practice is also included.*

AWS D14.1/D14.1M-2005, Specification for Welding of Industrial and Mill Cranes and Other Material Handling Equipment

*Requirements are presented for the design and fabrication of constructional steel weldments that are used in industrial and mill cranes, lifting devices and other material handling equipment. Requirements are also included for modification, weld repair and postweld treatments of new and existing weldments. Filler metal and welding procedure guidelines are recommended for the applicable base metals, which are limited to carbon and low-alloy steels. Allowable unit stresses are provided for weld metal and base metal for various cyclically loaded joint designs.*

AWS D14.3/D14.3M-2005, Specification for Welding, Earthmoving, Construction, and Agricultural Equipment

*This specification provides standards for producing structural welds used in the manufacture of earthmoving, construction, and agricultural equipment. Such equipment is defined as self-propelled, on and off-highway machinery and associated implements. Manufacturer's responsibilities are presented as they relate to the welding practices that have been proven successful within the industry in the production of weldments on this equipment. Basic dimensional weld details are defined and interpreted for application throughout the document. Provisions are made to identify base metals used in these weldments. Procedures to assure they are welded with compatible, identifiable welding processes and consumables are included with consideration given to factors that affect weldability.*

AWS D14.4/D14.4M-200x, Specification for Welded Joints in Machinery and Equipment

*This specification establishes common acceptance criteria for classifying and applying carbon and low-alloy steel welded joints used in the manufacture of machines and equipment. It also covers weld joint design, workmanship, quality control requirements and procedures, welding operator and welding procedure qualification, weld joint inspection (visual, radiographic, ultrasonic, magnetic particle, liquid penetrant), repair of weld defects, and heat treatment.*

AWS D14.5-1997, Specification for Welding of Presses and Press Components

*Presents requirements for the design and fabrication of cyclically loaded press weldments, which includes the weld repair of new and existing components. Filler metals and weld procedure specifications are recommended for the applicable base metals that are limited to those consisting of carbon and low-alloy steels. Allowable unit stresses are provided for weld metal and base metal for various cyclically loaded joint designs.*

AWS D14.6-2004, Specification for Welding of Rotating Elements of Equipment

*Establishes material and workmanship standards for manufacturers, fabricators, repair organizations, purchasers, and owner/operators of rotating equipment which are fabricated or repaired by welding. Included are sections defining process qualifications, operator qualifications, quality control, inspection requirements, and repair requirements.*

AWS D14.7/D14.7M-2005, Recommended Practices for Surfacing and Reconditioning of Industrial Mill Rolls

*This standard provides guidance, based upon experience, for preparing, building up and overlaying by welding, postweld heat treating, finish machining, inspecting, and record keeping of new and reconditioned industrial mill rolls used in the primary metal-working industry.*

AWS D15.1-2001, Railroad Welding Specification – Cars and Locomotives

*Establishes minimum standards for the manufacture and maintenance of railroad equipment. Part I covers the general requirements for welding in the railroad industry. Part II covers specific requirements for the welding of base metals thinner than 1/8 in. (3.2 mm).*

AWS D15.2-2003, Recommended Practices for the Welding of Rails and Related Rail Components for Use by Rail Vehicles

*This document recommends minimum standards for the maintenance welding of rails and related rail components used by rail vehicles. Repair procedures for rails and*

*austenitic manganese steel components are covered. Thermite welding and electric flash butt welding guidelines are discussed. Procedure qualification, welder qualification, and general welding safety procedures are addressed.*

AWS D16.1M/D16-2004, Specification for Robotic Arc Welding Safety

*Establishes safety requirements with respect to the design, manufacture, maintenance, and operation of arc welding robot systems and ancillary equipment. It also helps to identify and minimize hazards involved in maintaining, operating, and setting up of arc welding robot systems.*

AWS D16.2M/D16.2-2007, Components of Robotic and Automatic Welding

*AWS/NEMA D16.2M/D16.2:200X, Guide for Components of Robotic and Automatic Arc Welding Installations, provides performance recommendations for evaluating components of a typical robotic or automatic welding installation. Emphasis is placed on the role of the welding interface. A pin arrangement and specific pin function for each location in a standardized 37-pin connector are proposed.*

AWS D16.3-2001, Risk Assessment Guide for Robotic Welding

*Provides recommendations and guidelines for the safe application of robotic arc welding. Emphasis is placed on conformance of this process with prevailing industry standards for hazard analysis and proper safeguarding. This is the second public review for this standard. It was originally listed for public review in the March 13, 1998 issue of Standards Action. It is being resubmitted due to substantive changes in the text.*

AWS D16.4M/D16.4-2005, Specification for the Qualification of Robotic Arc Welding Personnel

*This specification provides requirements for the qualification of robotic arc welding support personnel at three different levels - CRAW-L1, CRAW-O, and CRAW-T. The revisions in this edition align education and experience requirements more realistically with those in industry.*

AWS D17.1-2001, Specification for Fusion Welding for Aerospace Applications

*Provides the general welding requirements for welding aircraft and space hardware. It includes but is not limited to the fusion welding of aluminum-based, nickel-based, iron-based, cobalt-based, magnesium-based, and titanium-based alloys using electric arc and high energy beam processes. There are requirements for welding design, personnel and procedure qualification, inspection, and acceptance criteria for aerospace, support and nonflight hardware. Additional requirements cover repair welding of existing hardware. A commentary for the specification is included.*

AWS D17.2/D17.2M-2007, Specification for Aerospace Spot and Seam Resistance Welding

*This specification provides the general resistance welding requirements for resistance welded aerospace hardware. It includes, but is not limited to, resistance spot and resistance seam welding of aluminium, magnesium, iron, nickel, cobalt, and titanium-based alloys. There are requirements for machine and procedure qualification, production witness samples, and inspection and acceptance criteria for aerospace hardware.*

AWS D18.1-1999, Specification for Welding of Austenitic Stainless Steel Tube and Pipe Systems in Sanitary (Hygenic) Applications

*Provides the requirements for welds in tubing systems in dairy and other food processing plants. The document addresses qualifications, fabrication, extent of visual examination, acceptance criteria, and documentation requirements. This is the second public review for this standard. It was originally listed for public review in the May 22, 1998 issue of Standards Action. It is being resubmitted due to substantive changes in the text.*

AWS D18.2-1999, Guide to Weld Discoloration Levels on Inside of Austenitic Stainless Steel Tube

*Provides a visual comparison guide that can be used to specify surface discoloration criteria for sanitary (hygienic) welds in austenitic stainless steel tube.*

AWS D18.3/D18.3M-2005, Specification for Welding of Tanks, Vessels, and Other Equipment in Sanitary (Hygienic) Applications

*This specification provides the requirements for welding of tanks, vessels, and other equipment used in food processing plants and other areas where sanitary (hygienic) applications are required. The document addresses qualification, fabrication, extent of visual examination, acceptance criteria, and documentation requirements.*

AWS D3.5-93 (R2000), Steel Hull Welding, Guide for

*This Guide discusses shipyard practices for steel hull construction. It includes steel products used, erection, and fitting practices, and qualification of welding procedures and personnel. Safety and health of yard workers is also included.*

AWS D3.6M-99, Underwater Welding

*Covers underwater welding in both dry and wet environments. Operations required at the surface related to and in support of underwater welding are within the scope of this document, but welding above the surface is not. All provisions of this document apply equally to new construction and to modification and repair of existing structures underwater. This standard was first listed for public review in the May 8, 1998 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

AWS D3.7-2004, Guide for Aluminum Hull Welding

*Provides information on the welding of sea going aluminum hulls and other structures in marine construction. Included are sections on hull materials, construction preparation, welding equipment and processes, qualification requirements, welding techniques, and safety precautions.*

AWS D8.14-2000, Specification for Automotive Components Weld Quality - Aluminum Arc Welding

*Defines the practical tolerances and requirements needed to achieve satisfactory weld quality when dealing with the production volumes associated with automotive structural parts made of aluminum. Gaps in the weld joints have a significant effect on structural performance and weld quality. Automatic and robotic arc welding requires specified part fit-up in the weld joints for consistent weld quality. Therefore, metal stampings and press-formed parts must be made to produce weld joint fits within the ranges allowed by this specification.*

AWS D8.1M-2007, Specification for Automotive Weld Quality - Resistance Spot Welding of Steel

*This document contains both visual and measurable acceptance criteria for resistance spot welds in steels. The information contained herein may be used as an aid by designers, resistance welding equipment manufacturers, welded product producers and others involved in the automotive industry and resistance spot welding of steels.*

AWS D8.6/D8.6M-2005, Specification for Automatic Resistance Spot Welding Electrodes

*This standard outlines the requirements for Resistance welding electrodes relating to the Automotive welding industry.*

AWS D8.7-2004, Recommended Practice for Automotiv Weld Quality – Resistance Spot Welding

*This document presents recommended practices and criteria for evaluating resistance spot welds typical of automotive sheet steel applications. The document contains weld characteristics, metrics, and testing methods useful in evaluation spot welding quality on coated and uncoated automotive sheet steels of all strength levels and compositions. The test methods described are designed to assess both static and dynamic properties of automotive sheet steel welds.*

AWS D8.8M-2007, Specification for Automotive Frame Weld Quality - Arc Welding

*This specification provides the minimum quality requirements for arc welding of various types of automotive and light truck components. This specification covers the arc and hybrid arc welding of coated and uncoated steels.*

AWS D8.9-2002, Recommended Practices for Test Methods for Evaluating the Resistance Spot Welding Behavior of Automotive Sheet Steel Materials

*Presents recommended practices for evaluating the resistance spot welding behavior of automotive sheet steels. The document contains a number of tests and test methods useful in determining the spot welding performance of coated and uncoated automotive sheet steels of all strength levels and compositions. The test methods are designed to assess current range, electrode endurance, and weld properties of automotive sheet steels. The weld property tests include tests for hold time sensitivity, weld hardness, shear-tension strength, and cross-tension strength. The document and the test methods, parameters, and test criteria it contains are designed exclusively for laboratory testing and are not intended as recommended practices or standards for manufacturing operations.*

AWS D9.1M/D9.1-2006, Sheet Metal Welding Code

*This code covers the arc and braze welding requirements for nonstructural sheet metal fabrications using the commonly welded metals available in sheet form. Requirements and limitations governing procedure and performance qualification are presented, and workmanship and inspection standards are supplied. The informative annexes provide useful information on materials and processes.*

AWS F1.1M-2006, Method for Sampling Airborne Particulates Generated by Welding and Allied Processes

*This document aids the reader in the proper technique for sampling welding fume in the workplace. Emphasis is placed on positioning the sampling device and calibration of the equipment.*

AWS F1.2-2006, Laboratory Method for Measuring Fume Generation Rates and Total Fume Emission of Welding and Allied Processes

*This document outlines a laboratory method for the determination of fume generation rates and total fume emission. A test chamber is used to collect representative fume samples under carefully controlled conditions.*

AWS F1.3M-2006, A Sample Strategy Guide for Evaluating Contaminants in the Welding Environment

*This guide provides advice on contaminants that may be present in the welding environment, and presents a strategy for collecting valid samples from the welder's breathing zone. Recommendations for fume analysis for various elements found in AWS filler metal specifications are presented in a table. A checklist to use in observing the workplace is provided in Annex B.*

AWS F1.5M-2003, Sampling and Analyzing Gases from Welding and Allied Processes, Methods for

*This standard contains recommended sampling methods and analytical techniques for ozone, carbon monoxide, nitric oxide, nitrogen dioxide, and gaseous fluoride in welding environments. It complements AWS F1.1, Methods for Sampling Airborne Particulates Generated by Welding and Allied Processes.*

AWS F1.6-2003, Guide for Estimating Welding Emissions for EPA and Ventilation Permit Reporting

*This document assists companies in estimating emissions from welding processes for EPA reporting purposes in a concise, easily understandable guide.*

AWS F2.2-2001, Lens Shade Selector

*Provides a chart that lists the minimum suggested protective lens shades and suggested comfort lens shades for a variety of commonly used welding and cutting processes.*

AWS F2.3M-2001, Specification for Use and Performance of Transparent Welding Curtains and Screens

*Informs the reader of reasonable and adequate means, ways, and methods for the testing, selection, and safe use of transparent welding curtains and screens. These devices are designed to provide outside viewers, at some distance from the welding arc or operation, a safe view of the operation and operator.*

AWS F3.2M/F3.2-2001, Ventilation Guide for Weld Fume

*Introduces the reader to various types of ventilation systems, including general supply and exhaust and local exhaust, for control of welding fumes. It contains or refers to information on air contaminants found in the welding fumes, principles of systems design and selection, and drawings that illustrate ventilation techniques. This standard was listed for public review in the 11/5/1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

AWS F4.1-1999, Recommended Safe Practices for the Preparation for Welding and Cutting of Containers and Piping

*Informs the reader of the necessary safe practices to be followed in the cleaning and preparation for welding or cutting of containers and piping. It describes various methods for cleaning, including water, steam, hot chemical and mechanical, and techniques to be used for their proper preparation, such as inerting.*

AWS F6.1-1978 (R1989), Method for Sound Level Measurement of Manual Arc Welding and Cutting Processes

*Describes the equipment and procedure to be used in measuring sound levels of manual arc welding processes. It allows the user to measure sound levels in a reproducible manner that permits comparison with other processes.*

AWS G1.10M-2001, Guide for the Evaluation of Hot Gas, Hot Gas Extrusion, and Heated Tool Butt Thermoplastic Welds

*Lists and describes faults in hot gas, hot gas extrusion, and heated tool butt welded joints in thermoplastics. Its intent is to make possible a generally valid evaluation giving consideration to graded quality requirements. This standard encompasses the classification, requirements, testing, evaluation, and acceptance of the welds. Details in recording engineering data are described. Tables illustrating cracks, cavities, solid inclusions, lack of fusion, defects of shape, and other defects in thermoplastic welds are included. Fault features with descriptions and illustrations are compiled into tables to aid in the evaluation of welds.This standard was originally listed in the September 10, 1999 issue of Standards Action. It is being resubmitted due to substantive changes.*

AWS G1.1M/G1.1-2006, Guide to Ultrasonic Assembly of Thermoplastics

*This guide details the ultrasonic equipment and the processes used in industry for fabricating thermoplastic parts; including, welding, staking, swaging, insertion, forming, degating, cutting, and trimming. Included are sections on safety, equipment setup, joint and part design, testing, and process optimization.*

AWS G1.2M/G1.2-1999, Specification for Standardized Ultrasonic Welding Test Specimens for Thermoplastics

*Outlines the requirements for a standard ultrasonic welding test sample for thermoplastics and its welding and testing. As used in this specification, the word "shall" denotes a requirement; the word "should" denotes a guideline or recommendation; and the word "may "denotes a choice. This standard was first listed in the April 9, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

AWS G1.6-2006, Specification for the Qualification of Plastics Welding Inspectors for Hot Gas Extrusion, and Heated Tool Blutt Thermoplastic Welds

*This standard defines the qualification requirements of Hot Gas, Hot Gas Extrusion, and Heated Tool Butt Thermoplastic welding inspectors include experience and satisfactory completion of an examination that includes demonstrated capabilities. The examination tests the inspector's knowledge of plastics welding processes, plastics welding procedures, nondestructive examinations, destructive tests, terms, definitions, symbols, reports safety, quality assurance and responsibilities.*

AWS G2.1M/G2.1-2002, Guide for the Joining of Wrought Nickel-Base Alloys

*Describes the welding of different wrought nickel alloys, including solid solution and precipitation hardening alloys. A safety section is included.*

AWS G2.4/G2.4M-2006, Guide for the Fusion Welding of Titanium and Titanium Alloys

*The standard Guide for the Fusion Welding of Titanium and Titanium Alloys provides instructional guidance for the welding of titanium and titanium alloys.*

AWS QC1-96, AWS Certification of Welding Inspectors

*Defines the requirements and program for the AWS to certify welding inspectors. The certification of visual welding inspectir requires documentation of experience and tests the inspector's knowledge of welding processes,*

*welding procedures, destructive tests, terms, and definitions, symbols, reports, safety, and responsibilities.*

## AWWA (American Water Works Association)

ANSI/AWWA A100-2006, Water Wells

*This standard describes the minimum requirements for vertical water supply wells.*

ANSI/AWWA B100-2001, Filtering Material

*Covers gravel, silica sand, high-density media, anthracite filter materials, and the placement of the materials in filters for water supply service application. ANSI/AWWA B604, Standard for Granular Activated Carbon, addresses use of GAC as a filter medium and as an adsorbent.*

ANSI/AWWA B101-2001, Precoat Filter Media

*Covers diatomaceous earth (DE), perlite, and other disposable filter materials used to precoat filters for water supply service application.*

ANSI/AWWA B101a-2001, Precoat Filter Media

*This standard covers diatomaceous earth (DE), perlite, and other disposable filter materials used to precoat filters for water supply service application.*

ANSI/AWWA B102-2004, Manganese Greensand for Filters

*Describes manganese greensand used in pressure and gravity filters to remove dissolved iron, manganese, radium, arsenic and hydrogen sulfide. It discusses the placement, handling, preparation and regeneration of manganese greensand media. Although manganese greensand filters frequently employ gravel and anthracite filter materials, they have been omitted from this standard with reference to the document ANSI/AWWA B100, Standard for Filtering Material, which covers these material in detail.*

ANSI/AWWA B200-2007, Sodium Chloride

*This standard describes sodium chloride in the form of rock, vacuum-granulated, compressed vacuum-granulated, solar, or compressed solar salt for use in the recharging of cation-exchange materials in water supply service for softening municipal and industrial water supplies. Additionally, sodium chloride is used in the recharging of anion-exchange materials for nitrate removal or dealkalization of municipal and industrial supplies.*

ANSI/AWWA B201-2003, Soda Ash

*This standard describes soda ash for use in the treatment of municipal and industrial water supplies.*

ANSI/AWWA B201a-1997, Soda Ash

*Replaces Section III, Acceptance, with the revised/approved wording in accordance with ANSI/NSF 60 (61).*

ANSI/AWWA B202-2002, Water Treatment – Quicklime and Hydrated Lime

*This standard covers copper sulfate for use in the treatment of municipal and industrial water supplies.*

ANSI/AWWA B300-2004, Hypochlorites

*Describes chlorinated lime, calcium hypochlorite, and sodium hypochlorite for use in the treatment of municipal and industrial water supplies.*

ANSI/AWWA B300a-1999, Addendum to B300-92, Standard for Hypochlorites

*Replaces Section III, Acceptance, with the revised/approved wording in accordance with ANSI/NSF 60 (61).*

ANSI/AWWA B301-2004, Liquid Chlorine

*describes liquid chlorine for use in the treatment of potable and industrial water supplies.*

ANSI/AWWA B302-2005, Ammonium Sulfate

*This standard describes ammonium sulfate for use in water supply service.*

ANSI/AWWA B303-2005, Sodium Chlorite

*This standard describes sodium chlorite, in either solid (granular, flake, or powdered) or aqueous-solution form, for use in making chlorine dioxide for use in water supply service. Sodium chlorite must be packaged, labeled, and registered according to the Federal Insecticide, Fungicide, and Rodenticide Act as administered by the US Environmental Protection Agency (USEPA.*

ANSI/AWWA B304-2005, Liquid Oxygen for Ozone Generation

*This standard describes liquid oxygen (LOX) for use in the generation of ozone for water treatment purposes.*

ANSI/AWWA B305-2005, Anhydrous Ammonia

*This standard describes anhydrous ammonia for water supply service application. Anhydrous ammonia is the compound having the formula NH3. “Anhydrous” means free from water.*

ANSI/AWWA B306-2007, Aqua Ammonia

*This standard describes aqua ammonia (liquid ammonium hydroxide) for use in the treatment of municipal and industrial water supplies.*

ANSI/AWWA B402-2006, Ferrous Sulfate

*This standard describes ferrous sulfate (FeSO4) in moist, dried, and solution (liquid) forms for water supply service application.*

ANSI/AWWA B403-2003, Aluminum Sulfate – Liquid, Ground, or Lump

*This standard describes purified aluminum sulfate in liquid, ground, or lump form for use in water treatment.*

ANSI/AWWA B403a-1997, Aluminum Sulfate – Liquid, Ground, or Lump

*Replaces Section I.C, Acceptance, with the revised/approved wording in accordance with ANSI/NSF 60 (61).*

ANSI/AWWA B404-2003, Liquid Sodium Silicate

*This standard describes liquid sodium silicate used in the preparation of activated silica, which is used as a coagulant aid for the treatment of municipal and industrial water supplies for (1) the control of corrosion, and (2) stabilization of iron and manganese in water systems.*

ANSI/AWWA B405-2006, Sodium Aluminate

*This standard describes sodium aluminate (Na2Al2O4) in both liquid and solid form for use in water supply service. Sodium aluminate according to this standard is a combination of sodium oxide (Na2O) and aluminum oxide (Al2O3) with sufficient excess causticity (sodium oxide) for stabilization.*

ANSI/AWWA B406-2006, Ferric Sulfate

*This standard describes dry form ferric sulfate and liquid ferric sulfate for use in water treatment.*

ANSI/AWWA B407-2005, Liquid Ferric Chloride

*Describes ferric chloride in aqueous (liquid) form for use in the treatment of municipal and industrial water supplies. Applications of the chemical include (1) water softening with lime or a combination of lime and soda ash to improve hardness reduction and coagulation, and (2) water clarification, as a coagulant, followed by settling or filtration.*

ANSI/AWWA B407a-1996, Standard for Liquid Ferric Chloride

*Adds additional sections at the end of Section 5: Verification, regarding Iron Alternative Method, Ferrous Iron Alternative Method and Ferric Iron Alternative Method.*

ANSI/AWWA B408-2003, Liquid Polyaluminum Chloride

*Describes polyaluminum chloride (PACI) in aqueous (liquid) form for use in water supply service.*

ANSI/AWWA B408a-1997, Liquid Polyaluminum Chloride

*Replaces Section I.C, Acceptance, with the revised/approved wording in accordance with ANSI/NSF 60 (61).*

ANSI/AWWA B451-2004, Poly(Diallyidimethylammonium Chloride)

*This standard describes poly(diallyldimethylammonium chloride) for use in water supply service applications.*

ANSI/AWWA B452-2006, EPI-DMA Polyamines Scale and Corrosion Control

*This standard covers epichlorohydrin dimethylamine (EPI-DMA) polyamines for water supply service applications.*

ANSI/AWWA B453-2006, Polyacrylamide

*This standard describes polyacrylamide (PAM) for use in water supply service.*

ANSI/AWWA B501-2003, Sodium Hydroxide (Caustic Soda)

*This standard describes sodium hydroxide, anhydrous and liquid, for use in the treatment of municipal and industrial water supplies.*

ANSI/AWWA B501a-1997, Sodium Hydroxide

*Replaces Section I.C, Acceptance, with the revised/approved wording in accordance with ANSI/NSF 60 (61).*

ANSI/AWWA B502-2005, Water Treatment – Sodium Polyphosphate, Glassy (Sodium Hexametaphosphate)

*This standard describes sodium polyphosphate, glassy, for use in water supply service. This material is also known as sodium hexametaphosphate, sodium tetrapolyphosphate, and Graham's salt.*

ANSI/AWWA B503-2005, Sodium Tripolyphosphate (Includes addendum B503a-97)

*This standard describes sodium tripolyphosphate for use in water supply service.*

ANSI/AWWA B504-2005, Monosodium Phosphate, Anhydrous (Includes addendum B504a-97)

*This standard describes monosodium phosphate, anhydrous, for water supply service. The product described is an orthophosphate used as formulated and in blends to inhibit corrosion of potable water conveyance systems. The product described by this standard is also known as sodium phosphate, monobasic, anhydrous.*

ANSI/AWWA B505-2005, Disodium Phosphate, Anhydrous (Includes addendum B505a-97)

*This standard describes disodium phosphate, anhydrous, for water supply service. The product described is an orthophosphate used, as formulated and in blends, to inhibit corrosion of potable water conveyance systems. The product described by this standard is also known as sodium phosphate, dibasic, anhydrous.*

ANSI/AWWA B506-2006, Zinc Orthophosphate

*This standard describes zinc orthophosphate (ZOP) corrosion inhibitor in dry and liquid forms for use in water supply service.*

ANSI/AWWA B510-2006, Carbon Dioxide

*This standard describes carbon dioxide (CO2) for use in recarbonation and pH adjustment in water supply service.*

ANSI/AWWA B510a-1997, Carbon Dioxide

*Replaces Section I.C, Acceptance, with the revised/approved wording in accordance with ANSI/NSF 60 (61).*

ANSI/AWWA B511-2005, Potassium Hydroxide

*This standard describes the use of potassium hydroxide (KOH), dry and liquid, for water supply service application.*

ANSI/AWWA B512-2002, Sulfur Dioxide

*This standard covers sulfur dioxide, a compressed, nonflammable liquified gas, for use in the treatment of municipal and industrial water supplies to remove excess residual chlorine.*

ANSI/AWWA B512a-1997, Sulfur Dioxide

*Replaces Section VI, Acceptance, with the revised/approved wording in accordance with ANSI/NSF 60 (61).*

ANSI/AWWA B550-2005, Calcium Chloride

*This standard describes calcium chloride (CaCl2), in the form of powder, pellet, granule, flake, or briquette for use in water supply treatment.*

ANSI/AWWA B600-2005, Powdered Activated Carbon

*This standard covers powdered activated carbon for use in adsorption of impurities for water supply service applications.*

ANSI/AWWA B601-2005, Sodium Meta bisulfite

*This standard describes the use of sodium metabisulfite (NA2S2O5) in the treatment of municipal and industrial water supplies.*

ANSI/AWWA B602-2002, Copper Sulfate

*This standard covers copper sulfate for use in the treatment of municipal and industrial water supplies.*

ANSI/AWWA B602a-1997, Copper Sulfate

*Replaces Section III, Acceptance, with the revised/approved wording in accordance with ANSI/NSF 60 (61).*

ANSI/AWWA B603-2003, Potassium Permanganate

*This standard describes both dry potassium permanganate (KMnO4) crystals, CAS No. 7722-64-7, as well as liquid sodium permanganate (NaMnO4) solutions, CAS No. 10101-5-5, for water supply service applications.*

ANSI/AWWA B604-2005, Granular Activated Carbon

*This standard describes virgin granular and extruded activated carbons for use as a filter medium and adsorbent in water treatment. It involves the selection, placement, and use of granular activated carbon (GAC) in filter-adsorbers where the GAC must function as both a filter medium and adsorbent, as well as those systems where the primary function is adsorption.*

ANSI/AWWA B605-2007, Reactivation of Granular Activated Carbon

*This standard describes the procurement of granular activated carbon (GAC) reactivation services and the use of reactivated GAC for water treatment. This standard does not cover the design of activated carbon handling facilities, reactivation facilities, or adsorption processes.*

ANSI/AWWA B701-2006, Sodium Fluoride

*This standard describes sodium fluoride (NaF), coarse crystalline grade, for water supply service application.*

ANSI/AWWA B702-2006, Sodium Fluorosilicate

*This standard describes sodium fluorosilicate (Na2SiF6) for water supply service application.*

ANSI/AWWA B703-2006, Fluorosilicic Acid

*This standard describes fluorosilicic acid (H2SiF6) for water supply service application.*

ANSI/AWWA C104/A21.4-2004, Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water

*This standard cover shop-applied, cement-mortar linings specified in the ANSI/AWWA C100/A21 series of standards for ductile-iron pipe and ductile-iron and gray-iron fittings for water and is intended to be used as a supplement to those standards.*

ANSI/AWWA C105/A21.5-2005, Polyethylene Encasement for Ductile-Iron Pipe Systems

*This standard covers materials and installation procedures for polyethylene encasement to be applied to underground installations of ductile-iron pipe. This standard also may be used for polyethylene encasement of fittings, valves, and other appurtenances to ductile-iron pipe systems.*

ANSI/AWWA C110/A21.10-2003, Ductile-Iron and Gray-Iron Fittings, 3 in through 48 in (75 mm through 1200 mm), for Water and Other Liquids

*This standard covers 3- to 48-in. (76- to 1,219-mm) gray-iron and/or ductile-iron fittings to be used with ductile-iron pipe for water. Requirements for fittings with mechanical joints and flanged joints are listed in Table 1 through 20 at the end of this standard.*

ANSI/AWWA C111-2006, Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings

*This standard describes rubber-gasket joints of the following types for ductile-iron pressure pipe and ductile-iron and gray-iron fittings, valves, hydrants, and other appurtenances for water supply service.1. Mechanical joint.2. Push-on joint.3. Flanged joint.4. Modifications to push-on and mechanical joints.*

ANSI/AWWA C115/A21.15-2005, Flanged Ductile-Iron Pipe With Ductile-Iron or Gray-Iron Threaded Flanges

*This standard describes 3-in. through 64-in. flanged ductile-iron pipe with ductile-iron or gray-iron threaded flanges for water supply service. Flanged pipe and flanges are rated for a maximum working pressure of 250 psi (1,720 kPa). However, 24-in. and smaller flanged joints with ductile-iron flanges may be rated for a maximum working pressure of 350 psi (2,413 kPa) as noted in the footnote of Table 1.*

ANSI/AWWA C116/A21.16-2003, Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings for Water Supply Service

*This standard covers protective fusion-bonded epoxy coatings for the interior and exterior surfaces of ductile-iron and gray-iron fittings used for water supply service. The standard covers the material, application, and performance requirements for these coatings.*

ANSI/AWWA C150/A21.50-2002, Thickness Design of Ductile-Iron Pipe

*This standard covers the thickness design of ductile-iron pipe complying with the requirements of ANSI*/AWWA C151/A21.51, Ductile-Iron Pipe, Centrifugally Cast, for water.*

ANSI/AWWA C151/A21.51-2002, Ductile-Iron Pipe, Centrifugally Cast, for Water

*This standard covers 3-in. through 64-in. ductile-iron pipe, centrifugally cast, for water, with push-on joints or mechanical joints. Requirements for pipe covered by this standard are discussed in the text and are shown in Tables 1 through 7 and Figures 1, 2, and 3. This standard may be used for pipe with such other types of joints as may be agreed on at the time of purchase.*

ANSI/AWWA C153/A21.53-2006, Ductile-Iron Compact Fittings for Water Service

*This standard covers 3-in. through 64-in. (76-mm through 1,600-mm) ductile-iron compact fittings to be used with ductile-iron pipe or pipe made of other materials with similar outside diameters for conveying water.*

ANSI/AWWA C200-1997, Steel Water Pipe – 6 in (150 mm) and Larger

*Covers electrically butt-welded straight-seam or spiral-seam pipe and seamless pipe 6 in (150 mm) in nominal diameter and larger for the transmission and distribution of water or for use in other water system facilities.*

ANSI/AWWA C203-2002, Coal-Tar Protective Coatings and Linings for Steel Water Pipelines – Enamel and Tape – Hot-Applied

*This standard provides the requirements for coal-tar protective exterior coatings and interior linings used in the potable water supply industry for buried steel water pipelines.*

ANSI/AWWA C203a-1999, Standard for Coal-Tar Protective Coatings and Linings for Steel Water Pipelines - Enamel and Tape - Hot Applied

*Concerns Section 1C in which " Acceptance," is to be replaced with the revised/approved wording in accordance with ANSI/NSF 60 (61).*

ANSI/AWWA C205-2000, Cement-Mortar Protective Lining and Coating for Steel Water Pipe – 4 in (100 mm) and Larger – Shop Applied

*Covers the material, application, and curing of shop-applied, cement-mortar protective linings and coatings for steel water pipe and fittings, and field jointing of cement-mortar-lined-and-coated steel water pipe and fittings.*
*Single copy price: $5.00*
*Order from: John Wilber, AWWA*
*Send comments (with copy to BSR) to: Same*

ANSI/AWWA C205a-1996, Cement-Mortar Protective Lining and Coating for Steel Water Pipe – 4 in and Larger – Shop Applied

*Substitutes the following for Section 4.4.3.1, Lining:*
*4.4.3.1 Lining. Straight sections of pipe shall be lined by use of a spinning machine designed and built for the purpose of rotating the pipe section and centrifugally applying cement-mortar linings to the interior of steel pipe or by a method known to provide equivalent results.*

ANSI/AWWA C206-1997, Field Welding of Steel Water Pipe

*Covers manual, semiautomatic, and automatic field welding by the metal arc welding processes for steel water pipe manufactured in accordance with American National Standard for Steel Water Pipe - 6 in (150 mm) and Larger, ANSI/AWWA C200-91. This standard covers field welding of three types of circumferential pipe joints: (1) lap joints, (2) butt joints, and (3) butt-strap joints. The design of field-welded joints is not covered.*

ANSI/AWWA C207-2001, Steel Pipe Flanges for Waterworks Service -- Sizes 4 in. through 144 in. (100 mm through 3,600 mm)

*Covers two types of slip-on flanges, ring-type and hub-type, that may be used interchangeably if the dimensions given in the standard are used. The standard also covers blind flanges. The flange types and the tables that describe them are 1.) Ring type, slip-on flanges. 2.) Hub-type, slip-on flanges. 3.) Blind Flanges. Unless otherwise specified by the purchaser, the manufacturer will select the type to be used.*

ANSI/AWWA C208-2001, Fabricated Steel Water Pipe Fittings, Dimensions for

*Provides overall dimensions for fabricating steel water pipe fittings for sizes 6 in. through 144 in. (150 mm through 3,600 mm) for steel water transmission and distribution facilities.*

ANSI/AWWA C209-2007, Cold-Applied Tape Coatings for the Exterior of Special Sections, Connections, and Fittings for Steel Water Pipelines

*This standard describes protective exterior coatings that consist of cold-applied liquid adhesives and prefabricated tapes and their applications to special sections, connections, and fittings to be used underground and underwater steel water pipelines protected with organic coatings, such as those described in ANSI/AWWA C203, ANSI/AWWA C210, ANSI/AWWA C213, ANSI/AWWA C214, ANSI/AWWA C215, and ANSI/AWWA C216.*

ANSI/AWWA C210-2003, Liquid-Epoxy Coating Systems for the Interior and Exterior of Steel Water Pipelines

*Sets minimum requirements for shop- and field-applied, liquid-epoxy interior linings and exterior coatings used in the potable-water supply industry for steel water pipelines installed underground or underwater, under normal construction conditions.*

ANSI/AWWA C213-2001, Fusion-Bonded Epoxy Coating for the Interior and Exterior of Steel Water Pipelines

*Covers the material and application requirements for fusion-bonded epoxy coatings for the interior and exterior of steel water pipe, special sections, welded joints, connections, and fittings for steel water pipelines installed underground or underwater. Fusion-bonded epoxy coatings are heat-activated, chemically cured coating systems.*

ANSI/AWWA C213a-2002, Fusion-Bonded Epoxy Coating for the Interior and Exterior of Steel Water Pipelines

*P. 14 and 15, Sec. 5.3.2.5 Impact, revise to read:5.3.2.5 Impact: Prepare two cold-rolled steel panels 3 in. x 3 in. x 0.125 in (76 mm x 76 mm x 3.2 mm) by blast cleaning one side according to Sec. 4.4.2.2.*

ANSI/AWWA C214-2000, Tape Coating Systems for the Exterior of Steel Water Pipelines

*Covers the materials and application of tape coating systems in coating plants at fixed sites, using coating techniques and equipment as recommended by the tape coating manufacturer.*

ANSI/AWWA C215-2004, Extruded Polyolefin Coatings for the Exterior of Steel Water Pipelines

*Describes the materials, systems, and application requirements for shop-applied, extruded polyolefin coatings for the exterior of steel water pipe up to 146 in. (3,650 mm) diameter.*

ANSI/AWWA C216-2000, Heat Shrinkable Crosslinked Polyolefin Coatings for the Exterior of Special Sections, Connections, and Fittings for Steel Water Pipelines

*This standard covers the material, application, and field procedure requirements for protective exterior coatings consisting of heat-shrinkable cross-linked polyolefin coatings and their application to special sections, connections, and fittings to be used in underground and underwater steel water pipelines.*

ANSI/AWWA C217-1999, Cold-Applied Petrolatum Tape and Petroleum Wax Tape Coating for the Exterior of Special Sections, Connections, and Fittings for Buried Steel Water Pipelines

*Establishes minimum requirements for cold-applied petrolatum tape and petroleum wax tape coatings used on the exterior of steel water pipelines.*

ANSI/AWWA C218-2002, Coating the Exterior of Aboveground Steel Water Pipelines and Fittings

*Covers nine coating systems designed to protect the exterior surfaces of steel pipelines and the associated fittings used by the water supply industry in above ground locations. The coating systems described may not perform or cost the same, but they are presented so that the appropriate coating system can be selected for the site-specific project requirements.*

ANSI/AWWA C219-2006, Bolted, Sleeve-Type Couplings for Plain-End Pipe

*This standard describes bolted, sleeve-type couplings, reducing or transition couplings, and flanged coupling adapters (couplings) used to join plain-end pipe. Couplings may be manufactured from carbon steel, stainless steel, ductile iron, or malleable iron, and are intended for use in systems conveying water. This standard describes nominal pipe sizes from ½ in. (13 mm) through 144 in. (3,600 mm.*

ANSI/AWWA C220-1998, Stainless Steel Pipe 4 in (100 mm) and Larger

*Pertains to unannealed austentic stainless-steel pipe that is electrically butt-seam, straight-seam, or spiral-seam welded; 4 in. (100 mm) in nominal diameter and larger; and that is intended for the transmission and distribution of water and for use in other water-system facilities.*

ANSI/AWWA C220a-1999, Stainless Steel Pipe, 4 In. (100 mm) and Larger, Addendum to ANSI/AWWA C220a-98

*Pertains to unannealed austenitic stainless-steel pipe that is straight-seam or spiral-seam welded; 4-in. (100 mm) in nominal diameter and larger; and that is intended for the transmission and distribution of water and for use in other water-supply system facilities.*

ANSI/AWWA C221-2001, Fabricated Steel Mechanical Slip-Type Expansion Joints

*Covers fabricated steel mechanical slip-type expansion joints having packing chambers for use on pipe with plain, flanged, grooved, or shouldered ends in nominal pipe sizes from 3 in. (75 mm) through 144 in. (3,600 mm). They shall be manufactured from steel and are intended for use in systems conveying water.*

ANSI/AWWA C222-1999, Polyurethane Coatings for the Interior and Exterior of Steel Water Pipe and Fittings

*Sets minimum requirements for shop- and field-applied polyurethane interior linings and exterior coatings used in the potable water supply industry for steel water pipe, special sections, welded joints, connections or fittings for steel water pipelines installed underground or underwater operating under normal conditions.*

ANSI/AWWA C223-2002, Fabricated Steel and Stainless Steel Tapping Sleeves

*This standard covers fabricated steel and stainless steeel tapping sleeves used to provide outlets on pipe. They are intended for pipe sizes 4 in. (100 mm) through 48 in. (1,200 mm), with branch outlets through 36 in. (900 mm). This standards includes requirements for materials, dimensions, tolerances, finishes, and testing.*

ANSI/AWWA C224-2007, Nylon-11-Based Polyamide Coating System for the Interior and Exterior of Steel Water Pipe, Connections, Fittings, and Special Sections

*This standard describes polyamide (Nylon-11-based) coating systems for interior and exterior of steel pipe, connections, fittings, and special sections that are used in water-handling equipment that is installed aboveground, belowground, or underwater. Polyamide coating systems are thermoplastic and are ordinarily applied in a shop or manufacturing facility.*

ANSI/AWWA C225-2002, Fused Polyolefin Coating Systems for the Exterior of Steel Water Pipelines

*Covers the materials and application of fused polyolefin coating systems for buried service. This system is applied in pipe coating plants, both portable and fixed, using coating techniques and equipment as recommended by the manufacturer.*

ANSI/AWWA C226-2006, Stainless Steel Fittings for Waterworks Service Sizes l/2 In. Through 72 In. (15 mm Through 1,800 mm

*This standard pertains to the various classes and types of stainless steel fittings that are intended for use in facilities of water distribution systems.*

ANSI/AWWA C300-2004, Reinforced Concrete Pressure Pipe, Steel Cylinder Type, for Water and Other Liquids

*This standard covers the manufacture of reinforced concrete cylinder pipe that is not prestressed or pretensioned in sizes 30 in. to 144 in. (760 mm to 3,660 mm), inclusive.*

ANSI/AWWA C301-2007, Prestressed Concrete Pressure Pipe, Steel-Cylinder Type

*This standard describes the manufacture of circumferentially prestressed concrete pressure pipe with a steel cylinder and wire reinforcement in sizes 16 in. (410 mm) through 144 in. (3,660 mm.*

ANSI/AWWA C302-2004, Reinforced Concrete Pressure Pipe, Noncylinder Type

*This standard describes the manufacture of circumferentially reinforced concrete pressure pipe, without a steel cylinder and not prestressed, in sizes from 12 to 144 in. (300 to 3,660 mm) inclusive and for working pressures not exceeding 55 psi (380 kPa) and working plus surge pressures not exceeding a total pressure of 65 psi (450 kPa).*

ANSI/AWWA C303-2002, Concrete Pressure Pipe, Bar-Wrapped, Steel Cylinder Type

*This standard covers the manufacture of concrete pressure pipe, reinforced with a steel cylinder that is helically wrapped with mild steel bar reinforcement, in sizes ranging from 10 in. through 72 in. (250 mm through 1,830 mm), inclusive, and for working pressures up to 400 psi (2,760 kPa).*

ANSI/AWWA C304-2007, Design of Prestressed Concrete Cylinder Pipe

*This standard defines the methods to be used in the structural design of buried prestressed concrete cylinder pipe (PCCP) under internal pressure. These methods are provided for the design of pipe subjected to the effects of working, transient, and field-test load and internal pressure combinations.*

ANSI/AWWA C400-2003, Asbestos-Cement Distribution Pipe, 4 in through 16 in, for Water and Other Liquids

*Covers type I and type II asbestos-cement pressure pipe sizes from 4 in. (100 mm) through 16 in. (400 mm) in pressure classes 100, 150, and 200. The pipe is intended for the underground conveyance of water in distribution systems*

ANSI/AWWA C401-2003, Selection of Asbestos-Cement Pressure Pipe, 4-in through 16-in (100-mm through 400-mm) for Water Distribution Systems

*This standard has been prepared so that the user may quickly determine the correct pressure classification of asbestos-cement pressure pipe to use under various combinations of internal pressure (working and surge) and external load (earth and superimposed live loads) in water distribution systems.*

ANSI/AWWA C402-2005, Asbestos-Cement Transmission Pipe, 18 in through 42 in (450 mm through 1,050 mm), for Water Supply Service

*This standard describes nine pressure classification of type 1 and type II asbestos-cement pipe, 18 in. through 42 in. (450 mm through 1,050 mm) in diameter, for underground installation to convey water in water supply service systems.*

ANSI/AWWA C403-2005, Selection of Asbestos-Cement Transmission and Feeder Main Pipe, Sizes 18 in through 42 in (450 mm through 1050 mm), Practice for the

*This standard has been prepared so that design engineers may determine the correct pressure classification of asbestos-cement transmission pipe to use under various combinations of internal pressure (static, operating, and surge) and external load (earth and superimposed live loads). Combined loading curves depicting the relationship between hydrostatic loading and external loading capabilities are included to expedite the selection of the correct pipe strength classification. This standard also presents criteria for determining the type of pipe to be used under various soil and water conditions.*

ANSI/AWWA C500-2002, Gate Valves for Water and Sewage Systems

*This standard covers iron-body, brass-mounted, nonrising-stem (NRS) gate valves including tapping gate valves, 3 in. (75 mm) NPS through 48 in. (1200 mm) NPS, and outside screw and yoke (OS&Y) rising-stem gate valves, 3 in. (75 mm) NPS through 12 in. (300 mm) NPS, with either double-disc gates having parallel or inclined seats, or solid-wedge gates.*

ANSI/AWWA C502-2005, Dry Barrel Fire Hydrants

*Covers post-type, dry-barrel fire hydrants with compression shut-off (opening against or with the pressure) or gate shutoff for use in water supply Service in all climates, including those where freezing occurs.*

## ANSI/AWWA C503-2005, Wet-Barrel Fire Hydrants

*This standard pertains to the various types and classes of wet-barrel fire hydrants for use in water-supply service in areas where the climate is mild and freezing temperatures do not occur. A wet-barrel hydrant has one or more valve openings above the ground line and, under normal operating conditions, the entire interior of the hydrant is subjected to water pressure at all times. Each outlet nozzle has an independent, compression-type valve (i.e., working with or against the pressure) that controls discharge from that particular outlet.*

## ANSI/AWWA C504-2006, Rubber-Seated Butterfly Valves

*This standard establishes minimum requirements for rubber-seated butterfly valves, 3 in. (75 mm) through 72 in. (1,800 mm) in diameter, with various body and end types, for fresh water having a pH range from 6-12 and a temperature range from 33°-125°F (0.6°-52°C). This standard covers rubber-seated butterfly valves suitable for a maximum steady-state fluid working pressure of 250 psig (1,723 kPa [gauge]), a maximum steady-state differential pressure of 250 psi (1,723 kPa), and a maximum full open velocity of 16 ft/sec (4.9 m/sec.*

## ANSI/AWWA C507-2005, Ball Valves 6 in (150 mm) through 48 in (1200 mm)

*Covers gray-iron, ductile-iron, and cast-steel, flanged-end, tight-shutoff, shaft- or trunnion-mounted, full-port, double-and single-seated ball valves for preassures up to 300 psi (2,100 kPa) in sizes from 6-in. through 48-in. (150-mm through 1,200-mm) diameter for use in water systems having fresh water with a pH greater than 6 and less than 12 and with temperatures greater than 32 degrees F (0 degrees C) and less than 125 degrees F (52 degrees C.*

## ANSI/AWWA C508-2001, Swing-Check Valves for Waterworks Service, 2 in (50 mm) through 24 in (600 mm) NPS

*Covers only iron-body, nonassisted, swing-check valves, 2 in. through 24 in. (50 mm through 600 mm) NPS, with mechanical-joint or flanged ends that are installed in approximately level settings in water systems.*

## ANSI/AWWA C509-2001, Resilient-Seated Gate Valves for Water Supply Service

*Covers iron-body, resilient-seated gate valves with nonrising stems (NRS) and outside screw-and-yoke (OS&Y) rising stems, including tapping gate valves, for water supply service having a temperature range of 33º - 125ºF (0.6º - 52ºC).*

## ANSI/AWWA C510-1997, Double Check Valve Backflow-Prevention Assembly

*Covers the double check valve backflow-prevention assembly. The assembly shall be for operation on hot- or cold-water lines and capable of withstanding a working water pressure of at least 150 psi (1,034 kPa) without damage to the working parts or impairment of function. Covers hot-and cold-water double check valve backflow-prevention assemblies. All assemblies shall be designed to, at a minimum, operate at a temperature range of 33oF-110oF (1oC-43oC). Hot-water assemblies shall be designed to operate in water at a minimum temperature range of 33oF-180oF (1oC-82oC). A complete assembly consists of two internally loaded, independently operating check valves, located between two tightly closing, resillient-seated shutoff valves, with four properly placed resillient-seated test cocks.*

## ANSI/AWWA C511-1997, Reduced Pressure Principle Backflow Prevention Assembly

*Covers the reduced-pressure principle backflow-prevention assembly. The assembly shall be capable of withstanding a working water pressure of at least 150 psi (1.034 kPa) without damage to working parts or impairment of function and for operation on hot or cold water lines. Covers hot and cold water reduced-pressure principle backflow-prevention assemblies. All assemblies shall be designed at a minimum to operate in water at a temperature range of 33-110*F (1-43*C). Hot water assemblies shall be designed at a minimum to operate in water at a temperature range 33-180*F (1-82*C). A complete assembly consists of a mechanical, independently operating, hydraulically dependent relief valve located between two independently operating, internally loaded check valves that are located between two tightly closing, resilient-seated valves with four properly placed resilient-seated*

## ANSI/AWWA C512-2004, Air Release, Air/Vacuum, and Combination Air Valves for Water Works Service

*This standard describes ½-in. (13-mm) through 6-in (150-mm) air-release valves and ½-in. (13-mm) through 20-in. (500-mm) air/vacuum and combination air valves having gray cast-iron or ductile-iron bodies and covers. The valves are designed for use in water systems with maximum working pressures of 300 psig (2,070 kPa [gauge]) and water temperatures ranging from above freezing to a maximum of 125 F (52 C).*

## ANSI/AWWA C513-2005, Open-Channel, Fabricated-Metal Slide Gates and Open-Channel, Fabricated-Metal Weir Gates

*Covers open-channel, fabricated-metal slide gates and open-channel, fabricated-metal weir gates for water supply service. This standard also covers manual slide lift mechanisms and standard gate appurtenances. Power driven actuators are specified in ANSI/AWWA C540, Standard for Power-Actuating Devices for Valves and Slide Gates.*

## ANSI/AWWA C515-2001, Reduced Wall, Resilient-Seated Gate Valves for Water Supply Service

*Covers reduced wall, resilient-seated gate valves with nonrising stems (NRS) and outside screw-and-yoke (OS&Y) rising stems, including tapping gate valves, for water supply service having a temperature range of 33º to 125ºF (0.6º to 52ºC). These valves are intended for applications where fluid velocity does not exceed 16 ft/second (4.9 m/s) when the valve is in the full open position.*

## ANSI/AWWA C517-2005, Resilient-Seated Cast Iron Eccentric Plug Valves

*This standard describes resilient-seated cast iron eccentric plug valves, 3 in. (75 mm) through 72 in. (1,800 mm) in diameter, with flanged, grooved or mechanical-joint ends, for water having a pH range from 6 to 12 and a temperature range from 33° to 125° F (0.6° to 52° C). The minimum design pressure shall be 175 psig (1,208 kPa) for 3 in. through 12 in. (75 mm through 300 mm) sizes and 150 psig (1,034 kPa) for 14 in. through 72 in (350 mm through 1,800 mm) sizes.*

### ANSI/AWWA C540-2002, Power-Actuating Devices for Valves and Sluice Gates

*Covers power-actuating devices for valves 3 in. (75 mm) in diameter and larger and slide gates in ordinary water service.*

### ANSI/AWWA C550-2005, Protective Interior Coatings for Valves and Hydrants

*This standard describes the special protective interior coatings for valves and hydrants used for water supply service. The standard describes the material, application, and performance requirements for these special interior coatings. The coating shall be either a liquid or powder system and shall not contain coal tar. These coating are applied to interior ferrous surfaces of valves and hydrants where corrosion protection is specified.*

### ANSI/AWWA C560-2001, Cast-Iron Sluice Gates

*Covers vertically mounted, cast-iron slide gates designed for either seating head or unseating head, or both, in ordinary water-supply service. The cast-iron slide gates have machined metal faces and machined adjustable wedging devices. The cast-iron slide gates may be used for square, rectangular, or round openings. They may be of the conventional-closure or the flush-bottom-closure type. This standard also covers manual slide gate actuator mechanisms together with standard accessories. Other actuator mechanisms, including electric or hydraulic mechanisms, are covered in ANSI/AWA C540 with an exception noted in Sec. 4.4.15 or this standard.*

### ANSI/AWWA C561-04, AWWA Standard for Fabricated Stainless Steel Slide Gates

*This standard describes fabricated stainless steel slide gates with full aperture closure, designed for either seating or unseating head, or both, in ordinary water supply service.*

### ANSI/AWWA C563-2004, Fabricated Composite Slide Gates

*Covers vertically mounted, fabricated composite, resilient seated slide gates designed for either seating head or unseating head, or both, in ordinary water supply service. The gates are primarily used to shut off water flow through a rectangular or round orifice, end of channel, or in-channel openings. They may be of conventional closure or the flush bottom-closure type and may be opened either upward or downward. The gates shall have ultra-high-molecular-weight (UHMW) polyethylene or resilient rubber sealing surfaces as required to meet leakage requirements. This standard also covers manual gate actuator mechanisms together with standard accessories.*

### ANSI/AWWA C600-2005, Installation of Ductile-Iron Water Mains and Their Appurtenances

*This standard describes installation procedures for ductile-iron mains and their appurtenances for water service.*

### ANSI/AWWA C602-2006, Cement-Mortar Lining of Water Pipelines in Place – 4 in (100 mm) and Larger

*This standard describes the requirements for the materials and application of a cement-mortar lining to the inside surface of 4-in. (100 mm) and larger new and old steel, ductile-iron, and cast-iron water pipelines that have been previously installed, as well as related work.*

### ANSI/AWWA C603-1996 (R2005), Installation of Asbestos-Cement Pressure Pipe

*This standard describes the installation of water pipelines constructed of asbestos-cement pressure pipe with fittings and appurtenances of asbestos-cement, cast iron, other materials, or a combination of any of these.*

### ANSI/AWWA C605-2005, Water Treatment – Underground Installation of Polyvinyl Chloride PVC Pressure Pipe and Fittings for Water

*This standard describes underground installation and hydrostatic testing procedures for polyvinyl chloride (PVC) pressure pipe and fittings that comply with either ANSI/AWWA C900, ANSI/AWWA C905, ANSI/AWWA C907 or ANSI/AWWA C909.*

### ANSI/AWWA C606-2006, Grooved and Shouldered Joints

*This standard describes grooved and shouldered joints for ductile-iron pipe, metallic pressure pipe of iron pipe size, and fittings, and other components for water service.*

### ANSI/AWWA C651-2005, Disinfecting Water Mains

*This standard describes essential procedures for the disinfection of new and repaired potable water mains. New water mains shall be disinfected before they are placed in service. Water mains taken out of service for inspection, repair, or other activities that might lead to contamination of water shall be disinfected before they are returned to service.*

### ANSI/AWWA C652-2002, Disinfection of Water-Storage Facilities

*This standard for disinfection of water-storage facilities covers materials, facility preparation, application of disinfectant to the facilities' interior surfaces, and sampling and testing for the presence of coliform bacteria. The standard also includes disinfection procedures for underwater inspection of on-line potable water storage facilities but does not cover the technical aspects of underwater inspection. All new storage facilites shall be disinfected before they are placed in service. All storage facilities taken out of service for inspecting, repairing, painting, cleaning, or other activity that might lead to contamination of water shall be disinfected before they are returned to service."This standard for disinfection of water-storage facilities covers materials, facility preparation, application of disinfectant to interior surfaces of facilities, and sampling and testing for the presence of coliform bacteria"*

ANSI/AWWA C653-2002, Disinfection of Water Treatment Plants

*This standard covers chlorination materials, procedures, and requirements for disinfection of new treatment facilities and existing water treatment facilities temporarily taken out of service for cleaning, inspection, maintenance, painting, repair, or any other activity that might lead to contamination of water.*

ANSI/AWWA C654-2003, Disinfection of Wells

*Covers the procedures for shock chlorination and bacteriological testing for the disinfection of wells for potable water service. These procedures shall be followed prior to using any new or existing well for potable water service if the well may have been contaminated as a result of construction, servicing, or maintenance.*

ANSI/AWWA C700-2002, Cold-Water Meters – Displacement Type, Bronze Main Case

*This standard covers the various types and classes of cold-water displacement meters with plastic main cases, in sizes ½ in. (13 mm) through 2 in. (50 mm), and the materials and workmanship employed in their fabrication.*

ANSI/AWWA C701-2007, Cold Water Meters – Turbine Type for Customer Service

*This standard describes the various classes of cold-water turbine meters in sizes ¾ in. (20 mm) through 20 in. (500 mm) for water supply customer service, mainline metering, and custody transfer of water among purveyors, and the materials and workmanship employed in their fabrication.*

ANSI/AWWA C702-2001, Cold Water Meters – Compound Type

*Covers the various types and classes of cold-water compound-type meters in sizes 2 in. (50 mm) through 8 in. (200 mm) and the materials and workmanship used in their fabrication. Compound meters shall consist of a combination of a turbine-type, main-line meter for measuring high rates of flow and a bypass meter of an appropriate size for measuring low rates of flow. The compound meter shall have an automatic valve mechanism for diverting low rates of flow through the bypass meter.*

ANSI/AWWA C703-1996 (R2004), Cold Water Meters – Fire Service Type

*Covers the various types and classes of cold-water fire-service-type meters in sizes 3 in. (75 mm) through 10 in. (250 mm) and the materials and workmanship used in their fabrication.*

ANSI/AWWA C704-2002, Cold-Water Meters – Propeller Type for Main Line Applications

*This standard covers the various types and classes of propeller meters in sizes 2 in. (50 mm) through 72 in. (1,800 mm) for waterworks applications. These meters register by recording the revolutions of a propeller set in motion by the force of flowing water striking the blades.*

ANSI/AWWA C706-96 (R2005), Direct-Reading Remote-Registration Systems for Cold-Water Meters

*This standard covers direct-reading, remote-registration systems for use on cold-water meters for water utility customer service and the materials and workmanship employed in the fabrication and assembly of these systems.*

ANSI/AWWA C707-2005, Encoder-Type Remote-Registration Systems for Cold-Water Meters

*This standard covers encoder-type remote registration systems for use on cold-water meters for water-utility customer service, particularly the materials and workmanship employed in the fabrication and assembly of the on-meter registers.*

ANSI/AWWA C708-2005, Cold-Water Meters - Multijet Type

*This standard describes cold-water, multijet meters in sizes 5/8 in. (15 mm) through 2 in.(50 mm) for water utilities' customer service and the materials and workmanship employed in their fabrication. These meters register by recording the revolutions of a rotor set in motion by the force of flowing water striking the blades.*

ANSI/AWWA C710-2002, Cold Water Meters – Displacement Type – Plastic Main Case

*This standard covers the various types and classes of cold-water displacement meters with plastic main cases, in sizes ½ in. (13 mm) through 1 in. (25 mm), for water utility customer service and the materials and workmanship employed in their fabrication.*

ANSI/AWWA C712-2002, Cold-Water Meters - Singlejet Type

*This standard describes the various types and classes of cold-water, singlejet meters in sizes 1½ in. (40 mm) through 6 in. (150 mm) for water utilities' customer service and the materials and workmanship employed in their fabrication. These meters register by recording the revolutions of rotor set in motion by the force of flowing water striking the blades.*

ANSI/AWWA C713-2005, Cold-Water Meters - Fluidic Oscillator Type

*This standard describes cold-water fluidic oscillator meters with brass main cases in sizes ½ in. (13 mm) through 2 in. (50 mm), and the materials and workmanship employed in their fabrication. The basis for volume measurement is a transducer element that senses and utilizes fluidic oscillation rather than a moving measurement element as required in traditional cold-water volumetric meters.*

ANSI/AWWA C750-2003, Transit-Time Flowmeters in Full Closed Conduits

*Describes transit-time ultrasonic flowmeters for water supply service application.*

ANSI/AWWA C800-2005, Underground Service Line Valves and Fittings

*This standard covers valves, fittings, service saddles, and meter setters for use in service line from the main through the meter valve or meter setting appurtenance. Valves, fittings, service saddles and meter setters covered in this standard include 1/2 in. (12.7 mm) through 2 in. (50.8 mm.*

ANSI/AWWA C900-1997, Polyvinyl Chloride (PVC) Pressure Pipe, 4 Inch through 12 Inch for Water Distribution

*Covers 4-in through 12-in (100-mm through 300-mm) polyvinyl chloride (PVC) pressure pipe and fabricated fittings with cast-iron-pipe-equivalent (C) outside diameter (OD) dimensions and with wall thickness dimension-ratios (DRs) 14, 18, and 25.*

ANSI/AWWA C901-2002, Polyethylene (PE) Pressure Pipe and Tubing, 1/2 in (13 mm) through 3 in (76 mm), for Water Service

*This standard covers polyethylene (PE) pressure pipe and tubing made from material having standard PE and designations PE 2406, PE 3406, and PE 3408 and primarily intended for use in the transportation of water and other liquids.*

ANSI/AWWA C903-2005, Polyethylene-Aluminum-Polyethylene & Crosslinked Polyethylene-Aluminum-Crosslinked Polyethylene Composite Pressure Pipes, 1/2 In. (12 mm) Through 2 In. (50 mm), for Water Service

*This standard describes coextruded polyethylene (PE) composite pressure pipes with a welded aluminum tube reinforcement between the inner and outer layers of polyethylene, primarily for use as underground water service lines.*

ANSI/AWWA C904-2006, Cross-Linked Polyethylene Pressure Pipes, 1/2 In. (12 mm) Through 3 In. (76 mm) for Water Service

*This standard describes Cross-linked*

*Polyethylene (PEX) pressure pipe and tubing made from material having a standard PEX material designation code of PEX 1006 for use as underground water service lines in sizes ½ in. (12 mm) through 3 in. (76 mm) and conform to a standard dimension ratio of SDR9.*

ANSI/AWWA C905-1997, Polyvinyl Chloride (PVC) Water Transmission Pipe (Nominal Diameters 14-36 inches)

*Covers 14-in through 48-in (350 mm through 1200 mm) polyvinyl chloride (PVC) pressure pipe and fabricated fittings, with cast-iron-pipe equivalent (CI) and steel-pipe-equivalent (IPS) outside diameter (OD) dimensions, and with wall thickness dimension-ratios (DRs) 14, 18, 21, 25, 26, 32.5, 41, and 51.*

ANSI/AWWA C906-2007, PE Pressure Pipe & Fittings, 4" (100 mm) Through 63" (1600 mm), for Water Distribution and Transmission

*This standard describes polyethylene (PE) pressure pipe made from materials conforming to standard PE code designations PE 2406, PE 3406, and PE 3408. The pipe is primarily intended for use in transporting potable water in either buried or aboveground installations.*

ANSI/AWWA C907-2004, Injection-Molded Polyvinyl Chloride (PVC) Pressure Fittings, 4 In. to 12 In. for Water Distribution

*This standard describes Pressure Class 150 polyvinyl chloride (PVC) injection-molded fittings with push-on rubber-gasketed joints in nominal sizes 4 in. (100 mm), to 12 in. (300 mm). The fittings are for use with PVC water distribution pipe having an outside diameter conforming to the dimensions of cast-iron pipe, and with dimension ratios (DR) of 18 (Class 150) or 25 (Class 100) as described in ANSI/AWWA C900, Standard for Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 in. through 12 in., (100 mm through 300 mm) for Water Distribution.*

ANSI/AWWA C909-2002, Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe, 4 in. Through 12 in. (100 mm Through 300 mm), for Water Distribution

*This standard pertains to molecularly oriented polyvinyl chloride (PVCO) pressure pipe that is manufactured from starting stock pipe made from ASTM D1784 cell class 12454 masterial. The starting stock materials are then oriented through circumferential expansion to provide a hydrostatic design basis (HDB) of 7,100 psi (49.0 MPa). The pipe has cast-iron pipe-equivalent (CI) outside diameter (OD) dimensions and with wall thicknesses designed for pressure classes 100, 150, and 200 psi, in 4 in. through 24 in. Design considerations are provided in appendix A of this document.*

ANSI/AWWA C950-2007, Fiberglass Pressure Pipe

*This standard describes the fabrication and the testing of nominal 1-in. through 156-in (25 mm through 4,000 mm) fiberglass pipe and joining systems for use in both aboveground and belowground water systems. Service and distribution piping systems and transmission piping systems are included.*

ANSI/AWWA D100-2005, Welded Carbon Steel Tanks for Water Storage

*The purpose of this standard is to provide minimum requirements for the design, construction, inspection, and testing of new welded carbon steel tanks for the storage of water at atmospheric pressure.*

ANSI/AWWA D102-2006, Coating Steel Water - Storage Tanks

*This standard describes coating systems for coating and recoating the inside and outside surfaces of steel tanks used for potable water storage in water supply service. Coating systems for new bolted steel tanks are not described in this standard (see ANSI/AWWA/D103.*

ANSI/AWWA D103-1997, Water Storage, Factory-Coated Bolted Steel Tanks for

*Facilitates the manufacture, installation, and procurement of cylindrical bolted steel tanks for the storage of water.*

ANSI/AWWA D104-2004, Automatically Controlled, Impressed-Current Cathodic Protection for the Interior of Steel Water Tanks

*Describes impressed-current cathodic protection systems intended to minimize corrosion of submerged interior steel surfaces of water storage tanks and 30-in. (750-mm) diameter and larger wet risers of elevated tanks.*

ANSI/AWWA D110-2004, Wire-Wound, Circular Prestressed Concrete Water Tanks

*The intent of this standard is to describe current recommended practice for the design, construction, inspection, and maintenance of wire- and strand-wound, circular, prestressed concrete water-containing structures with the following four types of core walls: type I - cast-in-place concrete with vertical prestressed reinforcement; type II - shotcrete with a steel diaphragm; type III - precast concrete with a steel diaphragm; type IV - cast-in-place concrete with a steel diaphragm.*

ANSI/AWWA D115-2006, Standard for Circular Prestressed Concrete Water Tanks with Circumferential Tendons

*This standard describes current and recommended practice for the design, construction, and field observations of concrete tanks using tendons for prestressing. This standard applies to containment structures for use with potable water, raw water, or wastewater.*

ANSI/AWWA D120-2002, Thermosetting Fiberglass-Reinforced Plastic Tanks

*Covers the composition, performance requirements, construction practices and workmanship, design, and methods of testing thermosetting fiberglass-reinforced plastic (FRP) tanks for the storage of water or other liquids used in water supply service.*

ANSI/AWWA D130-2002, Flexible-Membrane-Lining and Floating-Cover Materials for Potable Water Storage

*Pertains to flexible-membrane materials supplied in sheet form for lining, covering, or lining and covering potable water reservoirs.*

ANSI/AWWA F101-2002, Contact Molded, Fiberglass Reinforced Plastic Washwater Troughs and Launders

*This standard covers the minimum requirements for glass-fiber molding process, including flatbottom, round-bottom, and V-bottom troughs and launders. Requirements are included for materials, properties, design, construction, dimensions, tolerances, workmanship, and appearance.*

ANSI/AWWA F102-2002, Matched-Die Molded, Fiberglass Reinforced Plastic Weir Plates, Scum Baffles, and Mounting Brackets

*This standard covers the minimum requirements for glass-fiber reinforced plastic weir plates, scum baffles, mounting brackets, lap plates, cover washers, and weir pans, fabricated with the matched-die molding process. Included are requirements are design, construction, dimensions, tolerances, physical properties, workmanship, appearance, and installation.*

ANSI/AWWA G100-2005, Water Treatment Plant Operation & Management

*This standard covers the critical requirements for the effective operation and management of drinking water treatment plants. For purposes of this standard, the drinking water treatment plant is defined as “a group or assemblage of structures, equipment, and processes that treat or condition a water supply, affecting the physical, chemical, or bacteriological quality of water distributed or otherwise offered to the public for domestic use by a public water system.*

ANSI/AWWA G200-2004, Distribution Systems Operation and Management

*This standard describes the critical requirements for the effective operation and management of drinking water distribution systems.*

## BHMA (Builders Hardware Manufacturers Association)

ANSI/BHMA A156.1-2006, Butts and Hinges

*This Standard establishes requirements for lightweight, standard weight, heavy weight and detention hinges. Cycle tests, lateral and vertical wear tests, friction tests, strength tests, finish tests, and material and dimensional requirements are included.*

ANSI/BHMA A156.10-2005, Power Operated Pedestrian Doors

*Requirements in this Standard apply to power operated doors for pedestrian use which open automatically when approached by pedestrians and some small vehicular traffic or by a knowing act. Included are provisions to reduce the chance of user injury or entrapment. Power operated doors for industrial or trained traffic are not covered in this Standard.*

ANSI/BHMA A156.11-2004, Cabinet Locks

*This standard establishes requirements for Cabinet Locks used on doors, drawers and furniture.*
*Cycle tests, operational tests, strength tests and finish tests are included.*

ANSI/BHMA A156.115-2006, Hardware Preparation for Steel Doors and Frames

*This standard covers all dimension factors significant in the mounting of (1) mortise locks in flush wood doors; and (2) mortise lock strikes in metal and wood door frames. 1.1.1 Lock preparations covered by this standard are intended for use in doors 1 ¾ inches (44.5mm) + 1/16 inch (1.6mm) in thickness.*

ANSI/BHMA A156.115-W-2006, Hardware Preparation for Wood Doors and Frames

*This Standard covers all significant dimensional attributes for mounting common hardware products in wood doors and frames. All dimensions shall be as shown on the accompanying drawings.*

ANSI/BHMA A156.12-2005, Interconnected Locks and Latches

*This Standard establishes requirements for Interconnected Locks and includes operational tests, strength tests, security tests, cycle tests, finish tests and dimensional criteria.*

ANSI/BHMA A156.13-2005, Mortise Locks and Latches

*This Standard establishes requirements for Mortise Locks and Latches and includes operational tests, security tests, cycle tests, finish tests, material evaluation tests and dimensional criteria.*

ANSI/BHMA A156.14-2002, Sliding and Folding Door Hardware

*This Standard establishes requirements for Sliding and Folding Door Hardware. Cycle tests, abuse, durability static load, smoothness, static friction, kinetic friction and finish tests are included. Hardware for light to very heavy doors is covered including both residential and industrial applications.*

ANSI/BHMA A156.15-2006, Release Devices - Closer Holder, Electromagnetic and Electromechanical

*This Standard establishes requirements for door closers combined with hold-open devices or free-swinging door closers combined with releasing devices and includes performance tests covering operational, cyclical and finish criteria. Tests described in this Standard are performed under laboratory conditions. In actual usage, results vary because of installation, maintenance and environmental conditions.*

ANSI/BHMA A156.16-2002, Auxiliary Hardware

*Establishes requirements for various types of auxiliary hardware and includes performance tests covering operational, cyclical, strength or finish criteria. A type numbering system is also provided.*

ANSI/BHMA A156.17-2004, Self-Closing Hinges and Pivots

*Establishes requirements for Self Closing Hinges & Pivots. Cycle tests, operational tests, finish tests, material and dimensional requirements are included.*

ANSI/BHMA A156.18-2006, Hardware – Materials and Finishes

*This Standard establishes finish test methods and code numbers for finishes on various base materials. It includes criteria for viewing comparative finishes to the BHMA match plates and establishes five categories of finishes.*

ANSI/BHMA A156.19-2002, Power Assist and Low-Energy Power-Operated Doors

*Requirements in this Standard apply to power assist doors, low energy power operated doors or low energy power open doors for pedestrian use, and some small vehicular use and not provided for in ANSI/BHMA A156.10 for Power Operated Pedestrian Doors. Included are provisions intended to reduce the chance of user injury or entrapment.*

ANSI/BHMA A156.2-2003, Bored and Preassembled Locks and Latches

*This Standard establishes performance requirements for bored and preassembled locks and latches, and includes cycle tests, strength tests, operational tests, security tests, material evaluation tests, finish tests, and dimensional criteria.*

ANSI/BHMA A156.20-2006, Strap and Tee Hinges, and Hasps

*This Standard establishes requirements for Strap Hinges, Tee Hinges, and Hasps, and includes performance tests covering operational and strength criteria. Tests described in this Standard are performed under laboratory conditions. In actual usage, results vary because of installation, maintenance and environmental conditions.*

ANSI/BHMA A156.21-2006, Thresholds

*This Standard establishes requirements for thresholds. Types are described with identifying numbers. Strength tests, fastening systems, and gasketing tests are included.*

ANSI/BHMA A156.22-2005, Door Gasketing and Edge Seal Systems

*This Standard establishes requirements for the performance and installation of gasketing systems including intumescents applied to, or mortised to doors, frames or both. Included are performance tests intended to provide installation guidelines, resistance to smoke and air infiltration, and measure the life and durability of gasketing materials.*

ANSI/BHMA A156.23-2004, Electromagnetic Locks

*establishes requirements for electromagnetic locks and includes cyclical, dynamic, operational, strength and finish tests. This product is used for access control.*

ANSI/BHMA A156.24-2003, Delayed Egress Locks

*This standard covers products used in connection with conventional exit devices or locks causing the doors to remain locked after releasing actuation for a predetermined length of time. Performance criteria are included for functional, cycle, operational, fail-safe and overload requirements.*

ANSI/BHMA A156.25-2002, Electrified Locking Devices

*Establishes requirements for electrified locking devices, which control door access. When the input or controlling device or both are an integral part of the locking device , they shall also be covered by this standard. This standard includes requirements for cyclical, security, operational, strength, environmental, and finish tests for these products.*

ANSI/BHMA A156.26-2006, Continuous Hinges

*This Standard establishes requirements for architectural continuous hinges used in building construction. Cycle, finish, abuse, overload, vertical wear, and strength tests are included.*

ANSI/BHMA A156.27-2003, Power and Manual Operated Revolving Pedestrian Doors

*Requirements in this standard apply to power operated revolving type doors which rotate automatically when approached by pedestrians, some small vehicular use, and manual revolving type doors for pedestrians. Included are provisions to reduce the chance of user injury and entrapment. Revolving doors for industrial or trained traffic are not covered in this Standard.*

ANSI/BHMA A156.28-2000, Recommended Practices for Keying Systems

*The scope of this recommended practice is limited to mechanical key bitting, cylinder pinning and multiplex key systems. The purpose of this document is to recommend the approach to selecting the optimal keying system, once the type of cylinder has been selected by other criteria. This recommended practice is not intended to provide sufficient information for a full understanding of master key systems.*

ANSI/BHMA A156.29-2001, Exit Locks, Exit Locks With Exit Alarms, Exit Alarms, Alarms for Exit Devices

*Establishes requirements for Exit Locks, and Exit Locks with Exit Alarms, Exit Alarms and Alarms for Exit Devices and includes operational and finish tests. Alarms for Exit Devices include operational tests only.*

ANSI/BHMA A156.3-2001, Exit Devices

*Establishes requirements for exit devices and trim, automatic and self-latching flush bolts, removable mullions, coordinators, and carry-open bars. Performance criteria include cycle, operational, strength, material evaluation, and finish tests. Functions and types are described and numbered.*

ANSI/BHMA A156.30-2002, Mortise Locks

*This standard includes security performance based requirements for both mechanical and electrified high security cylinders. For the purpose of this standard, High Security Cylinder includes mechanical lock cylinders, electromechanical cylinders, and the electronic lock sub assemblies that are analogous to the cylinder assemblies. Cylinders include their keys or electronic credentials; their detainers (mechanical pins, levers, discs) or electronic control device; and their cylinder tailpiece or cam or electronic output port.*

ANSI/BHMA A156.31-2001, Electric Strikes and Frame Mounted Actuators

*Establishes requirements for Electric Strikes and Frame Mounted Actuators, and includes operational and finish tests*

ANSI/BHMA A156.4-2000, Door Controls – Closers

*Contains requirements for door closers that are surface mounted, concealed in the door, overhead concealed, or concealed in the floor. Also included are pivots for floor closers. Criteria for conformance include cycle, operational, closing force and finish tests.*

ANSI/BHMA A156.5-2001, Auxiliary Locks and Associated Products

*Establishes requirements for Auxiliary Bored and Mortise Locks, Rim Locks, Cylinders and Push Button Mechanisms and includes security tests, operational tests, finish tests, and dimensional criteria. It also establishes requirements for Indexed Key Control Systems and includes operational and finish tests.*

ANSI/BHMA A156.6-2005, Architectural Door Trim

*This Standard contains requirements for door protection plates, door edgings, push plates, door pulls, push bars, and pull bars. Included are strength and finish tests, and dimensional and material criteria.*

ANSI/BHMA A156.7-2002, Template Hinge Dimensions

*Covers the requirements for the length, width, thickness, offset, and screw hole spacing for builders template hinges. Included in the standard are hinge identification symbols and screw sizes. Methods for identifying template hinges that conform to the Standard are provided.*

ANSI/BHMA A156.8-2005, Door Controls - Overhead Stops and Holders

*This Standard establishes requirements for overhead door stops and holders and includes performance tests covering operational, cyclical, strength and finish criteria.*
*Tests described in this Standard are performed under laboratory conditions. In actual usage, results vary because of installation, maintenance and environmental conditions.*

ANSI/BHMA A156.9-2003, Cabinet Hardware

*This Standard contains requirements for cabinet hardware and includes hinges, knobs, pulls, catches, shelf rests, standards and brackets, drawer slides, rotating shelves and track with guides for sliding panels. Included are performance tests covering operational, cyclical, strength, and finish criteria.*

## BICSI (Building Industry Consulting Service International)

## BIFMA (Business and Institutional Furniture Manufacturers Association)

ANSI/BIFMA X5.1-2002, Office Furnishings – General-Purpose Office Chairs – Tests

ANSI/BIFMA X5.3-1997, Files, Tests for Vertical

*Provides tests for vertical files.*

ANSI/BIFMA X5.4-2005, Standard for Office Furnishing - Lounge Seating - Tests

*The standard describes the means of evaluating lounge seatin, independent of construction materials, manufacturing progceese, mechanical designs or asthetic designs. The standard defines specific tests, the laboratory equipment that may be used , the conditions of test and the mimimum acceptance levels to be used in evaluating lounge seating.*

ANSI/BIFMA X5.5-1998, Desk Products, Tests for

*Provides a common basis for evaluating the safety, durability, and structural adequacy of freestanding desk/table products (units). The standard defines tests used to determine the acceptability of the product and specifies the acceptance levels of performance. These tests are not intended to assess a product that has been in use.*

ANSI/BIFMA X5.6-2003, Office Furnishings – Panel Systems – Tests

*Provides performance and safety requirements for panel-supported office furniture systems as well as non-load bearing screen panels. Including modular systems and panel supported components such as work surfaces and storage units.*

ANSI/BIFMA X5.9-2004, Standard for Office Furniture Storage Units - Tests

*Performance and Safety requirements for Office Furniture Storage Units*

ANSI/BIFMA/SOHO S6.5-2001, Small Office/Home Office Furniture -Tests

*Provides performance and safety requirements for storage and desking furniture intended for use in the small office and/or home office applications.*

## BOMA (Building Owners and Managers Association)

## CAGI (Compressed Air and Gas Institute)

ANSI/CAGI ADF 100-1998, Pneumatic Fluid Power – Compressed Air Dryers – Methods for Rating and Testing

*This standard includes standard rating conditions of inlet temperature, ambient temperature, cooling water temperatures, inlet pressure dew point, operating pressure, outlet pressure dew point and pressure drop to enable a compressed air dryer to be classified; Test procedure for measuring performance to determine the capabilities; and provides basis on which to rate and measure the performance of compressed air dryers.*

ANSI/CAGI ADF 100-1998, Pneumatic Fluid Power – Compressed Air Dryers – Methods for Rating and Testing

*This standard includes standard rating conditions of inlet temperature, ambient temperature, cooling water temperatures, inlet pressure dew point, operating pressure, outlet pressure dew point and pressure drop to enable a compressed air dryer to be classified; Test procedure for measuring performance to determine the capabilities; and provides basis on which to rate and measure the performance of compressed air dryers.*

ANSI/CAGI ADF 300-1998, Single Tower (Non-Regenerative) Desiccant Compressed Air Dryers - Methods for Testing and Rating

*Includes testing conditions and performance measurements to be used for rating single tower (non-regenerative) desiccant compressed air dryers and their corresponding desiccants; test procedures and reference conditions for measuring performance to determine the capabilities of single tower (non-regenerative) desiccant compressed air dryers and their corresponding desiccants. This standard also provides a uniform basis of measuring the performance of single tower (non-regenerative) desiccant compressed air dryers and the corresponding desiccants and a uniform basis on which to rate single tower (non-regenerative) desiccant compressed air dryers and their corresponding desiccants.*

ANSI/CAGI ADF 400-1999, Testing and Rating Coalescing Filters

*Specifies the test layout and test procedures for testing coalescing filters used in industrial air systems.*

ANSI/CAGI ADF 500-1998, Measurement of Absorbtion Capacity of Oil Vapor Removal Absorbent Filters

*Specifies the test layout and test procedures required for testing hydrocarbon vapor absorbent filters used in industrial compressed air systems. The procedures cover the testing of granular absorbent filters and those constructed using paper, felt and cloth absorbents.*

ANSI/CAGI ADF 700-1998, Membrane Compressed Air Dryers - Methods for Testing and Rating

*Includes testing conditions and performance measurements to enable a membrane compressed air dryer to be rated. Test procedures and reference conditions for measuring performance to determine the capabilities of membrane compressed air dryers. This standard provides a uniform basis of measuring the performance of membrane compressed air dryers. A uniform basis on which to rate the performance of membrane compressed air dryers.*

ASME B19.1-1995, Safety Standard for Air Compressor Systems

*Addresses all aspects of air compressor systems, from the entrance to the inlet device, through the compressor and associated heat exchangers, dryers, and pulsation suppression devices, to the point of entry to the distribution system.*

ASME B19.3-1991, Safety Standard for Compressors for Process Industries

*Covers the requirements for safety devices and protective facilities to prevent compressor accidents as a result of excessive pressure, destructive mechanical failures, internal fires or explosions, and leakage of toxic or flammable fluids. General safety practices and hazards unique to compressors are also covered.*

ASME B19.3a-1994, Safety Standard for Compressors for Process Industries

ASME B19.3b-1995, Safety Standard for Compressors for Process Industries

## CAP (College of American Pathologists)

ANSI/CAP SNOMED-1-2003, Healthcare Terminology Structure

*Healthcare Terminology Structure is proposed to become the ANSI standard for the delivery of healthcare terminology, which uses numeric identifiers, provides multiple descriptions for each concept, and supports semantic relationships between concepts, with description logic foundation and a structure for inclusion of multiple languages and dialects. This proposed standard contains substantive changes to the earlier proposed standard SNOMED CT Structure.*

## CAPA (Certified Automotive Parts Association)

## CCPA (Cemented Carbide Producers Association)

ANSI B212.1-2002, Carbide Blanks, Brazed and Solid Single-Point Tools

*Covers designations, shapes, and dimensional specifications of carbide blanks and single point carbide tools.*

ANSI B212.10-2000, Cutting Tools – Precision Indexable Insert Cartridges

*Covers dimesional specifications, styles and designations of cartridges for indexable inserts.*

ANSI B212.10-2000, Cutting Tools - Precision Indexable Insert Cartridges - Type A

*Covers dimesional specifications, styles and designations of cartridges for indexable inserts.*

ANSI B212.11-1988 (R2002), Cutting Tools – Indexable Insert Shank-Type Milling Cutters (Inch Series) – Designation

*Establishes a code of indexable insert shank-type milling cutters designed in U.S. customary inch units for the purpose of simplifying orders and referencing specifications.*

ANSI B212.12-1991 (R2002), Turning Tools – Commonly Used Indexable Inserts

*Covers dimensional specifications and styles of indexable inserts commonly, but not exclusively used in turning.*

ANSI B212.12.1-1995 (R2002), Indexable Screw-On Inserts with Partly Cylindrical Fixing Holes Commonly Used for Turning

*Covers dimensional specifications and styles of indexable screw-on inserts commonly, but not exclusively used for turning.*

ANSI B212.13-1979 (R2002), Roller Turner Type Cutting Tools, Single Point

*Covers the dimensional envelope for various styles of single-point roller-turner tools covering brazed, solid, or indexable insert types.*

ANSI B212.14-2002, Carbide Seats Used with Indexable Inserts for Pin Lock-Type Holders

*Covers dimensional specifications and styles for negative rake pin lock-type holders. The values stated in U.S. customary units are to be regarded as the standard.*

ANSI B212.15-1994 (R2005), Cuttting Tools - Carbide-Tipped Masonry Drills & Blanks for Carbide Masonary Drills

*Covers dimensional specifications and designations for carbide-tipped masonry drills, blanks for carbide-tipped masonry drills, and blanks for rotary hammer drills.*

ANSI B212.16-2000 (R2005), Cutting Tools - Blanks for Carbide Tools

*Covers dimensional specifications and designations for stnard blanks for carbide burrs.*

ANSI B212.17-1995 (R2002), Cutting Tools – Bore Type Milling Cutters (Inch Series) – Designation

*Establishes a code for the designation of indexable insert bore type milling cutters in the U.S. customary inch units for the purpose of simplifying orders and referencing specifications.*

ANSI B212.18-2002, Inch Boring Bars for Indexable Inserts – Designation and Dimensions

*Covers dimensional specifications, styles, and designations of boring bars for indexable inserts.*

ANSI B212.19-1996 (R2002), Cutting Tools – Designation System for Extra Hard Cutting Surfaces, Bonded to Indexable Inserts and Other Carriers

*Covers the didentification system for indexable-type inserts for both single-point cutting tools and multi-point cutting tools.*

ANSI B212.1a-1990 (R2002), Carbide Tips for Brazing on Turning Tools

*Presents the dimensions of carbide tips for turning tools intended to be fixed on the shanks of tools by brazing. It is the identical equivalent to International Standard ISO 242.*

ANSI B212.2-1984 (R1999), Carbide Seats Used with Indexable Inserts for Clamp Type Holders

*Covers dimensional specs and styles of solid sintered carbide seats excluding seats used in conjunction with insers that are locked by a pin.*

ANSI B212.20-1980 (R2002), Carbide Chip Breakers Used with Indexable Inserts for Clamp Type Holders

*Covers dimensional specifications and syles of solid sintered carbide chip breakers.*

ANSI B212.3-2002, Cutting Tools – Precision Holders for Indexable Inserts

*Covers dimensional specifications, styles, and designations of precision holders for indexable inserts.This standard covers dimensional specifications, styles, and designations of precision holders for indexable inserts. This standard was listed for public review in the 1/28/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI B212.4-2002, Cutting Tools – Indexable Inserts – Identification

*Covers the identification system for indexable-type inserts for both single-point and multiple-point cutting tools such as milling cutters.*

ANSI B212.5-2002, Metric Holders for Indexable Inserts

*Covers dimensional specifications, styles, and designations of metric holders for indexable inserts.*

ANSI B212.7-1993 (R1999), Cutting Tools – Threaded Fasteners Used in the Carbide Tooling Industry

*Incorporates dimensional specifications, styles, etc. of threaded screw products used in the carbide tooling industry for mechanical clamping, locating, and adjusting purposes.*

ANSI B212.8-2002, Cutting Tools – Carbide Blanks for Twist Drills, Reamers, End Mills, and Random Rod

*Covers dimensional specifications and designations for carbide blanks for twist drills, reamers, end mills, and random rod.*

ANSI B212.9-1994 (R2005), Cutting Tools - Carbide Blanks for Tipping Circular Saws

*Covers dimensional specifications and designation for carbide blanks for tipping circular saws. The values stated in US customary units are to be regarded as the standard.*

ANSI/ISO 513-2005, Classification and application of hard cutting materials for metal removal with defined cuttting edges - Designation of the main groups and groups of application

*This International Standard specified the classification and application of ahrd cutting materials including hard metals (carbides), ceramics, diamond and boron nitride, for machinig by chip removal, and esablishes heir application. It is not applicable for other uses, like mining and other percussion tools, wire-drawing dies, tools operating by deformation of hte metal, comparator contact tips, etc.*

ANSI/ISO 5609-2004, Boring bars for indexable inserts - Dimensions

*This International Standard specifies the general dimensions of solid steel boring bars with cylindrical shank for indexable inserts, and specifies preferred boring bars.*

ANSI/ISO 6462-1983 (R2002), Face Milling Cutters with Indexable Inserts – Dimensions

*Lays down the dimensions of face milling cutters with indexable inserts. The form and dimensions of the inserts are left to the choice of the manufacturers.*

ANSI/ISO 6986-1983 (R2002), Side and Face Milling (Slotting) Cutters with Indexable Inserts – Dimensions

*Specifies the dimensions of side and face milling (slotting) cutters with indexable inserts.*

ANSI/ISO/IEC 11529-1-2004, Milling cutters - Designation - Part 1: Shank type end mills of solid or tipped design

*This part of ISO 11529 establishes a designation system for shank type end mills of solid or tipped design with a maximum diameter of 99.9mm, with the purpose of simplifying communication between users and sppliers*

ANSI/ISO/IEC 11529-2-2004, Milling cutters - Designation - Part 2 - Shank type and bore type milling cutters with the indexable inserts

*This part of ISO 11529 establishes a designation system for shank type and bore type milling cutters embodying hardmaterial indexable inserts, witht the purpose of simplifying communication between users and suppliers of such tools.*

## CEA (Consumer Electronics Association)

ANSI/CEA 2003-C-2007, Digital Audiobook File Format and Player Requirements

*CEA-2003-C defines requirements and provides recommendations to publishers, software developers, content providers, and hardware manufacturers for the data structure, usability requirements, playback systems and delivery systems for audiobooks in digital file format. It should be noted that throughout CEA-2003-C, the term audiobook is defined as any audio file or collection of audio files of primarily spoken word content that is played in a linear order.*

ANSI/CEA 2005-2006, AV Adapter to Connect Ethernet and 1394 Devices

*The Adapter project is intended to provide seamless connectivity between 1394 C/CE devices and DLNA devices. The Adapter will act as a Proxy between the two interfaces, exposing the devices on the opposite network as if they were on the same network.*

ANSI/CEA 2009-A-2005, Performance Specification for Public Alert Receivers

*Defines minimum performance criteria for consumer electronic products designed to receive SAME alert signals broadcast by the National Oceanic and Atmospheric Administration's Weather Radio network and Environment Canada's Meteorological Services of Canada Radio network. This standard does not apply to receivers not equipped to receive SAME messages (e.g., tone-alert receivers.*

ANSI/CEA 2010-2006, Standard Method of Measurement for Powered Subwoofers

*This standard defines a method for measuring the audio performance of powered subwoofers.*

ANSI/CEA 2012-A-2006, MOST Network Gateway for Aftermarket Products

*CEA-2012-A defines the requirements for implementing an aftermarket network based on the Media Oriented Systems Transport (MOST®) specification. CEA-2012-A documents the subset of requirements needed to create an aftermarket MOST network that can be used independent of any vehicle network and can also be connected to a factory-installed network if the vehicle manufacturer chooses to provide a gateway function. CEA-2012-A provides an overview of the requirements. Specific implementations need to be developed using the detailed MOST specifications.*

ANSI/CEA 2014-2006, Web-based Protocol and Framework for Remote User Interface on UPnP Networks and the Internet (Web4CE)

*This standard defines the necessary mechanisms to allow a user interface to be remotely displayed on and controlled by devices or control points other than the one hosting the logic. The basic device operations are based on the UPnP Device Architecture v1.0 for UPnP networks and UPnP devices in the home.*

ANSI/CEA 2027-A-2006, A User Interface Specification for Home Networks Using Web-based Protocols

*This CEA standard defines a user-to-machine interface method allowing a source of home-network services, such as a cable or terrestrial set-top box, digital VCR, or DTV, to utilize the presentation capabilities in a network-attached renderer such as a DTV display or PC. The method defined here enables user control of networked devices (either local to the user or remote) via another device's (e.g., DTV or PC) web browser graphical user interface (GUI.*

ANSI/CEA 2028-2005, Color Codes for Outdoor TV Receiving Antennas

*This standard defines color codes to be associated with minimum performance parameters of outdoor television (TV) receiving antennas. This standard applies only to devices that can be connected to a transmission line for purposes of converting an electromagnetic wave propagating in free space to a radiofrequency voltage. Couplers and distribution components that are not permanently integrated with an antenna are not covered by this standard.*

ANSI/CEA 2030-2005, Multi Room Audio Cabling Standard

*This standard defines cabling and connectors for use in distributing analog and digital audio signals throughout a home.*

ANSI/CEA 2032-2005, Indoor TV Receiving Antenna Performance Standard

*This standard defines test and measurement procedures for determining the performance of indoor TV receiving antennas. It replaces CEA CEB7, TV Receiving Antenna Manufacturers Guide to Indoor Antennas for Use with the CEA Indoor TV Antenna Certification Program.*

ANSI/CEA 426-B-1998 (R2005), Loudspeakers, Optimum Amplifier Power

*This standard defines test methods and criteria of acceptability for testing the performance of a loudspeaker or loudspeaker system designed for consumer use within defined limits in the areas of power compression, harmonic distortion, and accelerated life testing, when operated at or below the optimum amplifier power.*

ANSI/CEA 556-B-1999, Electronics – Outer Shipping Container Bar Code Label Standard

*This document provides instructions for producing and applying labels containing bar code symols or labels containing bar code and two-dimensional symbols on outer shipping containers. A brief description of the integration of Electronic Data Interchange (EDI) and ar codes in a distribution environment is included. Both labels and direct marking methods are covered in this standard under the general term "label."*

ANSI/CEA 600.10-2000, Introduction to the CEBusR Standard

*Comprises Section 1 of the complete EIA-600 standard and is intended to provide a general introduction to the entire standard. The complete set of documents that comprise EIA-600 provide the necessary specifications for the Consumer Electronic Bus (CEBusR) standard, a local communications and control network designed specifically for the home. The EIA-600 network provides a standardized communication facility for exchange of control information and data among devices and services in the home. To obtain an electronic draft: Email Shazia Azhar: shaziaa@eia.org*

ANSI/CEA 600.31-1997 (R2004), Power Line Physical Layer and Medium Specification

*preliminary specification for the CEBus Power Line (PL) Physical Layer and Media portion of the Physical Layer and Media Specifications of EIA-600. Its purpose is to present the information necessary for the development of a PL physical network and devices to communicate and share information over the network. This is one of a series of documents covering the various media that comprise the CEBus standard*

ANSI/CEA 600.32-1997 (R2004), Twisted Pair Physical Layer and Medium Specification

*specification for the CEBus Twisted Pair (TP) Physical Layer and Medium. Its purpose is to present all the information necessary for the development of a TP physical network and devices to communicate and share information over that network in an orderly manner. This is one of a series of documents covering the various media that comprise the CEBus standard*

ANSI/CEA 600.33-1997 (R2004), Coax Cable Physical Layer and Medium Specification

*preliminary specification for the CEBus Coax (CX) Physical Layer and Medium. Its purpose is to present all the information necessary for the development of a CX physical network and devices to communicate and share information over that network in an orderly manner. This is one of a series of documents covering the various media that comprise the CEBus standard*

ANSI/CEA 600.34-1997 (R2004), Infrared Physical Layer and Medium Specification

*preliminary specification for the CEBus Infrared (IR) Physical Layer and Medium portion of the Physical Layer and Medium specifications of EIA-600. Its purpose is to present all the information necessary for the development of a IR physical network and devices to communicate and share information over that network to and from IR and other CEBus media in an orderly manner. This is one of a series of documents covering the various media that comprise the CEBus standard*

ANSI/CEA 600.35-1997 (R2004), RF Physical Layer and Medium Specification

*preliminary specification for the CEBus Radio Frequency (RF) Physical Layer and Medium portion of the Physical Layer and Medium specifications of EIA-600. Its purpose is to present all of the information necessary for the development of a RF physical layer for the CEBus device. This is one of a series of documents covering various media that comprise the CEBus standard*

ANSI/CEA 600.37-1997 (R2004), Symbol Encoding Sublayer

*describes the portion of the Node Physical Layer that interfaces to the Medium Access Control (MAC) Sublayer and to Layer System Management (LSM). This sublayer is called the Symbol Encoding (SE) Sublayer*

ANSI/CEA 600.38-1997 (R2004), Power Line/RF Symbol Encoding Sublayer

*describes the portion of the Power Line or RF Physical Layer that interfaces to the Medium Access Control (MAC) Sublayer and to Layer System Management (LSM). This sublayer is called the Power Line/RF Symbol Encoding (PL/RF SE) Sublayer*

ANSI/CEA 600.41-1997 (R2004), Description of the Data Link Layer

*provides a prose description of the Data Link Layer Design for the CEBus Network. The intent of is to be descriptive, rather than provide a formal specification, and contains a discussion of the Data Link Layer interfaces to the Network Layer and Physical Layer, as well as a functional description of the Data Link Layer*

ANSI/CEA 600.42-1997 (R2004), Node Medium Access Control Sublayer

*This part of the CEBus standard technical specification of the services and protocol for the Node Medium Access Control Sublayer*

ANSI/CEA 600.43-1997 (R2004), Node Logical Link Control Sublayer

*This part of the CEBus standard technical specification of the services and protocol for the Node Logical Link Control Sublayer*

ANSI/CEA 600.81-1997 (R2004), Common Application Language (CAL) Specification

*describes the basic framework of CAL. It is intended as an introduction to CAL operation and syntax that stresses the object-oriented aspects of CAL. It is believed that the object-oriented methodology offers the best means of understanding the complex interaction between devices, controls, and controllers present in the CEBus environment*

ANSI/CEA 600.82-1997 (R2004), CAL Context Description

*describes the contexts, or main subsystems within a device, supported by the Common Application Language (CAL*

ANSI/CEA 621-A-2004, Electronic Industries Association – Consumer Electronics Group Product and Packaging Bar Code Standard

*Assists manufacturers of consumer electronic products in properly applying bar code symbols to products that will move through the retail channel of distribution to the ultimate consumer. The Universal Product Code (UPC) and the International Article Numbering Association (EAN), bar code symbols are being accepted worldwide for point-of-sale data capture by retailers. These bar codes uniquely identify the manufacturer and the product at the stock keeping unit (SKU) level.*

ANSI/CEA 633.31-2000, Power Line Physical Layer Conformancce

*Specifies tests to determine conformance of a Node's Power Line Physical Layer to EIA-600.31. This standard was first listed in the May 23, 1997, June 5, 1998, and March 12, ¹999 issues of Standards Action. It is being resubmitted due to substantive changes to the text. To obtain an electronic draft: shaziaa@eia.org.*

ANSI/CEA 633.32-1997 (R2004), CEBus Twisted Pair Physical Layer Conformance

*specifies tests to determine conformance of a device's Twisted Pair Physical Layer to EIA-600*

ANSI/CEA 633.34-1997, CEBus Infrared Physical Layer Conformance

*Specifies the tests necessary to determine conformance of a Node's IR Physical Layer to IS-60.*

ANSI/CEA 633.37-1997 (R2004), CEBus Symbol Encoding Sublayer Physical Layer Conformance

*specifies tests to determine conformance of a Node's Symbol Encoding Sublayer to EIA-600*

ANSI/CEA 633.38-1997 (R2004), CEBus PL and RF Symbol Encoding Sublayer Physical Layer Conformance

*specifies tests to determine conformance of a Node's Power Line or RF Symbol Encoding Sublayer to EIA-600*

ANSI/CEA 633.42-2000 (R2006), Node Data Link Layer Conformance

*This portion of the conformance standard specifies tests to determine conformance of a Node's Data Link Layer to IS-60.*

ANSI/CEA 633.81-2000, Common Application Language Conformance

*Specifies tests to determine conformance of a Node's CAL to EIA-600.81. This standard was first listed in the May 23, 1997 and March 12, 1999 issues of Standards Action. It is being resubmitted due to substantive changes to the text. To obtain an electronic draft: shaziaa@eia.org.*

ANSI/CEA 706-1997, Component Marking Standard

*Describes the requirements for using formatted two dimensional machine readable symbols for the marking of electronic components of first level assemblies.*

ANSI/CEA 709.1-B-2002, Control Network Protocol Specification

*(SP-4997) This specification applies to a communication protocol for networked control systems. The protocol provides peer-to-peer communication for networked control and is suitable for implementing both peer-to-peer and master-slave control strategies. This specification describes services in layers 2-7.*

ANSI/CEA 709.2-A-2000 (R2006), Control Network Powerline (PL) Channel Specification

*This specification contains all the information necessary to facilitate the exchange of data and control information over the power line medium within a home.*

ANSI/CEA 709.3-1999 (R2004), Free-Topology Twisted-Pair Channel Specification

*defines the free topology twisted pair channel and acts as a companion document to CEA-709.1*

ANSI/CEA 709.4-2000, Fiber Optic Channel Standard

*Specifies the physical layer (OSI Layer 1) requirements for the EIA-709.4 fiber optic channel, which encompasses the interface to the Media Access Control (MAC) layer and the interface to the medium.*

ANSI/CEA 721.1-1999 (R2004), Generic CAL Specification - Generic CAL Syntax, Methods, and Objects

*Describes the basic framework of Generic CAL. It is intended as an introduction to Generic CAL operation and syntax that stresses the object-oriented aspects of Generic CAL. It is believed that the object-oriented methodology offers the best means of understanding the complex interaction between devices, controls, and controllers present in a Generic Network environment*

ANSI/CEA 721.2-1999 (R2004), Generic CAL Context Description Specification

*Describes the contexts, or main subsystems within a device, supported by the Generic Common Application Language (Generic CAL)*

ANSI/CEA 721.3-1999 (R2004), Node Application Layer Specification

*This Application Layer consists of four main elements. The application Process interface to the Application Layer. Services are provided by the Generic Common Application Language (Generic CAL) Element to the User Element of the Application Process. Generic CAL language framework through which Resource Allocation and Control functions are executed. Services are provided by the Message Transfer Element to the Generic CAL Element. The Message Transfer Element interfaces to the lower layers of the Generic Network either directly or through the Association Control Element. The lower layers are representative of some home automation networks. Additional OSI layers may be included. An adaptation layer may be required between the Generic CAL Application Layer and the Generic Network lower layers*

## ANSI/CEA 721.4-1999 (R2004), Generic CAL Quality of Service

*This specification for Generic CAL consists of an Application Layer containing a command language and a Message Transfer Service Element. The specifications of the lower OSI layers are not within the scope of this standard. However, the services provided by the lower layers affect the performance and composition of messages issued from the Application Layer. These lower layer service options are collectively called the Quality-of-Service (QOS) available from the communications protocol. This portion of EIA-721 standard describes the lower layer QOS options that may impact the Application Layer. Recommended capabilities are specified. Also, a mechanism to convey these options to the Generic CAL Application Layer using Layer System Management functions is presented*

## ANSI/CEA 776.1-1999, Description of the CEBus-EIB Router

*A copy of this draft standard may be obtained via E-mail at shaziaa@eia.org.*

*Describes the operation of a CEBus-EIB Router. This document is not intended to define how a router should operate, but to provide an overview of the operation and the coordination of various router elements.*

## ANSI/CEA 776.2-1999, CEBus-EIB Router Medium Access Control Sublayer

*A copy of this draft standard may be obtained via E-mail at shaziaa@eia.org.*

*The CEBus-EIB Router Medium Access Control (MAC) Sublayer is almost identical to the CEBus or EIB Node MAC Sublayer corresponding to the "CEBus side" or the "EIB side" of the Router. The differences are in the way the Router does address matching on a received packet and on the information exchanged in some of the service primitives. Rather than copy the Node MAC specification here and make minor changes, the Router MAC is specified by exception to the Node MAC for both the CEBus and EIB specifications. The reader should have a clear understanding of the Node MAC and Logical Link Control (LLC) Sublayers before reading this specification. A prose description of the CEBus Node MAC and LLC is contained in*

## ANSI/CEA 776.3-1999, CEBus-EIB Router Logical Link Control Sublayer

*A copy of this draft standard may be obtained via E-mail at shaziaa@eia.org.*

*This section specifies the CEBus-EIB Router Logical Link Control Sublayer interfaces to the Router Network Layer and to the Layer System Management. The interfaces are described in terms of service primitives, which are abstract interfaces across a layer boundary. A service primitive represents an exchange of information into or out of a layer. Although service primitives are defined using a format similar to that of programming language procedure calls, no implementation technique is implied.*

## ANSI/CEA 776.4-1999, CEBus-EIB Router Network Layer

*A copy of this draft standard may be obtained via E-mail at shaziaa@eia.org.*

*Defines the inter-element interfaces of the CEBus-EIB Router Network Layer and the operation of each element. The CEBus-EIB Router Network Layer is conceptually divided into several elements, each performing distinct, well-defined services. Each element may be thought of as an independent process that communicates with the other elements and protocol layers through specified interfaces. Another part of this standard, Description of the CEBUS-EIB Router, BSR/EIA SP-4565, provides an overview of router operation, and should be read first.*

## ANSI/CEA 776.5-1999, The EIB Communications Protocol

*A copy of this draft standard may be obtained via E-mail at shaziaa@eia.org.*

*Describes the communications protocol of the EIB system. EIB is a control system for related applications in homes and buildings. The EIB system offers standardized basic and system components, e.g., Bus Coupling Units (BCU), Power Supply Units (PSU), Bus Interface Modules (BIM), Routers, and RS-232 data interfaces.*

## ANSI/CEA 844-2001, XML Encoding of Generic Common Application Language (CAL)

*Encodes Generic Common Application Language (CAL) into XML.*

## ANSI/CEA 851-A-2006, Versatile Home Network

*This standard defines an IP-enabled network for connecting cluster networks to a whole-home broadband distribution backbone in order to facilitate integrated operation of appliances and networked components. The distribution network in this standard is based on IEEE 1394. This network will accommodate Ethernet as an attached network via a bridge, and directly with the introduction of IEEE 1394c. The network defined in this standard is called the Versatile Home Network (VHN Home Network). The VHN Home Network provides a flexible and open network architecture and.*

## ANSI/CEA 852-2002, Tunneling Component Network Protocols Over Internet Protocol Channels

*This standard specifies the method to use for IP tunneling with EIA/CEA-709.1B and ANSI/EIA-600.81.*

## ANSI/CEA 863-A-2005, Connection Color Codes of Home Theater Systems

*This standard defines the colors for marking connections commonly used for electronic devices in a home theater system. This standard adds continuity to installation information, and ensures consistency of information to installers.*

## ANSI/CEA 936-A-2006, USB Carkit Specification

*CEA-936-A defines a standard method for routing audio and Universal Asynchronous Receiver Transmitter (UART) signals through a USB receptacle on a phone to a USB analog carkit and to other accessories such as chargers and RS232 devices. This specification is intended for developers of On-The-Go (OTG) transceivers, cell phones, carkits, and car stereos.*

## CEMA (Conveyer Equipment Manufacturers Association)

ANSI/CEMA 102-2006, Conveyor Terms and Definitions

*CEMA is attempting to create a balanced list of voters for an upcoming ANSI Canvass. CEMA has added or revised approximately 88 conveyor terms and definitions and will publish a revision to the standard in 2006. In response to a previous pre-canvass interest survey, we have an excess of general interest voters. We need additional users and producers to balance the list. Please contact us if you are interested.*

ANSI/CEMA 300-2003, Screw Conveyor Dimensional Standards

*Establishes recommended dimensional standards for major screw conveyor components. All dimensions and tolerances are based on Carbon Steel Fabrication*

ANSI/CEMA 350-2003, Screw Conveyors for Bulk Materials

*Provides a common basis for selection and installarion of screw conveyors of standard sizes and capacities to handle the most commonly encountered bulk materials in commerce and industry.*

ANSI/CEMA 401-2003, Roller Conveyors Non-Powered

*Establishes nomenclature, certain minimum standards, and application guidelines for use in manufacturing and applying unit handling, non-powered, roller conveyors.*

ANSI/CEMA 402-2003, Belt Conveyors

*Establishes nomenclature, certain minimum standards, and application guidelines for use in manufacturing and applying unit handling, belt conveyors.*

ANSI/CEMA 403-2003, Belt Driven Live Roller Conveyors

*Establishes nomenclature, certain minimum standards, and application guidelines for use in manufacturing and applying unit handling, belt driven, live roller conveyors.*

ANSI/CEMA 404-2003, Chain Driven Live Roller Conveyors

*Establishes nomenclature, certain minimum standards, and application guidelines for use in manufacturing and applying unit handling, chain driven, live roller conveyors*

ANSI/CEMA 405-2003, Slat Conveyors

*Establishes nomenclature, certain minimum standards, and application guidelines for use in manufacturing and applying unit handling, slat conveyors.*

ANSI/CEMA 406-2003, Lineshaft Driven Live Roller Conveyors

*Establishes nomenclature, certain minimum standards, and application guidelines for use in manufacturing and applying unit handling, lineshaft driven, live roller conveyors.*

ANSI/CEMA 501.1-2003, Welded Steel Wing Pulleys, Specifications for

*Establishes load ratings, allowable variation from nominal dimensions, permissible crown dimensions and such overall dimensions as are normally necessary to establish clearances for location of adjacent parts.*

ANSI/CEMA 550-2003, Classification and Definitions of Bulk Materials

*Provides materials classifications with physical characteristics of each, hazards that affect conveyability, and suggested test procedures for new materials. Aids in establishment of design criteria for bulk conveying machinery and ancillary equipment.*

ANSI/CEMA B105.1-2003, Specifications for Welded Steel Conveyor Pulleys With Compression Type Hubs

*Establishes load ratings, allowable variation from nominal dimensions, permissible crown dimensions and such overall dimensions as are normally necessary to establish clearances for location of adjacent parts.*

## CFPMI (Cold Formed Parts & Machine Institute)

ANSI B154.1-2004, Rivet Setting Equipment, Safety Requirements for Construction, Care, and Use of

*The requirements of this Standard apply to powered machines designed to insert and clinch fasteners commonly called rivets. Special machines built by adapting rivet setting machines with special tooling and assembly machines, for example, rivet setting machines in combination with dial indexing machines, are included when the primary purpose is fastening. Rivet spinners, rivet guns, and similar fastener applicators are excluded.*

## CGA (Compressed Gas Association)

ANSI K61.1-1999, Safety Requirements for the Storage and Handling of Anhydrous Ammonia

*This standard applies to the design, construction, repair, alteration, location, installation and operation of anhydrous ammonia systems including refrigerated ammonia storage systems. This standard does not apply to ammonia manufacturing plants. It does not apply to refrigeration systems where ammonia is used solely as a refrigerant, ammonia transportation pipelines, or ammonia barges and tankers.*

ANSI/CGA G-13-2006, Storage and Handling of Silane and Silane Mixtures

*Describes storage and handling of silane and silane mixtures including practical methods applicable for silane manufacturers, suppliers and end users. G-13 addresses cylinder and bulk silane delivery systems for the semiconductor user community; including storage and handling at the user site and guidelines for the interconnecting piping system up to the distribution piping in the manufacturing facility. Setback distances are recommended based on heat radiation as well as overpressure produced by blast effects due to delayed ignition.*

ANSI/CGA P-18-2006, Standard for Bulk Inert Gas Systems, 3rd edition

*Large industrial and institutional users of argon, nitrogen, and helium need storage units on their premises with greater capacity than that provided by manifolded cylinders. These bulk supply systems are an assembly of storage containers, pressure regulators, pressure relief devices, vaporizers, manifolds, and interconnecting piping. The inert gases are stored as gas or liquid in either stationary or portable containers. The bulk system terminates at the point where gas at service pressure enters the supply line. This standard does not apply to medical bulk inert gas systems or to carbon dioxide systems.*

## CI (The Chlorine Institute)

ANSI/CI Pamphlet 1-1997, The Chlorine Manual, Edition 6

*Contains basic information, including properties and physiological effects of chlorine, description and rules for handling chlorine containers, emergency measures and first aid, and chemical and physical characteristics.*

## CLMA (Composite Lumber Manufacturers Association)

## CLSI (Clinical and Laboratory Standards Institute (formerly

ANSI/CLSI H1-A5-2003, Tubes and Additives for Venous Blood Specimen Collection; Approved Standard- Fifth Edition

*This document is a performance standard for manufacturers of venous blood collection tubes and additives and users of venous blood collection tubes. H1 addresses requirements for the materials, construction, and labeling of venous blood collection tubes, and it provides methods for the evaluation of venous blood collection tube and closure assemblies. Specifications for the additives heparin, ethylenediaminetetraacetic acid (EDTA), and sodium citrate are also included.*

ANSI/CLSI LIS2-A2-2004, Specification for Transferring Information Between Clinical Laboratory Instruments and Information Systems; Approved Standard - Second Edition

*This document addresses the two-way digital transmission of remote requests and results between clinical laboratory instruments and information systems. It enables any two such systems to establish a logical link for communicating text to send result, request, or demographic information in a standardized and interpretable form.*

ANSI/CLSI M2-A9-2006, Performance Standards for Antimicrobial Disk Susceptibility Tests; Approved Standard - Ninth Edition

*This document contains the current recommended methods for disk susceptibility testing, criteria for quality control testing, and updated tables for interpretive zone diameters.*

ANSI/CLSI M7-A7-2006, Methods for Dilution Antimicrobial Susceptibility Tests for Bacteria that Grow Aerobically

*This document addresses reference methods for the determination of minimal inhibitory concentrations (MICs) of aerobic bacteria by broth macrodilution, broth microdilution, and agar dilution.*

ANSI/NCCLS C46-A-2001, Blood Gas and pH Analysis and Related Measurements; Approved Guideline

*Provides clear definitions of the several quantities in current use, and provides a single source of information on appropriate specimen collection, preanalytical variables, calibration, and quality control for blood pH and gas analysis and related measurements.*

ANSI/NCCLS GP17-A2-2004, Clinical Laboratory Safety; Approved Guideline

*This document contains general guidlines for implementing a high-quality laboratory safety program. The framework is adaptable to any laboratory.*

ANSI/NCCLS H11-A3-2000, Percutaneous Collection of Arterial Blood for Laboratory Analysis

*Focuses on arterial puncture and includes discussion of arterial cannulatuion. It addresses principles for collecting, handling, and transporting arterial blood specimens. Its primary purpose is to reduce potential hazards to the patient and maintain the integrity of the arterial blood specimen. While providing some specific guidance, it is not intended to provide an exhaustive discussion of related subjects, such as pH/blood gas analysis and the technical implications of improper sampling.*

ANSI/NCCLS H2-A4-2001, Methods for the Erythrocyte Sedimentation Rate (ESR) Test

*Provides a description of the principle, materials, and procedure for reference and standardized ESR methods, as well as a procedure to evaluate routine methods, and an outline of quality control programs for the ESR test.*

ANSI/NCCLS LIS2-A-1997 , Transferring Information Between Clinical Instruments and Computer Systems, Specification for (14.01)

*(no abstract provided by developer)*

ANSI/NCCLS LIS6-A-2001 , Practice for Reporting Reliability of Clinical Laboratory Computer Systems

ANSI/NCCLS M11-A6-2004, Antimicrobial Susceptibility Testing of Anaerobic Bacteria, Methods for

*This standard provides reference methods for the determination of minimal inhibitory concentrations (MICs) of anaerobic bacteria by broth macrodilution, broth dilution, and agar dilution*

## CPA (Composite Panel Association)

ANSI A135.4-2004, Basic Hardboard

*This Standard defines hardboard, covers requirements and test methods for water absorption, thickness swelling, modulus of rupture, tensile strength, surface finish, dimensions, squareness, edge straightness, and moisture content of five classes of basic hardboard. Where appropriate, test methods in ASTM D 1037 are required. Methods of identifying hardboard that conforms to this Standard are provided.*

ANSI A135.5-2004, Prefinished Hardboard Paneling

*This Standard covers requirements and methods of testing for the dimensions, squareness, edge straightness, and moisture content of prefinished hardboard paneling and for the finish of the paneling. Methods of identifying products which conform to this Standard are included.*

ANSI A208.1-1999, Particleboard, Mat-Formed Wood

*Covers particleboard made from cellulosic materials (usually wood) bonded together with a suitable bonding system by a process in which the inter-particle bond is created by the bonding system. Other materials may be added during manufacturing to improve certain properties.*

ANSI A208.2-2002, Medium Density Fiberboard for Interior Use

*Covers MDF for interior applications, and includes definitions, dimensional tolerances, physical and mechanical property requirements, and a maximum formaldehyde emission level for different grades of MDF. Also included are references to test methods and means of identifying conforming products. The mechanical property requirements are not engineering design values.*

ANSI/CPA A135.6-2006, Hardboard Siding

*This Standard covers requirements and methods of testing for the dimensions, straightness, squareness, physical properties, and surface characteristics of hardboard siding. Definitions of trade terms used and methods of identifying products that comply with the Standard are included.*

## CSA (CSA America, Inc.)

ANSI IAS LC-2a-1998 (R2006), Direct Gas-Fired Circulating Heaters for Agricultural Animal Confinement Buildings

*Details test and examination criteria for direct gas-fired circulating heaters primarily intended for permanent installation in agricultural animal confinement buildings for use with natural, manufactured and mixed gases, liquefied petroleum gases and LP gas-air mixtures.*

ANSI LC-1-2005, Fuel Gas Piping System Using Corrugated Stainless Steel Tubing (CSST) (same as CSA 6.26)

*Specifies construction and performance criteria for fuel gas piping systems using corrugate stainless steel tubing not exceeding 2-inch nominal internal diameter. These piping systems are for use with fuel gas pressures not exceeding 5 psig in residential and commercial buildings*

ANSI NGV4.8/CSA 12.8-2002, Natural Gas Vehicle Fueling Station Compressor Guidelines

*Details construction and performance requirements for natural gas compressors for use in compressed natural gas fueling stations service. The compressor package should include but not be limited to all necessary equipment from inlet connection immediately upstream from the isolation valve to the packager - specified discharge connection.*

ANSI Z21.1-2005, Household Cooking Gas Appliances, Twenty-eight Edition

*Details test and examination criteria for household cooking appliances for use with natural manufactured and mixed gases, liquefied petroleum gases and LP gas-air mixtures. The standard defines a household cooking gas appliance as an appliance for domestic food preparation, providing at least one function of (1) top or surface cooking, (2) oven cooking or (3) broiling.*

ANSI Z21.10.1-2004, Gas Water Heaters, Volume I, Storage Water Heaters With Input Ratings of 75,000 Btu Per Hour or Less (same as CSA 4.1)

*Details test and examination criteria for automatic storage water heaters with input ratings of 75,000 Btu per hour (21 980 W) or less for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures.*

ANSI Z21.10.1a-2005, Gas Water Heaters, Volume I, Storage Water Heaters With Input Ratings of 75,000 Btu Per Hour or Less (same as CSA 4.1a)

*Details test and examination criteria for automatic storage water heaters with input ratings of 75,000 Btu per hour (21 980 W) or less for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures.*

ANSI Z21.10.1b-2005, Gas Water Heaters, Volume I, Storage Water Heaters with Input Ratings of 75,000 Btu Per Hour or Less (same as CSA 4.1b)

*Details test and examination criteria for automatic storage water heaters with input ratings of 75,000 Btu per hour (21 980 W) or less for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures.*

ANSI Z21.10.3a-2005, Gas Water Heaters, Volume III, Storage Water Heaters With Input Ratings Above 75,000 Btu Per Hour, Circulating and Instantaneous (Same as CSA 4.3)

*Details test and examination criteria for automatic storage, with input ratings above 75,000 Btu per hour (21 980 W), circulating and instantaneous water heaters for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures.*

ANSI Z21.11.2-2007, Gas-Fired Room Heaters – Volume II, Unvented Room Heaters

*Details test and examination criteria for unvented heaters for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures. Such heaters are limited to Maximum input ratings of 40,000 Btu per hour.*

ANSI Z21.11.2a-2003, Gas-Fired Room Heaters, Volume II, Unvented Room Heaters, First Addenda

*Details test and examination criteria for unvented heaters for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures. Such heaters are limited to Maximum input ratings of 40,000 Btu per hour.*

ANSI Z21.11.2b-2004, Gas-Fired Room Heaters, Vol. II, Unvented Room Heaters

*Criteria for unvented heaters for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures. Such heaters are limited to maximum input ratings of 40,000 Btu per hour.*

ANSI Z21.12-1990 (R2005), Draft Hoods

*Details test and examination criteria for replacement draft hoods for use on installed appliances using natural, manufactured and mixed gases, liquified petroleum gases and LP gas-air mixtures, and for use on appliances that have been converted from other fuels to the above gases. They are suitable for use with gas appliances required to be installed with a draft hood as specified in American National Standard National Fuel Gas Codes, ANSI Z223.1-1996, in the event the appliance designs do not incorporate draft hoods.*

ANSI Z21.12a-1993 (R2005), Draft Hoods

*Details test and examination criteria for replacement draft hoods for use on installed appliances using natural, manufactured and mixed gases, liquified petroleum gases and LP gas-air mixtures, and for use on appliances that have been converted from other fuels to the above gases. They are suitable for use with gas appliances required to be installed with a*

*draft hood as specified in American National Standard National Fuel Gas Codes, ANSI Z223.1-1996, in the event the appliance designs do not incorporate draft hoods.*

ANSI Z21.12b-1994 (R2005), Draft Hoods

*Details test and examination criteria for replacement draft hoods for use on installed appliances using natural, manufactured and mixed gases, liquified petroleum gases and LP gas-air mixtures, and for use on appliances that have been converted from other fuels to the above gases. They are suitable for use with gas appliances required to be installed with a draft hood as specified in American National Standard National Fuel Gas Code, ANSI Z223.1-1996, in the event the appliance designs do not incorporate draft hoods.*

ANSI Z21.13-2004, Gas-Fired Low Pressure Steam and Hot Water Boilers (same as CSA 4.9)

*Details test and examination criteria for Category I, Category II, Category III and Category IV low-pressure steam and hot water boilers for use with natural, manufactured and mixed gases, liquified petroleum gases and LP gas-air mixtures. A boiler is defined in the standard as a boiler operating at or below the following pressures or temperatures: steam heating boiler - 15 psi (103.42 kPa) steam pressure; hot water heating or supply boiler - 160 psi (1.10 MPa) water pressure, 250°F (121°C) water temperature.*

ANSI Z21.13a-2005, Gas-Fired Low Pressure Steam and Hot Water Boilers (same as CSA 4.9a)

*Details test and examination criteria for Category I, Category II, Category III and Category IV low-pressure steam and hot water boilers for use with natural, manufactured and mixed gases, liquified petroleum gases and LP gas-air mixtures. A boiler is defined in the standard as a boiler operating at or below the following pressures or temperatures: steam heating boiler - 15 psi (103.42 kPa) steam pressure; hot water heating or supply boiler - 160 psi (1.10 MPa) water pressure, 250°F (121°C) water temperature.*

ANSI Z21.15-1997 (R2003), Manually Operated Gas Valves for Appliances, Appliance Connector Valves and Hose End Valves (same as CGA 9.1)

*Details test and examination criteria for manually operated gas valves which are substantially of the plug and body, or rotating disc type, and to valve of other types which will provide equivalent performance. The standard represents minimum levels for the substantial and durable construction, safe operation and acceptable performance of such valves.*

ANSI Z21.15a-2001 (R2003), Manually Operated Gas Valves for Appliances, Appliance Connector Valves and Hose End Valves (same as CGA 9.1a)

*Details test and examination criteria for manually operated gas valves which are substantially of the plug and body, or rotating disc type, and to valve of other types which will provide equivalent performance. The standard represents minimum levels for the substantial and durable construction, safe operation and acceptable performance of such valves.*

ANSI Z21.15b-2006, Manually Operated Gas Valves for Appliances, Appliance Connector Valves and Hose End Valves (same as CSA 9.1b)

*Details test and examination criteria for manually-operated gas valves, not exceeding 4 inches (102 mm) pipe size, and pilot shut-off devices, except for hose end valves and appliance connector valves, intended to be used as part of a gas-fired appliance.*

ANSI Z21.17-1998 (R2004), Domestic Gas Conversion Burners

*Details test and examination criteria for domestic gas conversion burners for use with natural, manufactured and mixed gases, liquified petroleum gases and LP gas-air mixtures.*

ANSI Z21.18-2000 (R2005), Gas Applaince Pressure Regulators

*Details test and examination criteria for gas appliance pressure regulators for use with natural, manufactured and mixed gases, liquefied petroleum gases and LP gas-air mixtures. Such devices, either individual or in combination wit other controls, are intended to control selected outlet gas pressures to individual gas appliances.*

### ANSI Z21.19-2002, Refrigerators Using Gas Fuel

*Details test and examination criteria for gas-fired refrigerators having refrigerated spaces for (1) storage of foods, or (2) storage of foods and making ice, or (3) storage of frozen foods and making ice, or (4) storage of foods and the storage of frozen foods and making ice, for use with natural gas, and/or liquid petroleum (propane) gases, for residential use. This standard also covers electrical equipment, wiring and accessories built in or supplied with gas-fired refrigerators for use with low-voltage direct current or alternating current.*

### ANSI Z21.20-2005, Automatic Gas Ignition Systems and Components

*Details test and examination of criteria for complete burner ignition systems, and components that perform one or more of the following functions: Ignite the fuel at the main burner(s), or at the pilot burner(s); Prove the presence of either the ignition source, or main burner flame; Automatically act to shutoff the fuel supply to the burner(s), when the supervised flame or ignition source is not proved; and Shut off the gas supply when the oxygen content in the room is reduced to a predetermined level.*

### ANSI Z21.21-2000, Automatic Valves for Gas Appliances (same as CSA 6.5)

*Details test and examination criteria for individual automatic valves, valves utilized as parts of automatic gas ignition systems, or the automatic valve functions of combination controls, which have maximum operating pressure ratings of 1/2 psi, 2 psi, 5 psi, or higher than 5 psi in 5 psi increments up to and including a maximum operating pressure of 60 psi.*

### ANSI Z21.21-2005, Automatic Valves for Gas Appliances (same as CSA 6.5)

*Details test and examination criteria for individual automatic valves, valves utilized as parts of automatic gas ignition systems, or the automatic valve function of combination controls, which have maximum operating pressure ratings of ½ psi, 2 psi, 5 psi, or higher than 5 psi in 5 psi increments up to and including a maximum operating pressure of 60 psi. This standard does not apply to self-contained automatic gas shutoff valves for hot water supply systems.*

### ANSI Z21.21a-2001, Automatic Valves for Gas Appliances (same as CSA 6.5a)

*Details test and examination criteria for individual automatic valves, valves utilized as parts of automatic gas ignition systems, or the automatic valve functions of combination controls, which have maximum operating pressure ratings of 1/2 psi, 2 psi, 5 psi, or higher than 5 psi in 5 psi increments up to and including a maximum operating pressure of 60 psi. This standard does not apply to self-contained automatic gas shutoff valves for hot water supply systems.*

### ANSI Z21.21b-2004, Automatic Valves for Gas Appliances (same as CSA 6.5b)

*Details test and examination criteria for individual automatic valves, valves utilized as parts of automatic gas ignition systems, or the automatic valve function of combination controls, which have maximum operating pressure ratings of ½ psi, 2 psi, 5 psi, or higher than 5 psi in 5 psi increments up to and including a maximum operating pressure of 60 psi. This standard does not apply to self-contained automatic gas shutoff valves for hot water supply systems.*

### ANSI Z21.22-1999 (R2003), Relief Valves for Hot Water Supply Systems (same as CSA 4.4-1998)

*Details test and examination criteria for: 1.Temperature relief valves and combination temperature and pressure relief valves for use on storage tanks of hot water supply systems without heater input limitation; 2.Valves having only pressure relief features for use on storage tanks of hot water supply systems with inputs up to and including 200,000 Btu per hour; 3.Vacuum relief valves.*

### ANSI Z21.22a-1999, Pressure Relief Valves and Vacuum Relief Valves

*Details test and examination criteria for:*
*1. Temperature relief valves and combination temperature and pressure relief valves for use on storage tanks of hot water supply systems without heater input limitation;*
*2. Valves having only pressure relief features for use on storage tanks of hot water supply systems with inputs up to and including 200,000 Btu per hour;*
*3. Vacuum relief valves.*

### ANSI Z21.22b-2001, Relief Valves for Hot Water Supply Systems (same as CSA 4.4b)

*Details test and examination criteria for: (1)Temperature relief valves and combination temperature and pressure relief valves for use on storage tanks of hot water supply systems without heater input limitation; (2) Valves having only pressure relief features for use on storage tanks of hot water supply systems with inputs up to and including 200,000 Btu per hour; (3)Vacuum relief valves.*

### ANSI Z21.23-2000 (R2005) and ANSI Z21.23a-2003 (R2005), Gas Appliance Thermostats

*Details test and examination criteria for integral gas valve type and electric type thermostats which are used as integral parts of gas-burning appliances. It presents minimum levels for the substantial and durable construction, safe operation and acceptable performance for such thermostats. The standard does not apply to wall-mounted thermostats for comfort heating control.*

### ANSI Z21.23b-2005, Gas Appliance Thermostats

*Details test and examination criteria for integral gas valve type and electric type thermostats which are used as integral parts of gas-burning appliances. It presents minimum levels for the substantial and durable construction, safe operation and acceptable performance for such thermostats. The standard does not apply to wall-mounted thermostats for comfort heating control.*

ANSI Z21.24-2005, Connectors for Gas Appliances (same as CSA 6.10)

*Details test and examination criteria for gas appliance connectors limited to a maximum nominal length of 6 feet (1.83m). Such connectors are suitable for connecting gas-fired appliances to fixed gas supply lines containing natural, manufactured or mixed gases, liquefied petroleum gases or LP gas-air mixtures at pressures not in excess of ½ psig (3.5 kPa). These connectors are intended for use with residential and commercial gas appliances that are not frequently moved after installation.*

ANSI Z21.24a-2002, Connectors for Gas Appliances (same as CSA 6.10a)

*The standard details test and examination criteria for gas appliance connectors limited to a maximum nominal length of 6 feet (1.83m. Such connectors are suitable for connecting gas-fired appliances to fixed gas supply lines containing natural, manufactured or mixed gases, liquefied petroleum gases or LP gas-air mixtures at pressures not in excess of ½ psig. These connectors are intended for use with residential and commercial gas appliances that are not frequently moved after installation.*

ANSI Z21.24b-2003, Gas Appliance Connectors

*Section 1.8 - Details instruction criteria for proper usage and installation of gas appliance connectors intended for use with residential and commercial gas appliances that are not frequently moved after installation.*

ANSI Z21.35-2005, Pilot Gas Filters

*Details test and examination criteria for gas filters for gas-burning appliances which are intended to protect pilot limiting orifices from stoppage, clogging or reduced gas flow due to finely divided particles in the gas.*

ANSI Z21.40.1-1996 (R2002), Gas-Fired, Heat Activated Air Conditioning and Heat Pump Appliances

*Details test and examination criteria for gas-fired, heat activated air-conditioning and heat pump appliances which make use of the thermal output of fuel gas combustion of natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures for providing their heating, cooling, or dehumidifying effect. These appliances supply conditioned air; heated and/or cooled liquid; or refrigerants, gases, solids, or liquids to spaces remote from or adjacent to the appliance.*

ANSI Z21.40.1a-1997 (R2002), Safety and Construction of Gas-Fired, Heat Activated Air-Conditioning and Heat Pump Appliances

*(Supplement to ANSI Z21.40.1-1996)*

ANSI Z21.40.2-1996 (R2002), Gas-Fired, Work Activated Air-Conditioning and Heat Pump Appliances (Internal Combustion)

*Details test and examination criteria for gas-fired engine-driven air-conditioning and heat pump appliances which make use of internal combustion for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures. Consisting of sections installed indoor, outdoor, or both, these appliances supply conditioned air, chilled liquid or refrigerant to spaces remote from or adjacent to the appliance.*

ANSI Z21.40.2a-1997 (R2002), Gas-Fired, Work Activated Air-Conditioning and Heat Pump Appliances (Same as CGA 2.92a)

*(Supplement to ANSI Z21.40.2-1996)*

ANSI Z21.40.4-1996 (R2002), Performance Testing and Rating of Gas-Fired, Air Conditioning and Heat Pump Appliances

*Details methods of testing and rating gas-fired air-conditioning and heat pump appliances which utilize natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures. This includes engine-driven heat pumps, absorption-cycle heat pumps, desiccant-type heat pumps, and other gas-fired heat pumps. The heat pumps may provide the functions of year-round space conditioning either by direct heating and cooling of air or indirectly by production of heated and chilled water.*

ANSI Z21.40.4a-1997 (R2002), Performance Testing and Rating of Gas-Fired, Air-Conditioning and Heat Pump Appliances (same as CGA 2.94a)

*(Supplement to BSR Z21.40.4-1996)*

ANSI Z21.41a-2004, Quick Disconnect Devices for Use With Gas Fuel Appliances (same as CSA 6.9)

*Details test and examination criteria for hand-operated devices which provide means for connecting and disconnecting gas-fired appliances or gas appliance connectors to gas supplies and which are for use under indoor or outdoor applications. These devices are equipped with automatic means to shut off gas flow when disconnected.*

ANSI Z21.41a-2004, Quick Disconnect Devices For Use With Gas Fuel Applaince (same as CSA 6.9a)

*Details test and examination criteria for hand-operated devices which provide means for connecting and disconnecting gas-fired appliances or gas appliance connectors to gas supplies and which are for use under indoor or outdoor applications. These devices are equipped with automatic means to shut off gas flow when disconnected.*

ANSI Z21.42-1993 (R2002), Gas-Fired Illuminating Appliances

*Details test and examination criteria for gas-fired illuminating appliances for use with fuel gases such as natural gas, manufactured gas, mixed gas, liquefied petroleum gases, and LP gas-air mixtures.*

ANSI Z21.42a-2004, Gas-Fired Illuminating Appliances, First Addenda

*Details test and examination criteria for illuminating appliances for use with natural gas, manufactured gas, mixed gas, and liquefied petroleum gases for indoor or outdoor installations.*

ANSI Z21.47-2006, Gas-Fired Central Furnaces (same as CSA 2.3)

*Details test and examination criteria for automatically operating gas-fired central furnaces for use with nat., mfd. and mixed gases, LP gases and LP gas air mixtures. Central furnaces are designed to supply heated air through ducts to building spaces remote from or adjacent to the appliance location. Central furnaces are intended for installation in residential, commercial and industrial structures including Direct Vent, Recreational Vehicle, Outdoor and Manufactured (Mobile) Home.*

ANSI Z21.5.1-2006, Gas Clothes Dryers, Voluem I, Type 1 Clothes Dryers (same as CSA 7.1)

*Details test and examination criteria for Type 1 clothes dryers for use with natural, manufactured or mixed gases, liquefied petroleum gases or LP gas-air mixtures.*

ANSI Z21.5.2-2004, Gas Clothes Dryers Volume II, Type 2 Clothes Dryers (same as CSA 7.2)

*Details test and examination criteria for Type 2 clothes dryers for use with natural, manufactured or mixed gases, liquefied petroleum gases or LP gas-air mixtures.*

ANSI Z21.5.2a-2006, Gas Clothes Dryers, Volume II, Type 2 Clothes Dryers

*Details test and examination criteria for Type 2 clothes dryers for use with natural, manufactured or mixed gases, liquefied petroleum gases or LP gas-air mixtures.*

ANSI Z21.50-2007, American National Standard/CSA Standard for Vented Gas Fireplaces (same as CSA 2.22)

*Details test and examination criteria for vented gas fireplace for use with natural and propane gases. The only function of a vented gas fireplace lies in the aesthetic effect of the flame; the appliance is not a source of heat.*

ANSI Z21.54-2002, Gas Hose Connectors for Portable Outdoor Gas-Fired Appliances (same as CSA 8.4)

*This standard is a harmonized U.S./Canadian Standard for Gas Hose Connectors for Portable Outdoor Gas-Fired Appliances, ANSI Z21.54 o CGA 8.4. The standard details test and examination criteria for Gas Hose Connectors for Portable Outdoor Gas-Fired Appliances for use with natural, manufactured, mixed and liquefied petroleum gases and LP gas-air mixtures.*

ANSI Z21.54a-2005, Gas Hose Connectors for Portable Outdoor Gas-Fired Appliances (same as CSA 8.4a)

*Details test and examination criteria for gas hose connectors suitable for connecting portable outdoor gas-fired appliances to fixed gas supply lines containing natural, manufactured or mixed gases, liquefied petroleum gases or LP gas-air mixtures at pressures not in excess of 1/2 psi (3.45 kPa). These connectors are intended for use in unconcealed outdoor locations unlikely to be subject to excessive temperatures [above 200 F (93.5 C).*

ANSI Z21.56-2005, Gas-Fired Pool Heaters (same as CSA 4.7)

*Details test and examination criteria for pool heaters for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures. Pool heaters are designed to heat non-potable water stored at atmospheric pressure, such as water in swimming pools, spas, hot tubs and similar applications.*

ANSI Z21.56a-2005, Gas-Fired Pool Heaters (same as CSA 4.7a)

*Details test and examination criteria for pool heaters for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures. Pool heaters are designed to heat non-potable water stored at atmospheric pressure, such as water in swimming pools, spas, hot tubs and similar applications.*

ANSI Z21.57-2005, Recreational Vehicle Cooking Gas Appliances

*Details test and examination criteria for recreational vehicle cooking gas appliances for use with liquefied petroleum gases or for use with natural gas convertible for use with liquefied petroleum gases. This standard defines a recreational vehicle cooking gas appliance as an appliance for domestic food preparation, providing at least one function of (1) top or surface cooking, (2) oven cooking or (3) broiling and having design features enabling it to meet the special conditions connected for use in a recreational vehicle.*

ANSI Z21.58-2006, American National Standard/CSA Standard for Outdoor Cooking Gas Appliances (same as CSA 1.6)

*Details test and examination criteria for portable or post-mounted outdoor cooking gas appliances having top or surface units or broilers units or combinations thereof which are (1) for use with natural gas, manufactured gas, mixed gas, liquefied petroleum gases or LP gas-air mixtures on a fixed fuel piping systems, or (2) for connection to a self-contained liquefied petroleum gas supply system.*

ANSI Z21.58a-2005, Outdoor Cooking Gas Appliances (Same as CSA 1.6a)

*Details test and examination criteria for portable or post-mounted outdoor cooking gas appliances having top or surface units or broilers units or combinations thereof which are (1) for use with natural gas, manufactured gas, mixed gas, liquefied petroleum gases or LP gas-air mixtures on a fixed fuel piping systems, or (2) for connection to a self-contained liquefied petroleum gas supply system.*

ANSI Z21.58b-2006, Outdoor Cooking Gas Appliances (same as CSA 1.6b)

*Details test and examination criteria for portable or post-mounted outdoor cooking gas appliances having top or surface units or broilers units or combinations thereof which are (1) for use with natural gas, manufactured gas, mixed gas, liquefied petroleum gases or LP gas-air mixtures on a fixed fuel piping systems, or (2) for connection to a self-contained liquefied petroleum gas supply system.*

ANSI Z21.60-2002, Decorative Gas Appliances for Installation in Solid-Fuel Burning Fireplaces

*Applies to decorative appliances for installation in solid-fuel burning fireplaces, which are constructed entirely of new, unused parts and materials, for use with natural gas and propane. Decorative appliances are not thermostatically controlled.*

ANSI Z21.60a-2003, Decorative Gas Appliances for Installation in Solid-Fuel Burning Fireplaces, First Addenda (same as CSA 2.26a)

*Details test and examination criteria for decorative appliances for installation in solid-fuel burning fireplaces for use with natural gas and propane. This appliance is defined as a "self-contained, free-standing, gas-burning appliance designed for installation only in a solid-fuel burning fireplace and whose primary function lies in the aesthetic effect of the flame.*

ANSI Z21.60b-2004, Decorative Gas Appliances for Installation in Solid-Fuel Burning Fireplaces (same as CSA 2.26b)

*Criteria for decorative appliances for installation in solid-fuel burning fireplaces for use with natural gas and propane. Self-contained, free standaing, gas-burning appliance for installation only in a solid-fuel burning fireplace and whose primary function is aesthetic.*

ANSI Z21.61-1983 (R2004), Toilets, Gas-Fired

*Details test and examination criteria for gas-fired toilets for use with natural, manufactured and mixed gases, liquefied petroleum gases and LP gas-air mixtures.*

ANSI Z21.63-2000 (R2005), Portable Type Gas Camp Heaters (same as CSA 11.3)

*Details test and examination criteria for unvented portable camp heaters or the infrared type only up to and including a maximum input of 12,000 Btuh (3.52kW) using propane, butane and liquefied petroleum gases and mixtures thereof and intended for outdoor use. This standard applies to camp heaters having regulated or non-regulated pressure and intended for direct or remote connection to the fuel container.*

ANSI Z21.63a-2001, Portable Camp Heaters of Other than the Catalytic Type for Use with Liquefied Petroleum Gases (same as CSA 11.3a)

*Details test and examination criteria for unvented portable camp heaters, of the infrared type only, up to and including a maximum input of 12,000 Btuh (3.52 kW) using propane, butane and liquefied petroleum gases and mixtures thereof and intended for outdoor use. This standard applies to camp heaters having regulated or non-regulated pressure and intended for direct or remote connection to the fuel container.*

ANSI Z21.63b-2003, Portable Type Gas Camp Heaters (same as CSA 11.3b)

*Details test and examination criteria for unvented portable camp heaters, of the infrared type only, up to and including a maximum input of 12,000 Btuh (3.52 kW) using propane, butane and liquefied petroleum gases and mixtures thereof and intended for outdoor use. This standard applies to camp heaters having regulated or non-regulated pressure and intended for direct or remote connection to the fuel container.*

ANSI Z21.66-1996 (R2001), Automatic Vent Damper Devices for Use with Gas-Fired Appliances

*Details test and examination criteria for electrically operated and thermally actuated automatic vent damper devices which are capable of being installed in venting systems, in the outlets of or downstream of appliance draft hoods, of existing individual, automatically operated listed gas-fired appliances and which are designed to automatically open the venting system when the appliances are in operation and to automatically close off the venting system when the appliances are in a standby or shutdown condition. An electrically operated vent damper device employs electrical energy to control the device. A thermally actuated vent damper device depends for operation exclusively upon the direct conversion of the thermal energy of the vent gases into mechanical energy.*

ANSI Z21.69-2002, Connectors for Movable Gas Appliances (same as CSA 6.16)

*This standard is a harmonized U.S./Canadian Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 o CGA 6.16. The standard details test and examination criteria for connectors for movable gas appliances for use with natural, manufactured, mixed and liquefied petroleum gases and LP gas-air mixtures.*

ANSI Z21.69a-2003, Connectors for Movable Gas Appliances (same as CGA 6.16a)

*Details test and examination criteria for gas appliance connectors consisting of flexible tubing for connecting gas supply piping to a gas appliance mounted on casters or otherwise subject to movement. These connectors are limited to a maximum length of 6 feet (1.83 m). These connectors are suitable for use with natural, manufactured or mixed gases, liquefied petroleum gases, or LP gas-air mixtures, at pressures not in excess of 1/2 psi (3.5 kPa).*

ANSI Z21.69b-2005, Connectors for Movable Gas Appliances (same as CGA 6.16b)

*Details test and examination criteria for gas appliance connectors consisting of flexible tubing for connecting gas supply piping to a gas appliance mounted on casters or otherwise subject to movement. These connectors are limited to a maximum length of 6 feet (1.83 m). These connectors are suitable for use with natural, manufactured or mixed gases, liquefied petroleum gases, or LP gas-air mixtures, at pressures not in excess of 1/2 psi (3.5 kPa.*

ANSI Z21.71-1993 (R2002), Automatic Intermittent Pilot Ignition Systems for Field Installation

*Details the construction and installation procedures for automatic intermittent pilot ignition systems designed to be adapted to continuous pilot burners on listed forced air heating appliances and boilers equipped with atmospheric burners. These systems, which consist of a pilot ignition device, pilot flame sensing means, and the necessary related controls and wiring, ignite the pilot burner gas on a call for heat, prove the presence of the pilot before allowing main burner gas to flow, and shut off both main burner and pilot gas when the call for heat is satisfied.*

ANSI Z21.71a-2004, Automatic Intermittent Pilot Ignition Systems for Field Installation

*Details test and examination criteria for gas-fired illuminating appliances for use with fuel gases such as natural gas, manufactured gas, mixed gas, liquefied petroleum gases, and LP gas-air mixtures.*

ANSI Z21.72-2000 (R2005), Portable Type Gas Camp Stoves (Same as CSA 11.2)

*Details test and examination criteria for portable camp cook stoves for use with propane HD-5 only, having input ratings of 12,000 Btu per hour or less and intended for use both indoors in adequately ventilated structures and outdoors. This standard applies to stoves designed for self-contained fuel supplies using fuel cylinders of not more than 75 cubic inches (2-1/2 pounds nominal water capacity.*

ANSI Z21.73-2000 (R2005), Portable Type Gas Camp Lights

*Details test and examination criteria for portable type gas camp lights for use with propane butane, liquefied petroleum gas and any combination, and for outdoor use only.*

ANSI Z21.74-1992 (R2006), Portable Refrigerators for Use with HD-5 Propane Gas

*This standard covers gas fired refrigerators, having refrigerated spaces for storage of foods with input ratings of 1000 Btu per hour (293 W) or less, and which are for use with HD 5 propane gas only. These refrigerators are intended for use both indoors in adequately ventilated structures and outdoors. This standard applies to refrigerators designed for self contained fuel supplies and using fuel cylinders of not more than 75 cubic inches (1230 cm3) (21/2 pounds nominal water capacity). Fuel supplies shall be in accordance with the Standard for the Storage and Handling of Liquefied Petroleum Gases, ANSI/NFPA No. 58.*

ANSI Z21.75-2001, Connectors for Outdoor Gas Appliances and Manufactured Homes (same as CSA 6.27)

*Details test and examination criteria for connectors constructed of new, unused parts and materials intended for exterior use above ground for making nonrigid connections between the gas supply and the gas inlet of a fixed appliance for outdoor installation; between the permanent gas outlet of a manufactured home community (mobile home park) or individual site and the piping inlet on a park trailer or a manufactured (mobile) home; or between sections of a multiple section manufactured (mobile home). Such connectors are considered suitable for use with natural, manufactured, mixed and liquefied petroleum (LP) gases and LP gas-air, at pressures not in excess of 1/2 psig. These connectors are limited to a maximum length of 6 feet. This standard does not apply to gas appliance connectors covered under American National Standard for Connectors for Gas Appliances,*

ANSI Z21.75a-2002, Gas Connectors for Stationary Outdoor Gas Appliances (CSA 6.27a)

*The standard details test and examination criteria for connectors constructed of new, unused parts and materials intended for exterior use above ground for making non-rigid connections between the gas supply and the gas inlet of a fixed appliance for outdoor installation.*

ANSI Z21.75b-2003, Connectors for Outdoor Gas Appliances and Manufactured Home

*Section 1.5 - Details instruction criteria for proper usage and installation of gas connectors suitable for non-rigid connection of outdoor gas appliances not frequently moved after installation, or manufactured (mobile) homes.*

ANSI Z21.76-1994 (R2006), Gas-Fired Unvented Catalytic Room Heaters for Use with Liquefied Petroleum (LP) Gases

*Details test and examination criteria for unvented catalytic room heaters having input ratings up to and including 40,000 Btu per hour (11 723 W) for use with liquefied petroleum (LP) gases.*

ANSI Z21.76a-1996 (R2006), Gas-Fired Unvented Catalytic Room Heaters for Use with Liquefied Petroleum (LP) Gases

*"a" addenda to ANSI Z21.76-1994*

ANSI Z21.76b-1997 (R2006), Gas-Fired Unvented Catalytic Room Heaters for Use with Liquefied Petroleum (LP) Gases

*"b" addenda to ANSI Z21.76-1994*

ANSI Z21.77-2005, Manually-Operated Piezo-Electric Spark Gas Ignition Systems and Components

*Details test and examination criteria for manually operated piezo-electric spark gas ignition systems and components, designed to ignite an appliance burner(s), for use with natural, manufactured or mixed gases, liquefied petroleum gases or LP gas-air mixtures.*

ANSI Z21.77b-2004, Manually Operated Piezo-Electric Spark Gas Ignition Systems and Components

*Details test and examination criteria for manually operated piezo-electric spark gas ignition systems and components, designed to ignite an appliance burner(s), for use with natural, manufactured or mixed gases, liquefied petroleum gases or LP gas-air mixtures.*

ANSI Z21.78-2005, Combination Gas Controls for Gas Appliances (same as CSA 6.20)

*Details test and examination criteria for conbination gas controls for gas appliances that have a maximum operating gas pressure of 1/2 psi. A combination gas control is defined as an assembly of two or more different functions, at least one of which conveys gas in a single unit without the use of pipe nipples. These include manually operated gas valve(s), a gas pressure regulator, automatic valve(s), a thermostat (other than an electric type), ignition system components, and an automatic shutoff device.*

ANSI Z21.79-1997 (R2002), Gas Appliances Sediment Traps

*Details test and examination criteria for gas appliance sediment traps having a maximum operating gas pressure rating of ½ psig. A sediment trap is defined as a device intended to protect appliance gas controls from dirt and foreign particles which may be present in the piping.*

ANSI Z21.79a-2005, Gas Appliance Sediment Traps (Same as CGA 6.21a)

*Details test and examination criteria for gas appliance sediment traps having a maximum operating gas pressure rating of ½ psig. A sediment trap is defined as a device intended to protect appliance gas controls from dirt and foreign particles which may be present in the piping.*

ANSI Z21.8-1994 (R2002), Installation of Domestic Gas Conversion Burners

*Details installation criteria for domestic gas conversion burners for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures.*

ANSI Z21.80-2002, Line Pressure Regulators (same as CSA 6.22)

*Details test and examination criteria for line pressure regulators, either individual or in combination with over pressure protection devices intended for application in natural gas piping systems between the service regulator and the gas appliance(s). This standard applies to regulators rated at 2, 5, or 10 psi with maximum outlet pressure of ½ or 2 psi, depending on the intended application.*

ANSI Z21.80a-2005, Line Pressure Regulators (Same as CSA 6.22a)

*Details test and examination criteria for line pressure regulators, either individual or in combination with over pressure protection devices intended for application in natural gas piping systems between the service regulator and the gas appliance(s). This standard applies to regulators rated at 2, 5, or 10 psi with maximum outlet pressure of ½ or 2 psi, depending on the intended application.*

ANSI Z21.81-2004, Cylinder Connection Devices (same as CSA 6.25) Second Edition

*Details test and examination criteria for Type I and Type II cylinder connection devices intended to connect the cylinder valve on portable LP-Gas containers to the inlet of the regulator on outdoor cooking gas appliances. These cylinder connection devices are intended for vapor withdrawal service only.*

ANSI Z21.81a-2006, American National Standard/CSA Standard for Cylinder Connection Devices (same as CSA 6.25a)

*Details test and examination criteria for Type I and Type II cylinder connection devices intended to connect the cylinder valve on portable LP-Gas containers to the inlet of the regulator on outdoor cooking gas appliances. These cylinder connection devices are intended for vapor withdrawal service only.*

ANSI Z21.84-2002, Manually Lighted, Natural Gas Decorative Gas Appliances for Installation in Solid-Fuel Burning Fireplaces

*Applies to manually lighted, natural gas, decorative gas appliances for installation in solid-fuel burning fireplaces for use with natural gas only at a maximum input rating of 90,000 Btu/hr. These appliances do not incorporate a pilot burner or an automatic gas ignition system. The main burner(s) is intended to be lighted by hand each time the appliance is used.*

ANSI Z21.84a-2003, Manually Lighted, Natural Gas Decorative Gas Appliances for Installation in Solid-Fuel Burning Fireplaces, First Addenda

*Details test and examination criteria for manually lighted, natural gas, decorative gas appliances for installation in solid-fuel burning fireplaces for use with natural gas only at a maximum input ratings of 90,000 Btu/hr. These appliances do not incorporate a pilot burner or an automatic gas ignition system. The main burner is intended to be lighted by hand each time the appliance is used.*

ANSI Z21.84b-2004, Manually Lighted Decorative Gas Appliances for Installation in Solid-Fuel Burning Fireplaces

*Criterial for manually lighted, natural gas, decorative gas appliances of installation in solid fuel burning fireplaces for use with natural gas only at a maximum input rating of 90,000 btu/hr.*

ANSI Z21.86-2003, Vented Gas-Fired Heating Appliances (same as CGA 2.32)

*Details test and examination criteria for vented room heaters, direct vent wall furnaces, vented wall furnaces, and gravity and fan type floor furnaces for use with natural, manufactured and mixed gases, liquefied petroleum gases and LP gas-air mixtures.*

ANSI Z21.86a-2005, Gas-Fired Space Heating Appliances (same as CSA 2.32a)

*Details test and examination criteria for vented room heaters, direct vent wall furnaces, vented wall furnaces, and gravity and fan type floor furnaces for use with natural, manufactured and mixed gases, liquefied petroleum gases and LP gas-air mixtures.*

ANSI Z21.86b-2007, Second Addenda to American National Standard/CSA Standard for Vented Gas-Fired Space Heating Appliances (same as CSA 2.32b)

*Details test and examination criteria for vented room heaters, direct vent wall furnaces, vented wall furnaces, and gravity and fan type floor furnaces for use with natural, manufactured and mixed gases, liquefied petroleum gases and LP gas-air mixtures.*

ANSI Z21.87-1999 (R2004), Automatic Gas Shutoff Devices for Hot Water Supply Systems (same as CSA 4.6-1998)

*Details test and examination criteria for automatic gas shutoff devices for hot water supply systems.*

ANSI Z21.87a-2004, Automatic Gas Shutoff Devices for Hot Water Supply Systems (same as CSA 4.6a)

*Details test and examination criteria for automatic gas shutoff devices for hot water supply systems.*

ANSI Z21.87b-2005, Automatic Gas Shutoff Devices for Hot Water Supply Systems (Same as CSA 4.6b)

*Details test and examination criteria for line pressure regulators, either individual or in combination with over pressure protection devices intended for application in natural gas piping systems between the service regulator and the gas appliance(s). This standard applies to regulators rated at 2, 5, or 10 psi with maximum outlet pressure of ½ or 2 psi, depending on the intended application.*

ANSI Z21.88-2005, Vented Gas Fireplace Heaters (same as CSA 2.33)

*Test and examination criteria for vented gas fireplace heaters for use with natural and liquefied petroleum (propane) gases, which allows the view of flames and provides the simulation of a solid fuel fireplace and furnishes warm air to the space in which it is installed with or without duct connections. A vented gas-fired fireplace heater is designed to comply with minimum thermal efficiency requirements and may be controlled by an automatic thermostat. Direct vent appliances may be installed in manufactured (mobile) homes and recreational vehicles.*

ANSI Z21.89-2007, Outdoor Cooking Speciality Gas Appliances (same as CSA 1.18)

*Details test and examination criteria for portable outdoor specialty gas appliances, (fryer/boiler, smoker, tabletop grill or any combination). Appliance may be connected to a fixed fuel piping system or self contained liquefied petroleum gas or propane gas supply system of a single cylinder with a maximum size of 20 pounds (9.1 kg) of fuel.*

ANSI Z21.90-2001 (R2006), Gas Convenience Outlets and Optional Enclosures (same as CSA 6.24)

*Details test and examination criteria for gas convenience outlets and optional enclosures, capable of operation at ambient temperatures between 32°F and 200°F (0ºC and 93.3ºC) if intended for Indoor Use Only, or between -20°F and 200°F (-28.8ºC and 93.3ºC), if intended for Indoor/Outdoor Use, and at pressures not in excess of 5 psig (34.5 kPa.*

ANSI Z21.90a-2003, Gas Convenience Outlets and Optional Enclosures (same as CSA 6.24a)

*Details test and examination criteria for gas convenience outlets and optional enclosures, capable of operation at ambient temperatures between 32°F and 200°F if intended for Indoor Use Only, or between -20°F and 200°F, if intended for Indoor/Outdoor Use, and at pressures not in excess of 5 psig.*

ANSI Z21.90b-2006, Gas Convenience Outlets and Optional Enclosures (same as CSA 6.24b)

*Details test and examination criteria for gas convenience outlets and optional enclosures, capable of operation at ambient temperatures between 32°F and 200°F (0ºC and 93.3ºC) if intended for Indoor Use Only, or between -20°F and 200°F (-28.8ºC and 93.3ºC), if intended for Indoor/Outdoor Use, and at pressures not in excess of 5 psig (34.5 kPa.*

ANSI Z21.91-2001 (R2005), Ventless Firebox Enclosures for Gas-Fired Decorative type Unvented Room Heaters

*Details test and examination criteria for ventless firebox enclosures for unvented decorative room heaters. Fireboxes covered by this standard are intended for use with unvented decorative room heaters which comply with ANSI Z21.11.2 for installation in solid fuel-burning fireplaces.*

ANSI Z21.91a-2002, Ventless Firebox Enclosures for Gas-Fired Unvented Decorative Room Heaters

*applies to newly produced ventless firebox enclosures for use with gas-fired unvented decorative room heaters which comply with ANSI Z21.11.2 for installation in solid fuel-burning fireplaces.*

ANSI Z21.91b-2004, Ventless Firebox Enclosures for Gas-Fired Unvented Decorative Room Heaters

*Criteria for ventless firebox enclosures for unvenetd decorative room heaters. Fireboxes covered by this standard are intended for use with unvented decorative room heaters which comply with ANSI Z21.11.2 for installtaion in solid fuel bunring fireplaces*

ANSI Z21.92-2001, Manually Operated Electric Gas Ignition Systems and Components (same as CSA 6.29)

*Details test and examination criteria for manually operated electric gas ignition systems and components which are intended to form an integral part of a gas appliance and designed to ignite an appliance burner(s), for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures.*

ANSI Z21.92a-2005, Manually Operated Elecric Gas Ignition Systems and Components (Same as CSA 6.29a)

*Details test and examination criteria for manually operated electric gas ignition systems and components which are intended to form an integral part of a gas appliance and requires a manual operation to initiate an ignition attemp; utilizes electrical energy to ignite gas at an appliance burner(s), and does not control gas flow.*

ANSI Z21.94-2005, Automatic Flammable Vapor Sensor Systems and Components (same as CSA 6.31)

*Details construction, performance and testing of flammable vapor sensor systems and components used for sensing the presence of flammable vapors in residential appliacations.*

ANSI Z83.11-2006, Gas Food Service Equipment (same as CSA 1.8)

*Details test and examination criteria for gas food service equipment for use with natural, manufactured and mixed gases, propane, liquefied petroleum gases and LP gas-air mixtures. The standard provides coverage for ranges and unit broilers, baking and roasting ovens, counter appliances, deep fat fryers and kettles, steam cookers and steam generators.*

ANSI Z83.18-2004, Recirculating Direct Gas-Fired Industrial Air Heaters

*Details test and examination criteria for direct gas-fired industrial air heaters of the Recirculating type, for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures. A direct gas-fired industrial air heater of the Recirculating type is described in the standard as a heater “show purpose is to offset building heat loss. Ventilation air to the heater shall be ducted directly from outdoors and the products of combustion generated by the heater are released into the air stream being heated. Inside air may be introduced before or after the combustion zone.*

ANSI Z83.18a-2005, Recirculating Direct Gas-Fired Industial Air Heaters

*Details test and examination criteria for direct gas-fired industrial air heaters of the Recirculating type, for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures. A direct gas-fired industrial air heater of the Recirculating type is described in the standard as a heater “show purpose is to offset building heat loss. Ventilation air to the heater shall be ducted directly from outdoors and the products of combustion generated by the heater are released into the air stream being heated. Inside air may be introduced before or after the combustion zone.&#8221.*

ANSI Z83.19-2001 (R2005), Gas-Fired High-Intensity Infrared Heaters (same as CSA 2.35)

*Details test and examination criteria for gas-fired high-intensity infrared heaters for use with natural, manufactured, mixed and liquefied petroleum (propane) gases and may be convertible for use with natural and LP-gases. Applies to heaters for installation in and heating of outdoor spaces or nonresidential indoor spaces where flammable gases or vapors are not generally present.*

ANSI Z83.20-2001 (R2005), Gas-Fired Tube-Type and Low-Intensity Infrared Heaters (same as CSA 2.34)

*Details test and examination criteria for gas-fired low-intensity infrared and infrared radiant tube heaters, with inputs up to 400,000 Btu/hr per burner, for use with natural, manufactured, mixed and liquefied petroleum (propane) gases and may be convertible for use with natural and LP-gases. Applies to heaters for installation in and heating of outdoor spaces or nonresidential indoor spaces where flammable gases or vapors are not generally present.*

ANSI Z83.4-2003, Non-Recirculating Direct Gas-Fired Industrial Air Heaters (same as CGA 3.7)

*Details test and examination of criteria for direct gas-fired industrial air heaters of the non-recirculating type, for use with natural, manufactured and mixed gases, liquefied petroleum gases, and LP gas-air mixtures. A direct gas-fired industrial air heater of the non-recirculating type is described in the standard as a heater "whose purpose is to offset building heat loss. All air to the heater shall be ducted directly from outdoors and the products of combustion generated by the heater are released into the air stream being heated."*

ANSI Z83.4a-2004, Non-Recirculating Direct Gas-Fired Industrial Air Heaters (same as CGA 3.7a)

*Details test and examination of criteria for direct gas-fired industrial air heaters of the non-recirculating type, for use with nat., mfd. and mixed gases, LP gases, and LP gas-air mixtures. A direct gas-fired industrial air heater of the non-recirculating type is described as a heater “whose purpose is to offset building heat loss. All air to the heater shall be ducted directly from outdoors and the products of combustion generated by the heater are released into the air stream being heated.*

ANSI Z83.4b-2005, Non-Recirculating Direct Gas Fired Industrial Air Heaters

*Details test and examination of criteria for direct gas-fired industrial air heaters of the non-recirculating type, for use with nat., mfd. and mixed gases, LP gases, and LP gas-air mixtures. A direct gas-fired industrial air heater of the non-recirculating type is described as a heater “whose purpose is to offset building heat loss. All air to the heater shall be ducted directly from outdoors and the products of combustion generated by the heater are released into the air stream being heated.&#8221.*

ANSI Z83.7-2000 (R2005), Gas-Fired Construction Heaters (Same as CSA 2.14-2000)

*Details test and examination criteria for construction heaters for use with natural and liquefied petroleum gases. A construction heater is primarily intended for temporary use in heating buildings or structures under construction, alteration or repair. All products of combustion are released into the area being heated.*

ANSI Z83.8-2005, Gas Unit Heaters and Gas-Fired Duct Furnaces (same as CGA 2.6)

*Details test and examination criteria for gas unit heaters and gas-fired duct furnaces for use with nat, mfd. and mixed gases, LP gases, and LP gas-air mixtures. A unit heater may either be suspended or floor-mounted and may be of the low- or high-static pressure type. Duct furnaces are normally installed in distribution ducts of air conditioning systems to supply warm air for heating and depended for air circulation on a blower not furnished as a part of the furnace.*

ANSI/CSA America FC 1-2004, Fuel Cell Power Plants (same as CGA 12.10)

*This standard covers the safe operation, substantial and durable construction, and acceptable performance of packaged stationary fuel cell power systems, which through electrochemical reactions and other processes, generate alternating-current or direct-current electricity. This standard applies to fuel cell power systems not exceeding a power output of 10 MW and that are for use with hydrogen gas, gaseous or liquid hydrocarbon fuel, or zinc particulate conveyed in a non-flammable liquid medium.*

ANSI/CSA FC 3-2004, Portable Fuel Cell Power Systems

*Covers the safe operation, substantial and durable construction, and acceptable performance of portable fuel cell power systems, which through electrochemical reactions and other processes, generate alternating-current or direct-current electricity. This standard applies to portable fuel cell power systems, with a rated output voltage not exceeding 600 V, for commercial, industrial, and residential indoor and outdoor use in non-hazardous locations*

ANSI/CSA LC 4-2007, Press-Connect Copper and Copper Alloy Fittings for Use in Fuel Gas Distribution Systems (same as CSA 6.32)

*This standard applies to copper and copper alloy press-connect type fittings and valves for use with fuel gas tube systems intended for installation above ground, below ground, indoors and outdoors, for operating pressures not to exceed 125 psig for use with copper tube 1/2" through 4" nominal size.*

ANSI/CSA LC-3-2000, Appliance Stands

*Details test and examination criteria for appliance stands, and drain pans. Appliance stands are used for supporting a appliance at the proper height to meet applicable codes requiring flammable vapor ignition sources such as burners, burner ignition devices, electrical heating elements and switches to be a minimum distance above the floor (generally 18 inches). Drain pans are used under an appliance to collect and have the ability to dispose water in the event of a leak. Appliance stands, may also incorporate a drain pan for catching and/or disposing of water in the event of a leak.*

^NSI/CSA NGV2-2000 (R2005), Basic Requirements for Compressed Natural Gas Vehicle (NGV) Fuel Containers

*This standard contains requirements for the material, design, manufacture and testing of serially produced, refillable Type NGV2 containers intended only for the storage of compressed natural gas for vehicle operation. These containers are to be permanently attached to the vehicle. Type NGV2 containers shall not be over 1,000 liters (35.4 cu ft) water capacity.*

ANSI/CSA NGV2a-2001 (R2005), Basic Requirements for Compressed Natural Gas Vehicle (NGV) Fuel Containers

*This standard contains requirements for the material, design, manufacture and testing of serially produced, refillable Type NGV2 containers intended only for the storage of compressed natural gas for vehicle operation. These containers are to be permanently attached to the vehicle. Type NGV2 containers shall not be over 1,000 liters (35.4 cu ft) water capacity.*

ANSI/CSA NGV3.1/CSA 12.3-1995 (R2006), Fuel System Components for Natural Gas Powered Vehicles

*Construction and performance criteria for:(1)check valves,(2)cylinder valves,(3)manual valves,(4)gas air mixers for operation at differential pressures greater than 2 psi,(5)pressure measurement devices,(6)pressure regulators,(7)automatic valves and (8)engine shut-off sensors, constructed entirely of new unused parts and materials,intended for use on natural gas powered vehicles. Every component shall be designed to secure mounting to the vehicle, maintain a fixed relationship between essential parts under normal and reasonable conditions of handling and usage and minimize the possibility of incorrect assembly.*

ANSI/IAS LC-2-1996 (R2006), Direct Gas-Fired Circulating Heaters for Agricultural Animal Confinement Buildings

*Details test and examination criteria for direct gas-fired circulating heaters primarily intended for permanent installation in agricultural animal confinement buildings for use with natural, manufactured and mixed gases, liquefied petroleum gases and LP gas-air mixtures.*

ANSI/IAS NGV 4.1/CSA 12.5-1999, NGV Dispensing Systems

*Details construction and performance criteria for (1) mechanical and electrical features of newly manufactured systems that dispense natural gas for vehicles (NGV) where such a system is intended primarily to dispense the fuel directly into the fuel storage container of the vehicle, (2) NGV dispensers contained in a single housing, and (3) NGV dispensers contained in multiple housings for metering and registering devices, remote electronics, hoses and nozzles.*

ANSI/IAS NGV 4.2/CSA 12.52-1999, Hoses for Natural Gas Vehicles and Dispensing Systems

*Applies to compressed natural gas hose assemblies that are used for NGV dispensing stations to connect the dispenser to the refueling nozzle, or used as part of a vehicle on-board fuel system and for gas lines which carry vented gas back to a safe location. Hose assemblies certified under this standard may be assembled at the point of manufacture of the bulk hose, or at hose assembly facilities authorized by the bulk hose manufacturer.*

ANSI/IAS NGV 4.4/CSA 12.54-1999, Breakaway Devices for Natural Gas Dispensing Hoses and Systems

*Applies to newly produced compressed Natural Gas Vehicle (NGV) dispenser shear valves and fueling hose emergency breakaway shutoff devices.*

ANSI/IAS NGV 4.6/CSA 12.56-1999, Manually Operated Valves for Natural Gas Dispensing Systems

*Applies to manually operated valves for high-pressure natural gas.*

ANSI/IAS NGV 4.7/CSA 12.57-1999, Automatic Pressure-Operated Valves for Natural Gas Dispensing Systems

*Applies to automatic, pressure-operated valves for high pressure natural gas service.*

ANSI/IAS NGV1b-1998 (R2005), Natural Gas Vehicle (NGV) Fueling Connection Devices

*(see BSR/IAS/AGA NGV1a-200x)*

ANSI/IAS PRD1-1998 (R2006), Basic Requirements for Pressure Relief Devices for Natural Gas Vehicle (NGV) Fuel Containers

*This standard contains specifications for the materials, design, manufacture and testing of pressure relief devices produced for use on NGV fuel containers. NGV fuel containers comply with the NGV2, FMVSS304 and/or CSA B51 Part 2 standards, as appropriate.*

ANSI/IAS PRD1a-1999 (R2006), Basic Requirements for Pressure Relief Devices for Natural Gas Vehicle (NGV) Fuel Containers

*This standard contains specifications for the materials, design, manufacture and testing of pressure relief devices produced for use on NGV fuel containers. NGV fuel containers comply with the NGV2, FMVSS304 and/or CSA B51 Part 2 standards, as appropriate.*

ANSI/IAS/AGA NGV1-2005, Natural Gas Vehicle (NGV) Fueling Connection Devices

*Construction and performance criteria for compressed natural gas vehicle fueling connection devices consisting of (1) a receptacle (mounted on the vehicle), (2) a nozzle (mounted on fueling dispenser), and/or (3) three-way valve (internal or external to the nozzle), having design pressures of 2400, 3000 or 3600 psig. Nozzle design will not permit gas flow until positively engaged to the receptacle and will not release the receptacle until gas flow has ceased and captured gas is safely vented. Intermating components are standardized. Nozzle and receptacle design prevent the fueling of a vehicle with lower service pressure by a dispenser with a higher service pressure.*

ANSI/IAS/AGA NGV1a-2005, Natural Gas Vehicle (NGV) Fueling Connection Devices

*(see BSR/IAS/AGA NGV1a-200x)*

## CSAA (Central Station Alarm Association)

ANSI/CSAA CS-V-01-2004, Alarm Verification and Notification Procedures

*This standard codifies alarm central station procedures for alarm verification (1) to permit authorized personnel at protected premises to appropriately identify themselves, thereby preventing emergency response agencies to respond to situations not representing an emergency situation; and (2) to confirm or deny the validity of alarm signals received at an alarm supervising station.*

## CSPA (Consumer Specialty Products Association)

## CTI (Cooling Tower Institute)

## DASMA (Door and Access Systems Manufacturers Association)

ANSI/DASMA 102-2004, Specifications for Sectional Overhead Type Doors

*This specification for sectional doors, as defined in Section 2, is intended to cover residential and commercial type doors normally used on garages, warehouses, factories, service stations, and other places requiring doors generally used for vehicular traffic. Exclusions. It is not intended to cover doors generally used for pedestrian traffic nor other types of overhead doors such as rigid, folding, multi-leaf, rolling curtain doors, or special application doors.*

ANSI/DASMA 103-2001 (R2006), Standard for Counterbalance Systems on Residential Sectional Garage Doors

*The standard defines performance-based and prescriptive-based methods of compliance for sectional door counterbalance system components under tension. This specification for sectional garage doors is intended to cover residential sectional garage doors used for vehicular traffic.*

ANSI/DASMA 105-1992 (R2004), Test Method for Thermal Transmittance and Air Infiltration of Garage Doors

*The purpose of this test method is to measure the thermal characteristics of garage doors under steady state conditions. Specifically, the measurements and calculations made will yield the thermal transmittance (U) and the air infiltration rate.*

ANSI/DASMA 107-1997 (R2004), Room Fire Test Standard for Garage Doors Using Foam Plastic Insulation

*This standard is a test method designed to evaluate the contribution of garage doors using foam plastic insulation to the creation of fire hazard under specified fire exposure conditions. The method is conducted in a standard room configuration. This standard is to be used to evaluate the flammability characteristics of garage door assemblies using foam plastic insulation when the foam plastic is not separated from occupied spaces by a facing of minimum 0.3 mm (0.010 in.) steel or 3.2 mm (1/8 in.) wood. This standard is not intended to evaluate the fire endurance of assemblies, nor does it provide full information concerning the toxicity of combustion gases.*

ANSI/DASMA 108-2005, Standard Method for Testing Sectional Garage Doors and Rolling Doors: Determination of Structural Performance Under Uniform Static Air Pressure Difference

*This test method describes the determination of the structural performance of garage door and rolling door assemblies under uniform static air pressure difference, using a test chamber.*

ANSI/DASMA 109-2001, Standard Method for Testing Sectional Garage Doors: Determination of Life Cycling Performance

*Describes the evaluation apparatus of the physical cycling performance of a door system under normal operating conditions or other specified conditions. this test method describes the apparatus and the procedure to be used for applying cyclic operation to a test specimen.*

ANSI/DASMA 115-2005, Standard Method for Testing Garage Doors: Determination of Structural Performance Under Missile Impact and Cyclic Wind Pressure

*This test method determines the performance of garage doors and rolling doors impacted by missiles and subsequently subjected to cyclic static pressure differentials.*

ANSI/DASMA 116-2007, Section Interfaces on Residential Garage Door Systems

*This standard defines performance-based and prescriptive-based methods of evaluating section interfaces on residential garage doors.*

ANSI/DASMA 203-2004, Standard for Non-Fire Rated Rolling Doors

*This standard defines minimum design and performance specifications for non-fire rated rolling doors in commercial and industrial applications, consisting of assembled, interlocking slats of steel, stainless steel, or aluminum. This standard for non-fire rated rolling doors, is intended to cover commercial and industrial type doors normally used on garages, warehouses, factories and other places requiring doors generally used for vehicular traffic. This standard is not intended to cover doors used for pedestrian traffic or otherwise not used for vehicular traffic, nor other types of doors such as rigid, folding or multi-leaf sectional type doors, fire-rated rolling doors, concession/counter doors, coiling doors without interlocking slats (sheet doors), perforated slat construction or special applications.*

ANSI/DASMA 204-2004, Standard for Fire Rated Rolling Door Assemblies

*This standard defines minimum design and performance specifications for fire rated rolling door assemblies in commercial and industrial applications, consisting of assembled, interlocking slats of steel or stainless steel. Refer to individual manufacturer's listings. This standard for fire rated rolling door assemblies is intended to cover commercial and industrial type warehouses, factories and other facilities where a service counter fire door, fire shutter or fire door is required to close an opening in a firewall during an emergency. Rolling fire doors intended for frequent use should be designed for high cycle operation. Refer to section 13.1.2. This standard is not intended to cover doors used for egress passage, nor other types of doors such as rigid, folding or multi-leaf sectional type doors, coiling doors without interlocking slats (sheet doors), perforated slat construction or special*

ANSI/DASMA 303-2006, Performance Criteria for Accessible Communications Entry Systems

*Defines general requirement and performance-based criteria for evaluating accessible communications entry systems. This standard is intended to cover accessible communications entry systems generally used for public pedestrian access to controlled entry buildings for intercom or assistance purposes. This standard is not intended to cover communications entry systems generally used for emergency access.*

## DISA (Data Interchange Standards Association)

ANSI X12 Series, A collection of all ANSI-approved X12 standards. Individual X12 standards not available separately

ANSI X12.1-1998, Transaction Set Directory

*Provides a compilation of transaction sets in the X12 family of American National Standards for electronic data interchange. A transaction set is the collection of data that is exchanged in order to convey meaning between the parties engaged in electronic data interchange. A transaction set consists of a specific group of segments in a specific order.*

*NOTE: ASC X12 repackaged its individual transaction sets to be forwarded for review into a single draft proposed American National Standard (dpANS): this document is identified as dpANS X12.1. This dpANS is a revision of Version 3, X12.1, since this designation formally identified the Purchase Order (850) transaction set only. Now it includes the ASC X12 Transaction Set directory as a whole.*

ANSI X12.1-2004, Purchase Order Transaction Set (850)

*This draft proposed ANS is a compilation of transaction sets for Electronic Data Interchange. A transaction set is the collection of data that is exchanged in order to convey meaning between the parties engaged in EDI.*

ANSI X12.22-2004, Segment Directory

*This draft proposed ANS contains the format and definitions of the segments used to construct the transaction sets of the ASC X12 series of American National Standards on Electronic Data Interchange.*

ANSI X12.3-2004, Data Element Dictionary

*This draft proposed ANS contains the specifications of the data elements used to construct the segments that comprise the transaction sets of the ASC X12 series of American National Standards on Electronic Data Interchange*

ANSI X12.5-2004, Interchange Control Structure

*This draft proposed ANS defines the control structures for Electronic Data Interchange encoded transactions of ASC X12 (provides the interchange envelope of a header and trailer, and a structure to acknowledge the receipt and processing this envelope).*

ANSI X12.56-2004, Interconnect Mailbag Control Structures

*This draft proposed ANS defines the control segments used to start and end a mailbag containing EDI data to be exchanged between two interconnecting entities.*

ANSI X12.58-2004, Security Structures

*This draft proposed ANS defines the data formats for authentication, encryption, and assurances in order to provide integrity, confidentiality, and verification and non-repudiation of origin for two levels of exchange of EDI data.*

ANSI X12.59-2004, Implementation of EDI Structures--Sematic Impact

*This draft proposed ANS describes the meaning that is to be associated with data due to their positioning within the exchange of X12 information, and the data relationships that can be inferred from the data structure.*

ANSI X12.6-2004, Application Control Structures

*This draft proposed ANS defines the structure of business transactions for computer-to-computer interchange by using a symbolic representation of X12 data independent of the physical representation (e.g., character set encoding).*

## DMSC (Dimensional Metrology Standards Consortium, Inc.)

## EASA (Electrical Apparatus Service Association)

ANSI/EASA AR100-2006, Recommended Practice for the Repair of Rotating Electrical Apparatus

*Recordkeeping, tests, analysis, and general guidelines for the repair of rotating electrical apparatus, including generators and motors.*

## EIA (Electronic Industries Alliance)

ANSI J-STD-042-2002, Emergency Alert Message for Cable

*(SP-4969) Defines an Emergency Alert (EA) signaling method for use by cable TV systems to signal emergencies to digital terminal devices that are offered for retail sale. Such devices include digital set-top boxes, that are sold to consumers at retail, digital TV receivers, and digital VCR's. Cable terminals owned by cable operators may use this or other proprietary methods for EA signaling.*

ANSI/EIA 198-1-F-2002, Ceramic Dielectric Capacitors, Classes I, II, III, and IV

*(SP-4979) It provides means to characterize ceramic capacitors electrically and mechanically by use of type designators. In addition this section outlines dielectric classifications, marking specifications and test sequences.*

ANSI/EIA 198-2-E-1997, Ceramic Dielectric Capacitors - Classes I, II, III and IV - Part II: Test Methods

*Establishes uniform methods for testing ceramic capacitors, including basic environmental tests to determine resistance to deleterious effects of natural elements, and physical and electrical tests.*

ANSI/EIA 198-3-E-1997, Ceramic Dielectric Capacitors - Classes I, II, III and IV - Part III: Individual Specifications

*Provides means to characterize ceramic capacitors electrically and mechanically by use of type designators.*

ANSI/EIA 364-01B-2000, Acceleration Test Procedure for Electrical Connectors and Sockets

*Establishes test methods to determine the ability of an electrical connector and sockets to withstand a specified acceleration force without damage detrimental to its specified performance.*

ANSI/EIA 364-02C-1999 (R2006), Air Leakage Test Procedure for Electrical Connectors

*Details a standard method to determine the integrity of the seal of the shell, insert, and contact interfaces in an electrical connector.*

ANSI/EIA 364-03B-1999 (R2006), Altitude Immersion Test Procedure for Electrical Connectors

*The object of this test is to demonstrate the ability of the connector-to-wire and interface area seals of a mated connector assembly to perform satisfactiry during and subsequent to simulated rapid descents from high altitude with attendant moisture condensation.*

ANSI/EIA 364-04A-2001, TP-04, Normal Force Test Procedure for Electrical Connectors

*Establishes two methods to determine the magnitude of normal force, at the point of the electrical connection generated by a contact system at a given deflection within its normal operating levels.*

ANSI/EIA 364-05B-1998, Electric Connectors – Contact Insertion, Release, and Removal Force Test Procedure

*Establishes a test method to determine the forces required to insert contacts into and remove contacts from their normal position in a connector.*

ANSI/EIA 364-06C-2006, Contact Resistance Test Procedure for Electrical Connectors

*Establishes test methods to determine the resistance of mated connector contacts attached to lengths of wire by measuring the voltage drop across the contacts while they are carrying a specified current.*

ANSI/EIA 364-06C-2006, Contact Resistance Test Procedure for Electrical Connectors

*Establishes test methods to determine the resistance of mated connector contacts attached to lengths of wire by measuring the voltage drop across the contacts while they are carrying a specified current.*

ANSI/EIA 364-07B-1998, Electric Connectors – Crimp Contact Deformation Test Procedure

*Establishes a test method to determine the straightness of contacts by measuring a total indicator reading (TIR) value.*

ANSI/EIA 364-08B-1998, Electric Connectors – Crimp Tensile Strength Test Procedure

*Establishes a test method to determine the tensile strength of a crimped contact to conductor joint.*

ANSI/EIA 364-09C-1999 (R2006), Durability Test Procedure for Electrical Connectors

*Details a uniform test method for determining the effects caused by subjecting electrical connectors to the conditioning action of mating and unmating, simulating the expected life of the connectors.*

ANSI/EIA 364-100-1999 (R2006), Marking Permanence Test Procedure for Electrical Connectors

*Establishes a method of determining the marking permanence of electrical connectors and sockets.*

ANSI/EIA 364-1000.01A-2006, Environmental Test Methodology for Assessing the Performance of Electrical Connectors and Sockets Used in Business Office Applications

*Establishes the test procedures and test sequences to be followed when evaluating the performance of electrical connectors and sockets used in controlled environments.*

ANSI/EIA 364-101-2000, Attenuation Test Procedure for Electrical Connectors, Sockets and Cable Assemblies or Interconnection Systems

*Applies to electrical connectors, sockets, cable assemblies or interconnection systems. This standard was first listed for public review in the May 22, 1998 issue of Standards Action. It is being resubmitted due to substantive changes.*

ANSI/EIA 364-102-1998 (R2006), Rise Time Degradation Test Procedure for Electrical Connectors, Sockets, Cable Assemblies or Interconnection Systems

*This standard is applicable to electrical connectors, sockets, cable assemblies, or interconnection systems.*

ANSI/EIA 364-103-1998 (R2006), Propogation Delay Test Procedure for Electrical Connectors, Sockets, Cable Assemblies or Interconnection Systems

*This standard is applicable to electrical connectors, sockets, cable assemblies or interconnection systems.*

ANSI/EIA 364-104A-2000, Flammability Test Procedure for Electrical Connectors

*Establishes a test method to determine the connector's resistance to burning when exposed to a flame.*

ANSI/EIA 364-105-1999, Altitude - Low Temperature Test Procedure for Electrical Connectors

*Establishes a test method to simulate actual service usage by inducing low temperatures and applying the test voltage at simulated altitudes.*

ANSI/EIA 364-106-2000, Standing Wave Ratio (SWR) Test Procedure for Electrical Connectors and Sockets

*Establishes test methods to evaluate existing standing wave ratio (SWR) of connectors, coaxial, radio frequency. Measured SWR shall not exceed that specified over the frequency range specified. This standard was listed for Public Review in the May 7, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/EIA 364-107-2000, Eye Pattern and Jitter Test Procedure for Electrical Connectors, Sockets, Cable Assemblies or Interconnection Systems

*Provides a test procedure that is applicable to electrical connectors, cable assemblies, or interconnection systems.*

ANSI/EIA 364-108-2000, Impedance, Reflection Coefficient, Return Loss, and VSWR Test Procedure Measured in the

Time and Frequency Domain for Electrical Connectors, Cable Assemblies or Interconnection Systems

*Applies to interconnect assemblies, such as electrical connectors, and cable assemblies. This standard was first listed in the January 14, 2000 issue of Standards Action. It is being resubmitted due to substantive changes.*

ANSI/EIA 364-109-2003, Inductance (Loop) Measurement Test Procedure for Electrical Connectors (1 nH - 10 nH

*This procedure applies to interconnect assemblies, such as electrical connectors and sockets.*

ANSI/EIA 364-11B-2005, Resistance to Solvents Test Procedure for Electrical Connectors and Sockets

*This procedure is to determine the ability of connector materials to withstand solvents that may be used to clean components.*

ANSI/EIA 364-12A-2005, Restricted Entry Test Procedure for Electrical Connectors and Sockets

*Establishes a test method to determine the ability of socket contacts, classified as restricted entry types, to prevent the insertion of an oversized pin.*

ANSI/EIA 364-13C-2006, Mating and Unmating Forces Test Procedure for Electrical Connectors

*Establishes a method to determine the forces required to mate and unmate electrical connectors or protective caps with connectors, connectors/sockets with gages or devices.*

ANSI/EIA 364-14B-1999 (R2006), Ozone Exposure Test Procedure for Electrical Connectors

*Details the ability of connectors to withstand the effects of controlled amounts of ozone and still maintain effective environmental protection.*

ANSI/EIA 364-16A-2002, Stripping Force (Solderless Wrapped Connection) Test Procedure for Electrical Connectors

*Establishes test methods to determine the force required to move a solderless wire-wrapped connection along the post parallel to the axis of the post.*

ANSI/EIA 364-17B-1999, Electric Connectors – Temperature Life With or Without Electrical Load Test Procedure for Electrical Connectors

*Establishes a test method to determine the ability of an electrical connector and sockets to withstand elevated temperatures with or without electrical loading.*

ANSI/EIA 364-19A-2001, Torsional Insert Retention Test Procedure for Electrical Connectors

*Establishes test methods to determine theability of the insert retaining system to withstanding the torsional stresses likely to be encountered during normal usage.*

ANSI/EIA 364-20C-2004, Electric Connectors – Withstanding Voltage Test Procedure

*This standard applies to electrical connectors, sockets and coaxial contacts.*

ANSI/EIA 364-21C-2000, Electric Connectors – Insulation Resistance Test

*Applies to electrical connectors, sockets and coaxial contacts. This is the second public review for this standard. It first appeared in the June 5, 1998 issue of Standards Action and is being resubmitted now due to substantive changes to the text.*

ANSI/EIA 364-22B-2000, Life Test Procedure for Electrical Connectors and Sockets

*Establishes test methods to determine the adequacy of a connector or socket to perform its operational function on land (general and heavy duty), aircraft, marine or underwater for the representative time period of application.*

ANSI/EIA 364-23C-2006, Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets

*This test procedure may applies to any type or combination of current carrying members such as pin and socket contacts, relay contacts, wire and crimp connectors, or printed circuit board.*

ANSI/EIA 364-24B-1998, Electric Connectors – Maintenance Aging Test Procedure

*Establishes a test method to access the ability of a component to withstand stress caused by repeated insertion and extraction of contacts during maintenance.*

ANSI/EIA 364-25C-1998, Electric Connectors – Probe Damage Test Procedure

*Establishes test method to be followed for probe damage testing primarily intended for round socket contacts in electrical connectors. May be applicable to other type contacts.*

ANSI/EIA 364-26B-1999 (R2006), Electric Connectors – Salt Spray Corrosion Test Procedure

*Details a standard test method to assess the effects of a controlled salt laden atmosphere on electrical connector components, finishes and mechanisms.*

ANSI/EIA 364-29C-2006, Electric Connectors – Contact Retention Test Procedure

*Establishes a test method to impose axial forces on the connector contacts to determine the ability of the connector to withstand forces that tend to displace contacts from ther proper location within the connector insert and resist contact pullout.*

ANSI/EIA 364-30A-2002, Capacitance Test Procedure for Electrical Connectors and Sockets

*Applies to electrical connectors and sockets. This standard was listed for public review in the 8/25/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/EIA 364-31B-2000, Electric Connectors – Humidity Test Procedure

*Details standard test methods for the evaluation of the properties of connectors and sockets as they are influenced by the effects of high humidity and heat. This is the third public review for this standard. It was previously listed in the December 22, 1995 and March 14, 1997 issues of Standards Action and is being resubmitted now due to substantive changes to the text.*

ANSI/EIA 364-33A-2002, TP-33 Inductance Testing for Electrical Connectors

*SP-4829 Applies to connectors, mated pin-and-socket assemblies and individual contacts or printed-circuit-board (PCB) connector sockets.*

ANSI/EIA 364-35B-1998 (R2006), Insert Retention Test Procedure for Electrical Connectors

*Establishes a method to determine the ability of an insert to withstand axial forces in electrical connectors.*

ANSI/EIA 364-36B-2006, Determination of Gas-Tight Characteristics Test Procedure for Electrical Connectors

*Determine the integrity of contacting surfaces (at the mating and/or termination areas) by assessment of the gas tight characteristics of the contacting surfaces.*

ANSI/EIA 364-37B-1998, Electric Connectors – Contact Engagement and Separation Force Test Procedure

*Establishes test methods which, when required by the referencing document shall be used for measuring the engagement and separation forces on contacts.*

ANSI/EIA 364-38B-1999 (R2006), Cable Pull-Out Test Procedure for Electrical Connectors

*Details a standard method to determine the holding effect of a connector cable clamp without causing any detrimental effects upon the cable or connector components.*

ANSI/EIA 364-39B-1999, Electric Connectors – Hydrostatic Test Procedure

*Establishes a test method to assess the ability of unmated receptacles and wired mated harness to withstand hydrostatic pressures that are encountered in the indersea environment.*

ANSI/EIA 364-40B-1998, Electric Connectors – Crush Test Procedure

*Establishes a test method to determine the ability of a connector to withstand a load such as might be encountered when run over by a wheeled vehicle.*

ANSI/EIA 364-41C-1999, TP-41 Cable Flexing Test Procedure for Electrical Connectors

*Establishes a method to determine the effectiveness of circular jacketed cable to plug seal or interface to withstand strain under repeated alternating cable-flexing stresses as expected in use with cable strain-relief design electrical connectors.*

ANSI/EIA 364-42B-1998 (R2006), Impact Test Procedure for Electrical Connectors

*Determines the ability of a connector to withstand impacts of the type that might be encountered when a connector is dropped to the floor.*

ANSI/EIA 364-43B-2000, Cable Clamping (Bending Moment) Test Procedure for Electrical Connectors

*Establishes a test method to determine the ability of connectors to withstand stress resulting from loads applied to rear accessory hardware such as might be experienced with cables hanging from plugs mated to wall-mounted receptacles.*

ANSI/EIA 364-44-1998, Electric Connectors – Corona Testing

*Determines the ability of an electrical connector to operate with an acceptable level of partial discharge at working voltages up to the extinction voltage.*

ANSI/EIA 364-45A-2000, Proposed Upgrade of EIA IS 50A, TP45 Flame Test Procedure for Firewall Electrical Connectors

*Establishes a test method to determine the ability of an mated electrical firewall connector to resist specified flame and vibration during a 20-minute exposure by preventing the flame from breaching the firewall through the connector, and providing specified electrical performance for the first 6 minutes of the 20-minute exposure. This standard was listed for Public Review in the May 7, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/EIA 364-46B-2006, Microsecond Discontinuity Test Procedure for Electrical Connectors

*Defines a method of detecting a discontinuity of one microsecond or longer in a mated electrical connector, contact or socket.*

ANSI/EIA 364-47A-2001, Conductor Unwrap (Solderless Wrapped Connection) Test Procedure for Electrical Connectors

*Establishes test methods to determine if excessive damage or deformation of the conductor in a solderless wrapped connection has occurred as a result of the wrapping process.*

ANSI/EIA 364-48A-2006, Metallic Coating Thickness Measurement of Contacts Test Procedure for Electrical Connectors

*Test methods contained in this standard are being superseded by applicable ASTM standards.*

ANSI/EIA 364-50A-1998 (R2006), Dust (Fine Sand)Test Procedure for Electrical Connectors

*Establishes a test method to ascertain the ability of fully wired connector assemblies to resist the effects of a dry dust (fine sand) laden atmosphere.*

ANSI/EIA 364-51A-2002, Electrical Connectors - Ice Resistance Test Procedure

*Establishes test methods to determine the ability of mated electrical connectors to resist the effects of ice build-up due to water splashing or brief immersion in water, where water is free to drain off of the connector surfaces.*

ANSI/EIA 364-52A-2003, TP 52 Test Procedures for Solderability of Contact Terminations Use in Connectors/Sockets

*Establishes a test method for performing solderability testing of loose contacts by the solder dip technique, which is the preferred method of test for these components.*

ANSI/EIA 364-53B-2000, Electric Connectors – TP53, Nitric Acid Vapor Test, Gold Finish

*Establishes test methods to determine the magnitude of porosity as well as other surface defects inherent in application of gold contact finishes.*

ANSI/EIA 364-54A-1999 (R2006), Magnetic Permeability Test Procedure for Electrical Connectors, Contacts and Sockets

*Applies to electrical connectors, contacts and sockets.*

ANSI/EIA 364-56C-2006, Resistance to Soldering Heat Test Procedure for Electrical Connectors and Sockets

*Establishes a test method for determining whether connectors can withstand the effects of the heating and/or environment that they will be subjected to during the soldering of their terminations by solder dip, soldering iron, solder wave, or reflow soldering techniques.*

ANSI/EIA 364-58A-2003, Electric Connectors – Temperature Life With Mechanical Loading for Connectors with Removable Contacts (Static Mechanical Load at Temperature)

*SP-4918-A Establishes test methods to determine the ability of the contact retention system in an electrical connector with removable contacts to withstand a static mechanical load at elevated temperature.*

ANSI/EIA 364-62A-2004, TP-62A, Terminal Strength Test Procedure for Electrical Connectors and Sockets

*Establishes test methods to determine the ability of the terminals of an electrical connector to withstand the mechanical stressed likely to be applied during normal assembly operations.*

ANSI/EIA 364-65A-1997, Mixed Flowing Gas

*Covers test procedure for producing environmentally related corrosive atmospheres to determine the reaction of plated or unplated surfaces when exposed to different concentrations of flowing gas mixtures. This is the third public review for this standard. It was listed in the june 24, 1994 and December 8, 1995 issues of Standards Action*

ANSI/EIA 364-66A-2000, EMI Shielding Effectiveness Test Procedure for Electrical Connectors

*This standard establishes test methods for the measurement of the EMI shielding effectiveness of electrical connectors over the frequency range of 1.0 GHz to 10.0 GHz using the mode-stirred technique. The procedure applies to both circular and rectangular connectors.*

ANSI/EIA 364-68A-2001, Actuating Mechanism Test Procedure for Electrical Connectors

*Establishes a test method to determine the strength of the actuating mechanism of a connector release mechanism.*

ANSI/EIA 364-69A-2002, Low-Level Inductance Measurement for Electrical Contacts of Electrical Connectors

*Applies to electrical connectors and sockets with values in the range of 10 nanohenrys to 100 nanohenrys.*

ANSI/EIA 364-70A-1998, Test Procedure for Current vs Temperature Rise of Electrical Connectors

*Establishes test procedures for temperature rise measurements in electromechanical components carrying current.*

ANSI/EIA 364-71B-2000, Solder Wicking Test Procedures for Electrical Connectors

*SP-4872 Applies to connectors and sockets that are mounted to printed wiring boards (PWB) employing through mount technology.*

ANSI/EIA 364-75-1997 (R2006), Lightning Strike Test Procedure for Electrical Connectors

*Determines the capability of a connector pair to conduct the electrical current induced by a lightning strike.*

ANSI/EIA 364-78A-2002, New Test Procedure #78, Cavity-to-Cavity Leakage Bonding Integrity Test Procedure for Electrical Connectors

*Establishes a technique for evaluating the sealing integrity of the contact cavity walls of an environmentally sealed electrical connector by detecting leakage between a given contact cavity and those adjacent to it. This standard was listed for public review in the 11/17/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/EIA 364-79-1998, Insert Bond Strength Test Procedure for Electrical Connectors

*Provides a technique for evaluating the strength of a bond between one or more conpoments, for example, a grommet seal bonded to a connector insert.*

ANSI/EIA 364-80-2002, Low Frequency Shielding Effectiveness Test Procedure for Electrical Connectors and Sockers

*Describes two methods to measure the shielding transfer impedance of mated cable connectors in the frequency rnge 1- kHz to 100 MHz, (method A) and a connector located between a bulkhead panel and a shielded cable from 30 MHz to 500 MHz, (method B).*

ANSI/EIA 364-81A-2005, Combustion Characteristics Test Procedure for Electrical Connector Housing, Connector Assemblies and Sockets

*Establishes a test method that may be used to characterize the resistance of connector/socket housings including composite housings in their as molded condition with and without contacts relative to flammability for a particular application.*

ANSI/EIA 364-82A-2005, Corrosivity of Plastics Test Procedure for Electrical Connector Housing, Connector and Socket Housings

*Establishes test method to determine whether a plastic electrical connector or socket housing generates corrosive elements when in contact with metallic parts or components.*

ANSI/EIA 364-83-1999, Shell-to-Shell and Shell-to-Bulkhead Resistance Test Procedure for Electrical Connectors

*Applies to mated plugs and receptacles or mated plugs and receptacles mounted to a bulkhead with conductive shells and/or mounting flange.*

ANSI/EIA 364-87-1996, Nanosecond Event Detection for Electrical Connectors, Contacts and Sockets

*Defines methods for detecting events that can be as short as 1 nanosecond.*

ANSI/EIA 364-89A-2006, Space Application Test Procedures for Electrical Connectors, and sockets

*Includes several methods that, when required by the feferencing document, are to be used for measuring the thickness of electrical contact surface finishes.*

ANSI/EIA 364-90-2000, Crosstalk Ratiuo Text Procedure for Electrical Connectors

*Applies to interconnect assemblies, such as electrical connectors, sockets and cable assemblies.*

ANSI/EIA 364-91A-2005, Dust Test for Electrical Connectors and Sockets

*Establishes a test method to determine the susceptibility of an electrical connector or socket system to the potential degradation of a dust/fiber environment common to an office or manufacturing area.*

ANSI/EIA 364-92-1997, Wire Bending Test Procedure for Insulation Displacement Contacts (IDC) for Electrical Connectors

*Assesses the ability of an insulation displacement connection to withstand the mechanical stress caused by bending the connected wire or ribbon cable in a specified manner.*

ANSI/EIA 364-93-1997, Repeated Wire Connection and Disconnection Test Procedure for Insulation Displacement Contacts (IDC) for Electrical Connectors

*Assesses the ability of a reusable insulation displacement termination to withstand a specified number of connections and disconnections.*

ANSI/EIA 364-94-1997, TP-94, Transverse Extraction Force Test Procedure for Insulation Displacement Contacts (IDC) for Electrical Connectors

*Determines the force necessary to remove the wire within connection slot of an accessible insulation displacement termination along the longitudinal axis of the termination.*

ANSI/EIA 364-95-1999 (R2006), Full Mating and Mating Stability Test Procedure for Electrical Connectors

*Defines methods to evaluate the coupled condition of a connector plug, with its mating receptacle.*

ANSI/EIA 364-96-2002, TP-96, Plated Through Hole Integrity Test Procedure for Electrical Connectors

*Applies to complaint pins inserted in printed circuit boards with plated-through-holes (PTH).*

ANSI/EIA 364-97-1997, TP-97, Housing Panel Retention Test Procedure for Electrical Connectors

*Covers the test procedure for determining the mechanical retention of the panel locking feature housings when properly installed in panels.*

ANSI/EIA 364-98-1997, Housing Locking Mechanism Strength Test Procedure for Electrical Connectors

*Covers the test procedure for determining retention strength of the locking retention features of mated plastic connector housings.*

ANSI/EIA 364-99-1999 (R2006), Gage Location and Retention Test Procedure for Electrical Connectors

*Determine the ability of a connector to comply with specified location and retention measurements through the use of location and retention test gages.*

ANSI/EIA 364-D-2001, Electric Connector Test Procedure

*Establishes a recommended minimum test sequence and test procedures for electrical connectors and sockets.*

ANSI/EIA 448-19A-2000, Test Standard for Electromechanical Components - Environmental Effects of Machine Soldering Using a Vapor Phase System

*Evaluates electromechanical surface mountable components that have been subjected to the environmental effects of machine soldering using the batch type vapor phase system.*

ANSI/EIA 448-21A-2000, Test Standard for Electromechanical Components - Switch Environmental Effects of Machine Soldering Using an Infrared System

*Evaluates electromechanical surface mountable components which have been subjected to the environmental effects of machine soldering using an infrared system.*

ANSI/EIA 448-2A-2000, Test Standard for Electromechanical Components Environmental Effects of Machine Soldering

*Evaluates lectromechanical components, which have been subjected to the environmental effects of machine soldering and the associated fluxing, preheating and cleaning operations.*

ANSI/EIA 463-B-2003, Electrolytic Capacitors for Alternating Current Motor Starting, Heavy Duty (Type 1) and Light Duty (Type 2), Fixed Aluminum

*SP-5004 covers the requirements for aluminum electrolytic capacitors, nonpolarized , sealed in plastic or aluminum cases, which are for intermittent service starting single phase alternating current induction motors.*

ANSI/EIA 469-D-2006, Test Method for Destructive Physical Analysis (DPA) of Ceramic Monololithic Capacitors

*Provides terminology, methods, and criteria for characterizing the internal structural features of monolithic, ceramic dielectric capacitors.*

ANSI/EIA 481-C-2003, 8 mm through 200 mm Embossed Carrier Taping and 8 mm &12 mm Punched Carrier Taping of Surface Mount Components for Automatic Handling

*Covers requirements for taping surface mount components*

ANSI/EIA 4899-2002, Standard for Preparing an Electronic Components Management Plan

*Defines the requirements for developing an Electronic Components Management Plan to assure customers and regulatory agencies that all of the electronic components in the equipment of the plan owner are selected and applied in controlled processes and that the Technical Requirements are accomplished.*

ANSI/EIA 4900-2002, Use of Semiconductor Devices Outside Manufacturers' Specified Temperature Ranges

*Prescribes processes for using semiconductor devices in wider temperature ranges than those specified by the device manufacturer. It applies to any designer or manufacturer of equipment intended to operate under conditions that require semiconductor devices to function in temperature ranges beyond those for which the devices are marketed.*

ANSI/EIA 495-A-1989 (R1997), Film Dielectric Capacitors with Metallized Paper Electrodes for Alternating Current Applications

*Describes some of the requirements for film dielectric capacitors, oil filled or impregnated, made with two metallized paper electrodes, or one metallized paper electrode and one aluminum foil electrode, and sealed in metal cases.*

ANSI/EIA 500-A-1989 (R2001), Measurement of X-Radiation from Projection Cathode Ray Tubes, Recommended Practice for

*Applies to the mesurement of X-radiation emitted from projection cathode ray tubes.*

ANSI/EIA 501-A-1990 (R2001), Measurement of X-Radiation from Raster-Scanned Direct-View Data Display Cathode Ray Tubes, Recommended Practice for

*Applies to the measurement of X-radiation emitted from raster-scanned direct-view data cathode ray tubes.*

ANSI/EIA 503-A-1990 (R2001), Recommended Practice for Measurement of X-Radiation from Direct-View Television Tubes

*Applies to the measurement of X-radiation emited from direct-view television picture tubes.*

ANSI/EIA 5200000-D-2000, Generic Specification for Special-Use Electromechanical Switches of Certified Quality

*Relates to special-use electromechanical switches of certified quality.*

ANSI/EIA 520E000-A-2000, Sectional Specification for In-Line Switches of Certified Quality

*Relates to in-line switches of certified quality.*

ANSI/EIA 520FA00-1992 (R1997), Blank Detail Specification for Special-Use Rotary Switches of Certified Quality

*Supplements the sectional specification containing requirements for style, layout and minimum content of detail specifications.*

ANSI/EIA 535BAAC-A-1998, Fixed Tantalum Chip Capacitor Style 1 Protected – Standard Capacitance Range

*Presents the fixed tantalum chip capacitor Style 1 protected (molded), polar, nonhermetically sealed.*

ANSI/EIA 540A000-A-1990 (R1997), Sectional Specification for Sockets for Chip Carriers for Use in Electronic Equipment

*Provides a means of assuring interchangeability between devices, compatibility between circuit boards and the chip carriers, and also provides standard test methods.*

ANSI/EIA 540AA00-1991 (R1997), Chip Carrier Sockets for Leadless type A,B,D Chip Carriers for use in Electronic Equipment, Blank Detail Specification for

*Provides all the information required for the identification and quality assessment of chip carriers sockets for leadless A, B, and D chip carriers.*

ANSI/EIA 540AAAA-1990 (R1997), Chip Carrier Sockets for Leadless Type A 1.27 mm (.050") Spacing Chip Carriers for Use in Electronic Equipment

*Provides all the information required for the identification and quality assessment of the chip carrier sockets for leadless type A packages (CCS/LLA described).*

ANSI/EIA 540AB00-1991 (R1997), Chip Carrier Sockets for Plastic Quad Flat Packages for Use in Electronic Equipment, Blank Detail Specification for

*Provides all the information required for the identification and quality assessment of chip carrier sockets for plastic quad flat packages.*

ANSI/EIA 540ABAA-1991 (R1997), Detail Specification for Chip Carrier Sockets for Plastic Quad Flat Pack 0.635-mm

(0.25-in) Lead Spacing (Gullwing)

*Provides all the information required for the identification and quality assessment of the chip carrier sockets for plastic quad flat packages (PQFP) with lead spacing on 0.635 mm (0.025 in) centers and "Gullwing" shaped leads.*

ANSI/EIA 540AC00-1991 (R1997), Chip Carrier Sockets for Plastic Chip Carrier (PCC) Packages with J Type Leads for Use in Electronic Equipment, Blank Detail Specification for

*Provides all information required for the identification and quality assessment of chip carrier sockets for plastic chip carriers with "J" type leads.*

ANSI/EIA 540ACAA-1991 (R1997), Chip Carrier Sockets for Plastic Chip Carrier Family 1.27 mm (0.50 inch) Lead Spacing, Detail Specification for

*Provides all the information required for the identification and quality assessment of the chip carrier sockets for plastic chip carrier (PCC) family with lead spacing.*

ANSI/EIA 540AD00-1991 (R1997), Adapter-Carrier Quad Flat Pack to Pin Grid Array Sockets for Use in Electronic Equipment, Blank Detail Specification for

*Provides all information required for the identification and quality assessment of adaptor carrier quad flat pack to pin grid array sockets.*

ANSI/EIA 540ADAA-1992 (R1998), Adaptor-Carrier Quad Flat Pack to Pin Grid Array Sockets for Use in Electronic Equipment, Detail Specification for

*Provides data for the identification and quality assesment of Quad Flatpack Carrier with solder land ares for attaching surface mount devices.*

ANSI/EIA 540B000-1989 (R1997), Sectional Specification for Sockets for Pin-Grid Array Devices with 2.54 mm ¥ 2.54 mm (0.1" ¥ 0.1") Spacing for Use in Electronic Equipment

*Relates to the sockets for pin grid array devices of assessed quality.*

ANSI/EIA 540B0AA-2001, Detail Specification for Production Ball Grid Array (BGA) Sockets with 1.27 mm (0.050 in) Spacing for Use in Electronic Equipment

*Covers interconnect systems typically used for production ball grid array (BGA) devices with pin counts of 1089 and greater.*

ANSI/EIA 540B0AE-2000, Detail Specification for Production Land Grid Array (LGA) Socket with 1.27 mm (0.050 in) Spacing for Use in Electronic Equipment

*Covers interconnect systems typically used for production land grid array (LGA) devices. The contacts are on 1.27 mm (0.50 in) contact spacing. This is the second public review for this standard. It was originally listed in the December 19, 1997 issue of Standards Action and is being resubmitted due to substantive changes to the text.*

ANSI/EIA 540BA00-1990 (R1997), Blank Detail Specification: Sockets for Pin Grid Array Devices with 2.54 mm ¥ 2.54 mm (0.1" ¥ 0.1") Spacing for Use in Electronic Equipment

*Provides information for the identification and quality assessment of the pin grid array socket described.*

ANSI/EIA 540BAAB-1990 (R1997), Non-Mechanically Activated Sockets for Pin Grid Array Devices with 2.54 mm ¥ 2.54 mm (0.1" ¥ 0.1") Spacing for Use in Electronic Equipment

*Provides all information required for the identification and quality assessment of pin grid array sockets described.*

ANSI/EIA 540BAAC-1990 (R1997), Nonmechanically Actuated Flexible Carrier Sockets for Pin Grid Array for Use in Electronic Equipment, Detail Specification for

*Provides all information required for the identification and quality assessment of pin grid array sockets for the NECQ quality assesment system.*

ANSI/EIA 540C000-1988 (R1996), Sectional Specification for Sockets for Relays for Use in Electronic Equipment

*Covers sockets for plug-in relays, of assessed quality. Provides a means of assuring interchangeability between these devices, compatibility between these sockets and their associated relays, and provides standard socket test methods and performance requirements.*

ANSI/EIA 540CA00-1989 (R1996), Blank Detail Specification on Relay Sockets

*Provides all information required for the identification and quality assessment of the relay sockets described. The information, contained herein or by references, is complete and sufficient for inspection purposes.*

ANSI/EIA 540CAAA-1989 (R1996), Detail Specification on Relay Sockets – 10A for Balanced Armature Relay

*Describes relay sockets of assessed quality having the following characteristics: the ability to mate with 10 ampererated hermetically sealed relays; a rated voltage not to exceed 250 volts (rms) at sea level; and the ability to withstand airborne type environments.*

ANSI/EIA 540CAAB-1989 (R1996), Detail Specification for Relay Sockets – 5A for Balanced Armature Relay

*Covers relay sockets of assessed quality, having the ability to mate with 5 ampere-rated hermetically sealed relays, with a rated voltage not exceeding 250 volts (rms) at sea level, and the ability to withstand airborne type environments.*

ANSI/EIA 540CAAC-1998, Detail Specification for 2-Pole 10A Relay Sockets

*Provides all information required for the identification and quality assessment of the relay socket described. This standard was originally listed in the June 6, 1997 issue of Standards Action. It is now being resubmitted due to substantive changes to the text*

ANSI/EIA 540CAAD-A-1999, Detail Specification for 2-Pole, 5A Relay Sockets

*Provides all information required for the identification and quality assessment of 2-pole, 5A relay sockets. This is the second public review for this standard. It was first listed for public review in the June 6, 1997 issue of Standards Action as a reaffirmation and is now changed to a revision.*

ANSI/EIA 540CAAE-A-1999, Detail Specification for 3-Pole 10A Relay Sockets

*Provides all information required for the identification and quality assessment of the relay socket described herein under the EIA system. This is the second public review for this standard. It first appeared in the June 6, 1997 issue of Standards Action and is being resubmitted now due to substantive changes to the text.*

ANSI/EIA 540D000A-1991 (R1997), In-Line Package Sockets for Use in Electronic Equipment, Sectional Specification for

*Relates to the plug-in sockets designed for in-line electronic packages of assessing quality.*

ANSI/EIA 540DA00-1991 (R1997), Dual-In-Line Package Sockets for Use in Electronic Equipment, Blank Detail Specification for

*Provides all information required for the identification and quality assessment of dual in-line package sockets for the NECQ quality system.*

ANSI/EIA 540DAAB-1991 (R1997), Detail Specification for Flexible Carrier 2-Piece Dual-In-Line Socket for Use in Electronic Equipment

*Describes dual in-line sockets or assessed quality having working voltage not to exceed 250 volts.*

ANSI/EIA 540DB00-1993 (R1999) , Blank Detail Specification for Decoupling Capacitor Dual-in-Line Package Sockets

*Provides all information required for identification and quality assessment of Decoupling Capacitor Dual In-Line Packaging Sockets within the NECQ Quality system.*

ANSI/EIA 540DBAA-1994 (R1999), Detail Specification for Decoupling Capacitor Dual-In-Line Package Sockets for Use in Electronic Equipment

*Covers specifications for decoupling capacitor dual in-line package sockets for use in electronic equipment.*

ANSI/EIA 540E000-1992 (R1999), Sectional Specification for Round Style Sockets

*Defines a unified numbering system to be used for round-style sockets standardized by EIA.*

ANSI/EIA 540EA00-1997, Blank Detail Specification for Round Style Sockets

*Provides all information requried for the identifiactin and quality assessment of Round Style package sockets for the NECQ quality system using the Sectional Sepcification EIA-540EOOO as a base.*

ANSI/EIA 540EAAA-1997, Detail Specification for Round Style Sockets

*Provides all information required for the identification and quality assessement of Round Style package sockets for the NECQ quality system using Sectional Specifications EIA 540EOOO as a base.*

ANSI/EIA 540F000-1991 (R1997), Multi-Package Module Sockets for Use in Electronic Equipment, Sectional Specification for

*Defines a unified numbering system to be used with multi-package module carrier sockets standardized by EIA.*

ANSI/EIA 540FAAA-1992 (R1998), Detail Specification for Multi-Package 100 Mil Pitch, Vertical Mounting Format Module Sockets for Use in Electronic Equipment

*Provides data for the identification and quality assessment of these sockets for the NECQ quality system.*

ANSI/EIA 540FAAB-1992 (R1998), Detail Specification for Multi-Package 100 Mil Pitch, Angled Mounting Format Module Sockets for Use in Electronic Equipment

*Provides data for the identification and quality assessment of these sockets for the NECQ quality system.*

ANSI/EIA 540FAAC-1992 (R2001), Detail Specification for Multi-Package 50 Mil Pitch, Vertical Mounting Format Module Sockets for Use in Electronic Equipment

*Applies to sockets for multi-package modules, vertical mounting.*

ANSI/EIA 540FAAD-1992 (R2001), Detail Specification for Multi-Package 50 Mil Pitch, Angled Mounting Format Module Sockets for Use in Electronic Equipment

*Applies to sockets for multi-package modules, angled mounting.*

ANSI/EIA 540G000-1993 (R2001), Sectional Specification for Burn-In Sockets for Use in Electronic Equipment

*Relates to burn-in sockets of assessed quality.*

ANSI/EIA 540GA00-1993 (R2001), Blank Detail Specification for Burn-In Socket for Chip Carrier Packages with Molded Carrier Rings for Use in Electronic Equipment

*Provides all information required for the identification and quality assessment of the burn-in sockets for chip carrier packages with molded carrier rings.*

ANSI/EIA 540GAAA-1993 (R2001), Detail Specification for Burn-In Sockets for Chip Carrier Packages with Molded Carrier Rings for Use with Electronic Equipment

*Provides all information required for the identification and quality assessment of the burn-in sockets for chip carrier packages that are defined by EIA/JEDEC Publication 95.*

ANSI/EIA 540H000-1997, Sectional Specification for Burn-In Sockets Used with Ball Grid Array Devices for Use in Electronic Equipment

*Relates to the burn-in sockets for Ball Grid Array (BGA) devices of assessed quality.*

ANSI/EIA 540HA00-2000, Blank Detail Specification for Burn-In Sockets Used with Ball Grid Array Devices for Use in Electronic Equipment

*Provides specifications for ball grid array (BGA) burn-in sockets of assessed quality having a maximum enclosure (maximum length, width and height dimensions) and a working voltage not exceeding __ volts and a current not exceeding __ ampere per pin. This is the third public review for this standard. It was originally listed in the November 22, 1996 and the December 5, 1997 issues of Standards Action and is being resubmitted due to substantive changes to the text.*

ANSI/EIA 540HAAA-2000, Detail Specification for Burn-In Sockets Used with Ball Grid Array Devices for Use in Electronic Equipment

*Relates to the burn-in sockets for ball grid array (BGA) devices of assessed quality. This is the third public review for this standard. It was originally listed in the November 22, 1996 and the January 16, 1998 issues of Standards Action and is being resubmitted due to substantive changes to the text.*

ANSI/EIA 540J000-2000, Sectional Specification for Battery Holders for Use in Electronic Equipment

*Provides a means of interchangeability between qualified devices and compatibility between the board and the battery holder and to provide standard test methods, gauges and performance requirements.*

ANSI/EIA 540J0AA-2000, Detail Specification for Cylindrical Battery Holders, Standard Profile, for use in Electronic Equipment

*Covers cylindrical battery holders of assessed quality.*

ANSI/EIA 540J0AB-2001, Detail Specification for Coin Cell Battery Holders for Use in Electronic Equipment

*Comprises a specification for use with standard industry-defined batteries.*

ANSI/EIA 542-1997, Cable Television Channel Identification Plan

*This standard specifically designates 6 MHz channel number allocations for 158 channels up to 1002 MHz, with a method of specifying higher channels.*

ANSI/EIA 554-1-1996 (R2002), Assessment of Average Outgoing Quality Levels in Parts Per Million (PPM)

*Provides a uniform method if measurement and calculation of average outgoing quality levels. Minimum sample sizes and a method for aggregating data are provided.*

ANSI/EIA 554-2-1996 (R2002), Assessment of Nonconforming Levels in Parts Per Million (PPM)

*Provides a uniform method of assessing quality levels in situations with audit sampling rather than acceptance sampling is performed.*

ANSI/EIA 554-A-1996 (R2002), Assessment of Outgoing Nonconforming Levels in Parts Per Million (PPM)

*Provides guidance for selecting standardized methods for estimating the proportion nonconforming expressed a PPM.*

ANSI/EIA 555-1988 (R2002), Lot Acceptance Procedure for Verifying Compliance with the Specified Quality Level (SQL) in PPM

*Provides a means by which PPM nonconformance level requirements can be verified on a lot to lot basis until such time that quality approaches the ultimate objective or near zero conformance.*

ANSI/EIA 557-B-2006, Statistical Process Control Systems

*This document describes the general requirements of a statistical process control (SPC) system.*

ANSI/EIA 575-A-2005, Resistors, Rectangular, Surface Mount, General Purpose

*Covers thick film general purpose rectangular leadless discrete fixed resistors with temperature coefficients of + 350 PPM/ºC.*

ANSI/EIA 576-A-2005, Resistors, Rectangular, Surface Mount, Precision

*Covers thin film precision rectangular leadless discrete fixed resistors with temperature coefficients of + 50 PPM/ºC.*

ANSI/EIA 580A0AB-1999, Detail Specification for Fixed Metallized Polyethylene Terephthalate Film Dielectric DC Capacitors Radial-Leaded

*Covers fixed metallized polyethylene terephthalate film dielectric DC capacitors radial-leaded.*

ANSI/EIA 580A0AC-1998, Detail Specification for Fixed Metallized Polyethylene Terephthalate Film Dielectric DC Capacitors Axial Leaded

*Covers fixed metallized polyethylene terephthalate film dielectric DC capacitors axial leaded.*

ANSI/EIA 580BA00-1997, Blank Detail Specification: Fixed Metallized Electrode Film Dielectric AC Capacitors

*This standard is a supplementary document to the Sectional Specification and contains requirements for style and layout and minimum content of detail specifications.*

ANSI/EIA 584-1991 (R2002), Zero Acceptance Number Sampling Procedures and Tables for Inspection by Attributes of a Continuous Manufacturing Process

*Conventional attribute sampling plans based upon nonzero acceptance numbers are no longer desirable. In addition, emphasis is now placed on the quality level that is received by the customer.*

ANSI/EIA 585-1991 (R2002), Acceptance Number Sampling Procedures and Tables for Inspection by Attributes of Isolated Lots

*Conventional attributes sampling plans based upon acceptance numbers that permit acceptance of a lot when some allowable number of nonconformances are encountered during inspection are no longer desirable.*

ANSI/EIA 591-1992 (R2002), Assessment of Quality Levels in PPM Using Variables Test Data

*Pertains to the traditional approach to measuring levels of nonconformance using attribute data, whether the results are stated in percent or Parts Per Million (PPM), which becomes more burdensome as the nonconformance levels approach zero.*

ANSI/EIA 599-A-1998 (R2002), National Electronic Process Certification Standard

*Covers requirements for taping surface mount components. Complementary standards for specialized taping requirements are included in the addendum.*

ANSI/EIA 601-A-1998, General Procedures for Capability Approval of Electronic Components in the NECQ-System

*Specifies requirements for the approval and maintenance of a manufacturer's capability and the procedures for the test and release of electronic components manufactured under capability approval. Also includes requirements for generic specifications that invoke this standard.*

ANSI/EIA 616-A-2002, Two-Millimeter, Two-Part Connectors for Use with Printed Boards and Backplanes

*(SP-4644-A) Applicable to modular two-part connectors for printed boards associated with equipment for telecommunication or electronic devices using similar techniques.*

ANSI/EIA 632-2003, Processes for Engineering a System

*(SP-5022) Intended to enable an enterprise to strengthen its competitiveness in global markets by engineering and producing quality systems, and by delivering it products on time at an affordable price or cost. The focus, therefore, is on conceptualizing, creating, and realizing a system and the products that make up a system.*

ANSI/EIA 654-2000, Resistance to Soldering Heat Test Procedure for Wire and Electrical Components

*Determines whether wire and other component parts can withstand the effects of the heating and/or environment to which they will be subjected during the soldering of their terminations by soldering iron, solder dip, solder wave, or other soldering techniques.*

ANSI/EIA 670-1997, Quality Systems Assessment

*This standard is for the use by the electronic industry for preparation of audity checklists for compliance of quality systems to the requirements of ANSI/ASQC Q9001 (ISO 9001) and others. See 1 Scope for more details.*

ANSI/EIA 674-A-2006, Specification for Dimensions and Connector Locations of Small Form Factor 45 Millimeter (1.8 Inch) Disk Drive

*This specification defines the dimensions and connector locations of 45 millimeter (1.8 inch) small form factor disk drives.*

ANSI/EIA 676-A-2006, Specification for Parallel 1.8 Inch Drive Form Factor (78 millimeter x 54 millimeter)

*Defines the configuration characteristics associated with the 78 millimeter x 54 millimeter (1.8 inch) form factor drive that has a parallel interface and operates at 3.3V.*

ANSI/EIA 677-1997 (R2006), Specification for Small Form Factor Power Connector Pin Dimensions

*Defines the pin dimensions of the 4-pin pin-and-socket connector commonly used to provide power to small form factor disk drives.*

ANSI/EIA 699-1997, Test Method for the Visual Inspection of Quartz Crystal Resonator Blanks

*Provides nomenclature, methods and criteria for characterizing acceptable quartz resonator blanks. Its major objective is to aid in the evaluation of the crystal blank visual inspection of quartz crytal resonator blanks for the purpose of contributing to the complete evaluation of a product.*

ANSI/EIA 700A000-1997, Sectional Specification for Printed Board Connectors of Certified Quality (for use in dc/Low Frequency Analog Applications and in Digital Applications Employing High Speed Data Rates)

*Applies to printed board connectors of assessed quality for use in direct current and analog or digital applications for frequencies below 3 MHz and in digital applications requiring higher data rate frequencies.*

ANSI/EIA 700A0AD-1997, Detail Specification for the Interface of the 1.27-mm Pitch, Ribbon Contact (Leaf Spring) Trapezoidal Shaped, Self-Locking I/O Connector

*Covers rectangular self-locking connectors with ribbon style (leaf sping) connector contacts on 1.27-mm (0.050-in) contact spacing.*

ANSI/EIA 700AOAE-2000, Detail Specification for Trapezoidal Connectors with Non-Removable Ribbon Cable Contacts on 1.27 mm Pitch Double Row Used with Single Connector Attachments (SCA2)

*Establishes uniform specifications, testing requirements and quality assessment procedures.*

ANSI/EIA 700AOAF-2000, Detail Specification for Trapezoidal Shielded Connector 0.8 mm Pitch Used with Very High Density Cable Interconnect (VHDCI)

*Establishes uniform specifications, type testing requirements, and quality assessment procedures. This standard was originally listed in the February 14, 1997 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/EIA 700B000-1999, Sectional Specification for Rectangular/Trapezoidal Connectors

*Applies to connectors for use in direct current and analog applications for frequencies below 3 MHz and in digital applications requiring higher data rate frequencies.*

ANSI/EIA 700BA00-1998, Blank Detail Specification for Rectangular/Trapezoidal Connectors of Certified Quality

*Establishes uniform specifications, type testing requirements, and quality assessment procedures for a family of connectors. Provides format to be followed when writing detail standards subordinate to EIA PN-2958, Sectional for Rectangular Connectors.*

ANSI/EIA 700BAAD-2000, Detail Specification for Shielded Rectangular Connectors for Universal Serial Bus Plus Power Connectors Series "A"

*Covers rectangular shielded connectors for jacketed cable (discrete wire non-removable contacts) on variable pitch. This standard was originally listed for public review in the September 24, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/EIA 700BAAE-2000, Detail Specification for Shielded Rectangular Connectors for Universal Serial Bus Plus Power Connectors Series"B"

*Applies to rectangular cable-to-board connectors having the following characteristics: shielding, 4 to 20 positions, rectangular-shaped mating interface, 2.54-mm pitch spacing on a single-row or double row connector(s); for discrete wire-to-board applications; keying for determination of voltage requirements. This standard was originally listed for public review in the September 24, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/EIA 700C000-1996, Sectional Specification for Circular Multicontact Connectors of Assessed Quality (for Frequencies Essentially Below 3MHz)

*Describes circular multi-contact connectors of assessed quality for use in direct current and low frequency analog applications, and in digital applications employing high speed data rates. Shall be used in conjunction with American National Standard Generic Specification for Electronic and Electrical Connectors of Certified Quality (for Frequencies Essentially below 3 MHz), ANSI/EIA 7000000-1993.*

ANSI/EIA 700D000-1997, Sectional Specification for Discrete Contacts of Certified Quality

*Applies to discrete contact components for use in direct current and analog applications for frequencies below 3 mhz and in digital applications requiring higher data rate frequencies.*

ANSI/EIA 710-1997, Requirements Guide for Space Grade Electrical Connectors

*Provides the information concerning what the minimum requirements are for all electrical connectors being used in any space flight application.*

ANSI/EIA 720-A-2007, Specification for Small Form Factor 63.5 mm (2.5”) Disk Drives

*Defines the dimensions and connector locations of 63.5 millimeters (2.5 inch) small form factor disk drives.*

ANSI/EIA 724-1997, Product Life Cycle Data Model

*Defines a product life cycle curve model for use by the electronics industry to standardize the terms and definitions used to describe the life cycle status of a product.*

ANSI/EIA 740-1999, Specification for Small Form Factor 88.9 mm (3.5 in) Disk Drives

*Defines the dimensions and interconnections of 88.9 mm (3.5 in) small form factor disk drives.*

ANSI/EIA 741-2002, Specification for Small Form Factor 133.35 mm (5.25 in) Disk Drives (SP-3877-A)

*Defines the dimensions and inteconnections of 133.35 mm (5.25 in) small form factor disk drives. This standard was listed for public review in the 5/22/1998 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*
*On Page 6, Figure 2, Definition of Screw Threads: change the specified screw threads from: 6-32 UNC-2B to: M3*

ANSI/EIA 743-1999, Usable Screen Dimensions for Monochrome Display Tubes

ANSI/EIA 748-A-1998 (R2002), Earned Value Management System

*(SP-4980) The earned value management system guidelines incorporate best business practices to provide strong benefits for program or enterprise planning and control. The processes include integration of program scope, schedule, and cost objectives, establishment of a baseline plan for accomplishment of program objectives, and use of earned value techniques for performance measurement during the execution of a program.*

ANSI/EIA 765-A-2000, International and National Quality Standards Index

*Provides a quick reference of international and national quality standards and publications that support general quality system elements. This reference is a list of quality standards that a company may wish to consider when implementing or improving their quality system. Electronic copy available from*

*emikoski@eia.org.*

ANSI/EIA 772-2001, Users Application Guide to Fuses

*Aids the circuit and system designer in the selection of supplemental fuses.*

ANSI/EIA 773-2000, Checklist for Documentation Development and Revision

*Aids in the development and/or revision of EIA standards.*

ANSI/EIA 830-2000, Model for Integrating Metrics into the Procurement Process

*Describes a model that is applicable during the acquisition process to gain insight into suppliers' approaches to using metrics in monitoring, managing, and improving their processes and products. This model also facilitates a common framework to understand and recognize potential suppliers' performance on relevant past contract or purchase orders.*

ANSI/EIA 832-2000, Process Improvement Guidelines

*To guide a manufacturer through a methodology for analyzing, modeling, controlling, validating and improving products and services through the use of effective and measurable engineering practices. Electronic copy available from emikoski@eia.org*

ANSI/EIA 948-2004, Component Tray for Automated Handling

*Covers requirements for component trays used during automated handling.*

ANSI/EIA 956-2006, Aluminum Electrolytic Chip Capacitor with Polymer Cathode

*Polar, Nonhermetically sealed chip capacitor with conductive polymer and electrical circuits.*

ANSI/EIA/CEA 364-28E-2006, Vibration Test Procedure for Electrical Connectors and Sockets

*Details a method to assess the ability of electrical connector components to withstand specified severities of vibration.*

ANSI/EIA/CEA 364-32D-2006, Thermal Shock (Temperature Cycling) Test Procedure for Electrical Connectors

*This test is conducted for the purpose of determining the resistance of a given electrical connector or socket to exposure at extremes of high and low temperatures and to the shock of alternate exposurers to these extremes, simualating the worst probable conditions of storage, transportation and application.*

ANSI/EIA/CEA 364-59A-2006, Low Temperature Test Procedure for Electrical Connectors and Sockets

*Establishes a test method for exposing electrical connectors and sockets to low temperature for a specified duration.*

ANSI/EIA/ECA 364-10D-2006, Fluid Immersion Test Procedure for Electrical Connectors

*This standard establishes test methods to determine the ability of an electrical connector or connector assembly to resist degradation due to exposure to specific fluids with which whe connector assembly may come into contact during its service life.*

ANSI/EIA/ECA 364-110-2006, Thermal Cycling Test Procedure for Electrical Connectors

*Establishes a test method to determine the effectiveness of connectors to exposure at extremes of high and low temperatures at a specified ramp up and ramp down rates.*

ANSI/EIA/ECA 364-15A-2006, Contact Strength Test Procedure for Electrical Connectors

*Establishes a test method to determine the pin contact strength for contact sizes 20 and smaller when subjected to a defined bending stress (or moment.*

ANSI/EIA/ECA 364-18B-2007, Visual and Dimensional Inspection Test Procedure for Electrical Connectors and Sockets

*Establishes guidelines for visual and dimensional inspection of electrical connectors and sockets prior to, during, and after other test procedures.*

ANSI/TIA 455-43A-1999, Output Near-Field Radiation Pattern Measurement of Optical Waveguide Fiber

*SP-3308-1 was prepared by the FO-6.6 Subcomittee on Optical Fibers and Materials. Balloting on SP-3308 closed on June 15, 1994. There were nine affirmative ballots, three affirmative ballots with comment, and one No comment ballot was received. The comments were addressed by the FO-6.6 Subcommittee. Because of technical changes being made to the document, the chairman deemed it necessary to issue a 30 day Public Review Notice, thus SP-3308-1.*

## EIA (Environmental Industry Associations)

ANSI Z245.1-1999, Refuse Collection, Processing, and Disposal Equipment – Mobile Refuse Collection and Compaction Equipment – Safety Requirements

*Establishes safety and design requirements for the manufacture, reconstruction, modification, maintenance, service, operation, and installation (where applicable) of mobile, collecting, transporting, and compacting equipment. It applies to all persons engaged in the manufacture, modification, operation, cleaning, maintenance, service, or repair of this equipment. Revision to include clauses for work brake, dual drive, conspicuity, cargo securement, and safety training provisions.*

ANSI Z245.2-1997, Equipment Technology and Operations for Wastes and Recyclable Materials -Stationary Compactors - Safety Requirements

*Applies to persons engaged in the manufacture, modification, operation, cleaning, maintenance, service, or repair of stationary compactors. Establishes safety requirements for manufacture, reconstruction, modification, maintenance, service, installation, and operation of stationary compactors.*

ANSI Z245.30-1999, Refuse Collection, Processing, and Disposal Equipment – Waste Containers – Safety Requirements

*Establishes safety requirements for the manufacture, reconstruction, use, modification, maintenance, service, operation, and installation (where applicable) of containers, two wheeled carts, and two wheeled cart lifters used in conjunction with the collection, processing and disposal (including the diversion of wastes for recycling) of municipal, commercial and industrial solid wastes by private companies and public entities. Applies to all persons engaged in the manufacture, modification, operation, use cleaning, maintenance service or repair of these containers and cart lifters.*

ANSI Z245.41-1997, Equipment Technology and Operations for Wastes and Recyclable Materials - Facilities for the Processing of Commingled Recyclable Materials - Safety Requirements

*Establishes safety requirements for the design, manufacture, installation, reconstruction, modification, maintenance, and operation of material recovery facilities that engage in receiving, storing, and processing commingled recyclable materials that have been previously collected or otherwise diverted from the solid waste stream.*

ANSI Z245.5-1997, Equipment Technology and Operations for Wastes and Recyclable Materials - Baling Equipment - Safety Requirements

*Establishes safety requirements for the manufacture, installation, reconstruction, modification, maintenance and operation of balers. Standard does not apply to mobile and stationary compaction equipment.*

ANSI Z245.60-1999, Refuse Collection, Processing, and Disposal Equipment – Waste Containers – Compatibility Dimensions

*Contains dimensional specifications that apply to newly manufactured containers that are used in conjunction with the collection, processing and disposal (including the diversion of waste for recycling) of municipal, commercial and industrial solid wastes by private companies and public entities. These containers are used in conjunction with mobile and stationary equipment that use mechanical means to handle the containers. This standard also facilitates the dimensional compatibility between various types of containers and equipment designed to lift and dump these containers, as well as facilitates the identification of compatible containers and lifting equipment by persons involved in the manufacture, reconstruction, use, modification, maintenance, service, operation, and installation (where applicable) of containers. This standard also provides nomenclature for*

## EIMA (EIFS Industry Members Association)

ANSI/EIMA 99-A-2001, Exterior Insulation and Finish Systems (EIFS)

*Provides the requirements for specifying and installing Exterior Insulation and Finish Systems This standard was listed for public review in the 5/5/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

## EOS (ESD Association, Inc.)

ANSI/ESD S1.1-1998 (R2006), Protection of Electrostatic Discharge Susceptible Items - Wrist Straps

*This standard provides electrical and mechanical test methods and performance limits for evaluation, acceptance, and functional testing of wrist straps.*

ANSI/ESD S20.20-2007, Development of an Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment

*The purpose of this draft standard is to provide administrative and technical requirements for establishing, implementing and maintaining an ESD Control Program.*

ANSI/ESD S4.1-1997 (R2006), Worksurfaces - Resistance Measurements

*This standard establishes methods for resistance measurements of worksurface materials used at workstations where protection of ESD susceptible items is required.*

ANSI/ESD S541-2003, Protection of Electrostatic Discharge Susceptible Items - Packaging Materials or ESD Sensitive Items

*Applies to packaging used to store, transport, and protect ESDS electronic items during all phases of production and distribution. This document does not address protection from EMI/RFI/EMP or protection of volatile materials. ESD protective packaging is a requirement of the overall ESD control program ANSI/ESDS20.20.*

ANSI/ESD S6.1-2005, Standard Practice for the Protection of Electrostatic Discharge Susceptible Items - Grounding

*This draft standard applies to bonding and grounding for the prevention of ESD in an EPA..*

ANSI/ESD S7.1-2005, Protection of Electrostatic Discharge Susceptible Items – Resistive Characterization of Materials – Floor Materials

*This draft standard test method is intended to provide test methods for evaluating floor materials used to control electrostatic charges.*

ANSI/ESD S8.1-2003, Protection of Electrostatic Discharge Susceptible Items - Symbols-ESD Awareness

*Three Symbols are covered in this document. The first indicates that an electrical or electronic device or assembly is susceptible to damage from an ESD event if not properly handled. The second indicates that the material or product on which the symbol is displayed provides protection to ESD susceptible devices or assemblies. The third indicates the location of an ESD common point ground. The application of these ESD symbols on products does not constitute or imply product performance.*

ANSI/ESD SP 5.3.2-2004, Sensitivity Testing - Socketed Device Model

*This draft standar practice pvodides a test method for generating a "Socketed Device Model" test on a component integrated circuit device.*

ANSI/ESD SP 5.4-2004, Transient Latch-up Testing - Component Level Supply Transient Stimulation

*This draft standard practice seeks to instruct the reader on the methods and materials needed to perform Transient Latch-up Testing.*

ANSI/ESD SP 5.5.1-2004, Transmission Line Pulse (TLP) Component Level

*This draft standard practice defines a method for pulse testing to evaluate the voltage current response of the component under test.*

ANSI/ESD SP14.1-20041, System Level Electrostatic Discharge (ESD) Simulator Verification Standard

*This document defines a time-domain measurement technique for verifying compliance with discharge current specifications given in system-level ESD standards*

ANSI/ESD SP15.1-2005, ESD Association Standard for the Protection of

Electrostatic Discharge Susceptible Items - Standard Practice for In-Use Resistance Testing of Gloves and Finger Cots

*This draft standard practice provides test procedures for measuring the intrinsic electrical resistance of gloves and finger cots.*

ANSI/ESD SP3.3-2006, Periodic Verification of Air Ionizers

*This standard practice provides test methods and procedures for periodic verification of the performance of air ionization equipment and systems (ionizers.*

ANSI/ESD SP5.1.1-2006, Standard Practice for the Protection of Electrostatic Discharge Susceptible Items - Supply Pin Ganging Human Body Mode (HBM) and Machine Mode (MM) Alternative Test Methods 0 Component Level

*This draft standard practice provides alternative test procedures for supply pin ganging on a component level. These test methods are for human body model and machine model testing.*

ANSI/ESD SP5.1.2-2006, Standard Practice for the Protection of Electrostatic Susceptible Items - Split Signal Pin - Human Body Model (HBM) and Machine Model (MM) Alternative Test Methods - Component Level

*This draft standard practice provides alternative test procedures for split signal pins on a component level. These test methods are for human body model and machine model testing.*

ANSI/ESD STM11.11-1993 (R2003), Protection of Electrostatic Discharge Susceptible Items - Surface Resistance Measurement of Static Dissipative Planar Materials

*Defines a direct current test method for measuring electrical resistance, replacing ASTM D257-78. The Standard is designed specifically for static dissipative planar materials used in packaging of ESD sensitive devices and components.*

ANSI/ESD STM11.12-2000, Test Method for Protection of Electrostatic Discharge Susceptible Items - Volume Resistance Measurements of Static Dissipative Planar Materials

*Provides test methods for measuring the volume resistance of static dissipative, planar materials used in the packaging of ESD-sensitive devices and components.*

ANSI/ESD STM11.13-2004, ESD Association Draft Standard Practice for the Protection of Electrostatic Discharge Susceptible Items - Two-Point Resistance Measurement

*This draft standard test method measures the resistance between two points on a material's surface without consideration of the material's means of achieving conductivity.*

ANSI/ESD STM11.31-1994 (R2001), Evaluating the Performance of Electrostatic Discharge Shielding Materials: Bags

*Provides a method for testing and determining the shielding capabilities of electrostatic shielding bags.*

ANSI/ESD STM12.1-1997 (R2006), Test Method for Protection of Electrostatic Discharge Susceptible Items - Seating - Resistive Measurement

*This standard test method provides test methods for measuring the electrical resistance of seating used for the control of electrostatic discharge. The standard test method provides test methods for the qualification of seating prior to installation or application, as well as test methods for evaluating and periodically checking seating after installation or application.*

ANSI/ESD STM2.1-1997, Test Method for Protection of Electrostatic Discharge Susceptible Items - Garments

*Provides test methods for measuring the electrical resistance of garments. It covers procedures for measuring sleeve-to-sleeve resistance and point-to-point resistance.*

ANSI/ESD STM3.1-1991 (R2006), Protection of Electrostatic Discharge Susceptible Items – Ionization

*This standard test method establishes measurement techniques, under specified conditions, to determine ion balance and charge neutralization time for ionizers. This standard test method does not include measurements of electromagnetic interference (EMI), or uses of ionizers in connection with ordinance, flammables, explosive items or electrically initiated explosive devices.*

ANSI/ESD STM4.2-1998 (R2006), Test Method for Protection of Electrostatic Discharge Susceptible Items - ESD Protective Worksurfaces Charge Dissipation Characteristics

*This standard provides a test method that measures the charge dissipation characteristics of worksurfaces. To accomplish this, a conductive test object is charged, placed on the worksurface under test, then removed. The resultant charge on the test object is an indicator of the ability of the tested worksurface to dissipate charge from the test object placed on it. This is only applicable however for the test object specified within this standard. The standard is designed for use in a laboratory environment for qualification, evaluation or acceptance of worksurfaces and not for periodic testing.*

ANSI/ESD STM5.1-2003, Test Method for Protection of Electrostatic Discharge Sensitivity Testing: (HBM) Component Level

*Establishes the procedure for testing, evaluating, and classifing the electrostatic discharge (ESD) sensitivity of components to the defined humasn bodey model (HBM).*

ANSI/ESD STM5.2-1999, Test Method for Protection of Electrostatic Discharge Susceptible Sensitivity Testing - Machine Model - Component Level

*Establishes the procedure for testing, evaluating and classifying the ESD sensitivity of components to the defined MM.*

ANSI/ESD STM5.3.1-1999, Test Method for Protection of Electrostatic Discharge Susceptible Sensitivity Testing - Charged Device Model (CDM) Component Level

*Establishes the procedure for testing, evaluating and classifying the ESD sensitivity of components to the defined CDM.*

ANSI/ESD STM9.1-2001 (R2006), Protection of Electrostatic Discharge Susceptible Items: Footwear - Resistive Characterization

*This standard test method relies on electrical resistance measurements utilizing common electrical instruments to provide a means of evaluating footwear. This standard test method excludes heel straps, toe grounders, etc.*

ANSI/ESD STM97.1-1999 (R2006), Test Method for Protection of Electrostatic Discharge Susceptible Items - Floor Materials and Footwear - Resistance Measurement in Combination with a Person

*This standard test method provides for measuring the electrical system resistance of floor materials in combination with a person wearing static control footwear.*

ANSI/ESD STM97.2-1999 (R2006), Test Method for Protection of Electrostatic Discharge Susceptible Items - Floor Materials and Footwear - Voltage Measurement in Combination with a Person

*This document provides test methods for the measurement of the voltage on a person where protection of ESD susceptible items is required.*

## ESTA (Entertainment Services and Technology Association)

ANSI E1.1-2006, Entertainment Technology - Construction and Use of Wire Rope Ladders

*BSR E1.1, Entertainment Technology - Construction and Use of Wire Rope Ladders, is a revised version of ANSI E1.1-1999. E1.1-1999 was offered for public review to reaffirm it last year, but examination of the document showed that the specification for the wire rope needed to be changed. The current review is being done to correct errors in the SI measurements. The standard applies to the construction and use of wire rope ladders in the entertainment industry, which includes, but is not limited to, live concerts and live theater.*

ANSI E1.11-2004, Entertainment Technology - USITT DMX512-A - Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories

*The standard is a revision of USITT's DMX512/1990. It describes a protocol for transmitting digital data used to control entertainment lighting equipment and accessories, including dimmers, robotic luminaires, scrolling color changers, color wheels, and pattern rotators. The standard describes the electrical properties, the data types, the data format, appropriate connectors, and equipment grounding procedures.*

ANSI E1.14-2001, Entertainment Technology - Recommendations for Inclusions in Fog Equipment Manuals

*Applies to the instruction manuals for fog equipment manufactured for use in the entertainment industry. There are several technologies used for the production of fog effects today, with each technology creating a specific type of effect. In order to facilitate the safe and effective use of fog, the user must have some general knowledge of the technology, have a clear understanding of how to operate the fog making system, and be aware of the potential hazards related to the use of fog, and particularly the system that he is using. This standard was listed for public review in the 1/14/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI E1.15-2006, Entertainment Technology - Recommended Practices and Guidelines for the Assembly and use of Theatrical Boom & Base Assemblies

*BSR E1.15 is a draft standard for the assembly and use of ground-supported variable and fixed-height lighting fixture suspension devices. These devices normally consist of a heavy floor base, a vertical member or members, and horizontal members (arms) coming of the vertical member for the attachment of luminaires or accessories. The draft standard has been offered for public review before, but substantive changes have been made in response to comments.*

ANSI E1.16-2002, Entertainment Technology - Configuration Standard for Metal-Halide Ballast Power Cables

*The document establishes a standard practice for grounding contact assignment for the cable to ballast connection on detachable power cables used on 6kW, 12kW and 18kW metal-halide ballasts in the motion picture and television industries on portable studio luminaires.*

ANSI E1.17-2006, Entertainment Technology - Architure for Control Networks

*This draft standard is commonly called "ACN." The draft standard is a suite of protocols offering needed services in network management, device management, device description, and device control with reliable multi-cast transport on data networks that use the common Internet Protocols. It is primarly intended for lighting control, but it could be used to control other devices.*

ANSI E1.2-2006, Entertainment Technology - Design, Manufacture and Use of Aluminum Trusses and Towers

*Revisions are proposed for the existing American National Standard E1.2-2000, Entertainment Technology--Design, Manufacture and Use of Aluminum Trusses and Towers. The proposed revisions are to address the effects adding or removing paint or other coatings may have on the strength of aluminum truss and tower modules. The document describes the design, manufacture and use of aluminum trusses, towers and associated aluminum structural components in the entertainment industry.*

ANSI E1.20-2006, Entertainment Technology-- RDM, Remote Device Management over DMX512 Networks

*The Remote Device Management Protocol (RDM) permits intelligent bi-directional communication between devices from multiple manufacturers using a DMX512 or ANSI E1.11 data link. RDM permits a console or other controlling device to discover and then configure, monitor, and manage intermediate and end-devices connected through a DMX512 or ANSI E1.11 network. This standard specifies the physical layer and timings, device discovery process and algorithms, message structure and communication.*

ANSI E1.21-2006, Entertainment Technology - Temporary Ground-Supported Overhead Structures Used to Cover the Stage Areas and Support Equipment in the Production of Outdoor Entertainment Events

*This document establishes a minimum level of design and performance parameters for the design, manufacturing, use, and maintenance of temporary ground-supported overhead structures used to cover the stage areas and support equipment in the production of outdoor entertainment events. The structures within the scope of this standard are ones in which the structural elements are rigid towers, trusses, and space frames. Membrane structures are not included in the scope of this standard.*

ANSI E1.23-2006, Entertainment Technology -- Design and Execution of Theatrical Fog Effects

*This Standard is intended to be applicable to the creation of theatrical effects using artificial fogs or mists in theatres, arenas, and other places of entertainment or public assembly. It is intended to offer atmospheric effects creators and operators guidance in the planning and execution of theatrical fog effects so that the health and comfort of workers and spectators shall not be compromised. In addition, the Standard is intended to help avoid nuisance triggering of fire detection systems, while preserving adequate functioning of the systems.*

ANSI E1.24-2006, Entertainment Technology - Dimensional Requirements for Stage Pin Connectors

*The draft standard is a configuration standard covering the dimensional requirements and mechanical requirements related to intermateability for a series of split-pin and sleeve wiring devices known as Pin Connectors or Stage Pin Connectors that are used predominately in the theatre, television, and motion picture industries in North America. It is not a safety standard.*

ANSI E1.25-2006, Recommended Basic Conditions for Measuring the Photometric Output of Stage and Studio Luminaires by Measuring Illumination Levels Produced on a Planar Surface

*The E1.25 document describes the basic testing conditions (e.g. the condition of the luminaire, the power supply, et cetera) for any of a number of methods of measuring a luminaire's output that involve shining the light from the luminaire on a flat wall and then measuring the levels of illumination produced. The draft standard does not describe the equipment or measurement method used to measure the illumination.*

ANSI E1.26-2006, Entertainment Technology - Recommended Testing Methods and Values for Shock Absorption of Floors Used in Live Performance Venues

*This document sets out the energy absorption requirements for floors in venues used for live performances, and the methods for testing them. This document is to be used in conjunction with all applicable local building codes and requirements.*

ANSI E1.27-1-2006, Entertainment Technology - Standard for Portable Control Cables for use with ANSI E1.11 (DMX512-A) and USITT DMX512/1990 Products

*This draft standard describes the types of portable cable used to interconnect products that comply with ANSI E1.11, Entertainment Technology - USITT DMX512-A: Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories, and its predecessor, USITT DMX512/1990.*

ANSI E1.3-2001 (R2006), Entertainment Technology - Lighting Control Systems - 0 to 10V Analog Control Specification

*Describes a method of controlling equipment by means of an analog control voltage. It is primarily intended for lighting control equipment (controllers and dimmers) although any equipment that might be controlled by a lighting controller could use this control method. This standard does not address electro-magnetic compatibility (EMC) issues.*

ANSI E1.5-2003, Entertainment Technology - Theatrical Fog Made with Aqueous Solutions of Di- and Trihydric Alcohols

*This standard describes the composition of theatrical fogs or artificial mists that are not likely to be harmful to otherwise healthy performers, technicians, or audience members of normal working age, which is 18 to 64 years of age, inclusive. This standard is limited to those fogs and mists made from a solution of water and one or more dihydric or trihydric alcohols.*

ANSI E1.8-2005, Entertainment Technology - Loudspeaker Enclosures Intended for Overhead Suspension - Classification, Manufacture and Structural Testing

*Encompasses the requirements for speaker enclosures intended for overhead suspension. It addresses only the structural characteristics of the enclosure designed to allow overhead suspension without structural failure and the means to ensure the reliability of the structure.*

ANSI E1.9-2001, Reporting Photometric Performance Data for Luminaires Used in Entertainment Lighting

*Defines the minimum photometric performance data to be reported for luminaires used in the live entertainment and performance industries and in television and film studios. It describes a method of reporting the data that is intended to be easily understood by users or specifiers of stage and studio luminaires. This standard was first listed in the February 26, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

## FCI (Fluid Controls Institute)

ANSI/FCI 69-1-1989 (R2004), Pressure Rating Standard for Steam Traps

*The standard provides the minimum requirements for the design, fabrication, pressure rating, and marking of pressure containing housings for steam traps.*

ANSI/FCI 70-2-2006, Control Valve Seat Leakage

*To establish a series of seat leakage classes for control valves and defines the test procedures.*

ANSI/FCI 70-3-2004, Regulator Seat Leakage

*Establishes a series of seat leakage classes for regulators and defines the test procedures.*

ANSI/FCI 73-1-1998, Pressure Rating Standard for "Y" Type Strainers

*Provides the minimum requirements for the design, fabrication, pressure rating, marking, and testing of pressure containing housings for "Y" type strainers for use with pipe conforming to American National Standard for Welded and Seamless Wrought Steel Pipe, ANSI/ASME B36.10M-1996, and American National Standard for Stainless Steel Pipe, ANSI/ASME B36.19M-1985 (R1994).*

ANSI/FCI 78-1-1998, Pressure Rating Standard for Pipeline Strainers Other than "Y" Type

*Provides the minimum requirements for the design, fabrication, pressure rating, marking, and testing of pressure containing vessels for pipeline strainers other than "Y" type and temporary strainers of the cone and plate type.*

ANSI/FCI 79-1-2003, Proof of Pressure Ratings for Pressure Reducing Regulators

*This standard describes the recommended proof testing of pressure regulators for operation at or below the manufacturer's rated pressure.*

ANSI/FCI 91-1-1997, Standard for Qualification of Control Valve Stem Seals

*Classifies control valve stem seals by their ability to withstand mechanical and thermal cycles to meet EPA fugitive emission control requirements per the Clean Air Act amendments of 1990. Bellows, Diaphram, and Tubular seals not included.*

ANSI/FCI 99-2-2004, Pressure Reducing Regulator Capacity

*To provide a test methodology for measuring and reporting the capacity of pilot operated and direct acting pressure reducing regulators.*

## FM (FM Approvals)

ANSI FM 4474-2004, Test Standard for Evaluating the Simulated Wind Uplift Resistance of Roof Assemblies Using Static Positive and/or Negative Differential Pressures

*Presents a test method for determining and categorizing wind uplift resistance of roof assemblies including the structural deck. The objective of this test is to evaluate the comparative resistance of roof assemblies to positive and/or positive and negative pressures. The test evaluates the deck and roof covers including all components for their method of attachment to each other and to their supports.*

ANSI FM 4880-2001, Fire Test Standard for Class 1: A) Insulated Wall or Walls and Ceilings or Roofs; B) Plastic Interior Finish Materials; C) Plastic Exterior Building Panels; D) Wall and Wall and Ceiling Coating Systems; E) Interior or Exterior Finish Systems

*Sets fire test requirements for insulated walls or walls and roofs or walls and ceilings, plastic interior finish materials, plastic exterior building panels, wall coating and wall and ceiling coating systems and interior or exterior finish systems installed to unlimited heights.This standard was listed for public review in the 12/1/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/FM 4950-2007, Welding Pads, Welding Blankets and Welding Curtains for Hot Work Operations

*Sets performance requirements for welding pads, welding blankets and welding curtains used as a means of preventing the ignition of combustibles during welding, cutting and other hot work operations. Welding pads, welding blankets and welding curtains will be evaluated on their ability to: prevent burn through of the material; provide adequate protection for adjacent combustibles; limit temperature transmission through the material; resist melting, dripping or deformation, maintain their flexibility, durability and structural integrity; and resist degradation from weathering.*

ANSI/FMRC FM 3260-2004, Radiant Energy-Sensing Fire Detectors for Automatic Fire Alarm Signaling

*Sets performance requirements for radiant energy-sensing fire detectors used for automatic fire alarm signaling for the protection of occupants, building space, structure, area, or object.*

ANSI/FMRC FM 4910-2004, Cleanroom Materials Flammability Test Protocol

*Describes minimum performance requirements for materials intended for use in cleanroom facilities. Evaluates the ability of materials and, in turn, system components to limit fire spread and smoke damage resulting from fire in the cleanroom environment. Intended to verify that the product as described will meet minimum specific stated conditions of performance, safety, and quality, useful in determining the potential suitability for end-use conditions of these products.*

## GBI (Green Building Initiative)

## GEI (Greenguard Environmental Institute)

## GEIA (Government Electronics & Information Technology Association)

ANSI/EIA 649-A-2004, National Consensus Standard for Configuration Management

*Intended to be used when establishing, performing, or evaluating Configuration Management processes in any industry, business enterprise or governmental organization. This standard describes Configuration Management functions and principles and defines a neutral Configuration Management terminology for use with any product line.*

ANSI/EIA 656-B-2007, I/O Buffer Information Specification (IBIS)

*IBIS is a standard for specifying the electronic behavior of digital integrated circuit input/output (I/O) analog characteristics. IBIS defines a consistent software-parsable format for essential behavioral information. Within the IBIS format, vendors can accurately model buffers while minimizing disclosure of proprietary design information. IBIS is intended to support simulation tools at many levels of sophistication.*

ANSI/GEIA STD-0001-2006, IBIS Interconnect Modeling Specification (ICM)

*The ICM specification provides for general purpose interconnect modeling in a text format similar to that of IBIS (I/O Buffer Information Specification, ANSI/EIA 656-A). ICM describes a means for modeling all electrical interconnect types, including connectors, cables, packages, printed circuit boards, and even on-die interconnects. The specification defines a consistent format that can be parsed by software, allowing interconnect modeling data to be transferred between interconnect design and simulation tools.*

ANSI/GEIA STD-0003-2006, Procedures for Long Term Storage of Electronic Devices

*Document defines different methods of storage such as nitrogen or a bag with desiccant that absorbs not only moisture but also corrosive gases. Also describes labeling, marking, and minimal mention of inventory control requirements.*

ANSI/GEIA STD-0005-1-2007, Performance Standard for Aerospace and High Performance Electronic Systems Containing Lead-free Solder

*The Standard communicates technical and administrative requirements for a Performance Plan for aerospace & military electronic systems containing lead-free solder alloys. The requirements are communicated by the customers, e.g.,vehicle integrators, operators, & regulatory agencies, to the suppliers, e.g., electronic system designers, producers, maintainers, & repair facilities. The Plan prepared by the suppliers satisfies the tech. & admin. requirements of the STD. The Plan documents processes used by the Plan owner, i.e., the supplier, to satisfy requirements including reliability, configuration control, repair processes, & controlling the deleterious.*

ANSI/GEIA STD-0005-2-2006, Standard for Mitigating the Effects of Tin Whiskers in Aerospace and High Performance Electronic Systems

*The Standard communicates technical and administrative requirements for a Plan to control the effects of tin on aerospace and military electronic systems containing lead-free solder alloys. The requirements are communicated by the customers, e.g.,vehicle integrators, operators, and regulatory agencies, to the suppliers, e.g., electronic system designers, producers, maintainers, and repair facilities. The Plan prepared by the suppliers satisfies the technical and administrative requirements of the Standard. The Plan documents level of control exercised by the Plan owner, and the processes used by the Plan owner, i.e., the supplier.*

## GISC (Glazing Industry Secretariat Committee )

ANSI Z97.1-2004, Glazing Materials Used in Buildings, Safety Performance Specifications and Methods of Test

*Establishes the specifications and methods of test for the safety properties of safety glazing materials (glazing materials designed to promote safety and to reduce or minimize the likelihood of cutting and piercing injuries when the glazing materials are broken by human contact) as used for all building and architectural purposes. Changes that are subject to public review are only those since the last public review. These changes (Deletion of Center Punch Fragmentation Test) are located in the following sections: Section 4 and Section 5 as outlined in the attached file.*

## GTEEMC (Georgia Tech Energy and Environmental Management Center)

ANSI/MSE 2000-2005, A Management System for Energy

*Provides the framework for a management system for energy using a process model in order to facilitate implementation and coordination with other management standards, such as ISO 9001 and ISO 14001. The standard includes documentation and recordkeeping requirements, specific management responsibilities, a process for energy management planning, , elements needed for implementation and operations, elements required for checking and evaluation of the system and energy management projects, and specifics of management review of results and subsequent actions.*

## HELP (Hydrogen Executive Leadership Panel)

## HFES (Human Factors & Ergonomics Society)

## HI (Hydraulic Institute)

ANSI/HI 1.1 - 1.2-2000, Centrifugal Pumps – Nomenclature, Definitions, Application and Operation

*Covers centrifugal and regenerative turbine pumps of all industrial types except vertical multistage diffuser types.*

ANSI/HI 1.3-2000, Centrifugal Pumps - Horizontal Baseplate Design

*Covers centrifugal and regenerative turbine pumps of all industrial types except vertical multistage diffuser types. It includes design and application.*

ANSI/HI 1.4-2000, Centrifugal Pumps – Nomenclature, Definitions, Application and Operation

ANSI/HI 1.6-2000, Centrifugal Pump Test

*Describes centrifugal, sealless centrifugal, and regenerative turbine pumps of all industrial types, except vertical multistage diffuser type and submersible pumps. It includes detailed procedures on the setup and conduct of hydrostatic and performance tests of such pumps. Changes made since last publication include the following: (a) Section 1.6.5.3 - add explanation for the use of level "A" and "B", (b) Section 1.6.7 - mechanical test - new, and (c) Editorial changes to show metric units first.*

ANSI/HI 10.1 - 10.5-2004, Air-Operated Pumps for Nomenclature, Definitions, Application, and Operation

*Applies to air-operated diaphragm pumps (AOD), which are defined as positive displacement reciprocating pumps used for general fluid transfer. These pumps are driven by means of a compressed gas (usually air) from an outside source. Diaphragm and bellows type, single acting and double acting pumps are included in this standard. Piston plunger pumps are not included. Topics covered include nomenclature, definitions, design and applications, selection of wetted part materials, effect of viscosity and specific gravity on performance, and installation, operation, and maintenance.*

ANSI/HI 10.6-2004, Air-Operated Pump Tests

*Applies to the testing of air-operated diaphragm pumps (AOD) only. Unless otherwise stated, all tests are conducted using water at ambient temperature. Procedures for mechanical and performance testing and recording test results are included in this standard. Diaphragm and bellows type, single and double acting pumps are included, but piston plunger pumps are not.*

ANSI/HI 11.6-2001, Submersible Pump Tests

*Applies to testing Centrifugal Submersible Pumps driven by induction motors, except where otherwise noted. A centrifugal submersible pump is defined as a close-coupled impeller pump/motor unit designed to operate submerged in a liquid, and includes submersible pumps operating in either a wet-pit or dry-pit environment. This standard does not apply to accessory items, such as discharge elbows, suction fittings, or sliding connections.*

ANSI/HI 12.1-12.6-2005, Centrifugal Slurry Pumps For Nomenclature Definitions, Applications and Operation-2005

*The Slurry Pump Committee will limit its activity to the above matters to rotodynamic pumps that handle abrasive slurries. Excluded are applications for wastewater pump.*

ANSI/HI 2.1-2.2-2000, Vertical Pumps for Nomenclature and Definitions

*Applies to vertical centrifugal pumps that are driven by electric motors or engines with right angle gears; it includes nomenclature and definitions.*

ANSI/HI 2.3-2000, Vertical Pumps for Design and Application

*Applies to vertical centrifugal pumps that are driven by electric motors or engines with right angle gears; it includes design and application.*

ANSI/HI 2.4-2000, Vertical Pumps for Nomenclature, Definitions, Application and Operation

*Applies to vertical centrifugal pumps that are driven by electric motors or engines with right-angle gears. It includes installation, operation and maintenance. This is the second public review for this standard. It was originally listed in the May 21, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/HI 2.6-2000, Vertical Pump Test

*Includes detailed procedures on the setup and conduct of hydrostatic and performance tests of vertical diffuser type centrifugal pumps. Changes made since last published include the following: Section 2.6.7 - mechanical test - new, Editorial changes to show metric units first.*

ANSI/HI 3.1–3.5-2000, Rotary Pump Standards for Nomenclature, Definitions, Applications and Operation

*Applies to industrial rotary positive displacement pumps. It includes: types and nomenclature; definitions; design and application; and installation, operation and maintenance. It does not include standards on magnetic drives for sealless pumps. Changes made since last published include the following: (a) Editorial changes to show metric units first; (b) Section 3.3.3.10 - Added last paragraph on low NPIP; and (c) Section 3.4.3.11.4 Nozzle Loads - New section.*

ANSI/HI 3.6-2000, Rotary Pump Test

*Applies to industrial rotary positive displacement pumps. Includes detailed procedures on the setup and conduct of hydrostatice and performance tests of such pumps.*

ANSI/HI 4.1–4.6-2000, Sealless Rotary Pumps – Nomenclature, Definitions, Applications, Operation and Test

*Applies to industrial rotary positive-displacement pumps. It includes: types and nomenclature, definitions; design and application; installation, operation and maintenance; and test. It does not include standards on magnetic drives for sealless pumps.*
*Changes made since last published include the folllwing:*
*Editorial changes to show metric units forst*
*Section 4.3.3.3.3 added last paragraph on corrosion resistance.*

ANSI/HI 5.1- 5.6-2000, Sealless Centrifugal Pumps for Nomenclature, Definitions, Application, Operation and Test

*This standard is for sealless centrifugal pumps that are driven by canned motors or magnetic couplings. It includes types and nomenclature, definitions; design and application; installation, operation and maintenance, and test.*
*The following changes have been made as the result of suggestions from a canvass initiated on January 7, 1999.*
*5.3.2.2.3 - Liquid Containment Shells: The following caution statement has been added:*
*CAUTION: The electrical leads from the motor stator shall be sealed between the terminal box and the stator electrical core. However, in the possible event of the combined failure of these seals and rupture of the stator liner, it is possible that the process liquid being pumped can migrate into the atmospheric side of the terminal box. For this reason it is recommended that electrical conduit lead seals shall be utilized to provide further seal*

ANSI/HI 6.1–6.5-2000, Reciprocating Power Pump Standards for Nomenclature, Definitions, Application, and Operation

*Applies to industrial/commercial reciprocating power pumps. It includes: types and nomenclature, definitions; design and application; installation, operation and maintenance.*

ANSI/HI 6.6-2000, Reciprocating Pump Test

*Describes power pumps including controlled volume pumps, which are driven by power from an outside source applied to the crankshaft. It includes procedures for testing such pumps. Changes made since the last published version are editorial changes to show metric units first.*

ANSI/HI 7.1-7.5-2006, Controlled Volume Metering Pumps for Nomenclature, Definitions, Application, and Operation

*This standard covers controlled-volume metering pumps used to accurately displace a predetermined volume of liquid within a specified time period. It includes types and nomenclature, definitions, design and application and installation, operation, and maintenance. This standard does not apply to accessory items, such as piping, tubing, fittings, or instrumentation or pump drivers.*

ANSI/HI 8.1–8.5-2000, Direct Acting Steam Pumps for Nomenclature, Definitions, Application, and Operation

*Applies to industrial/commercial direct acting (steam) pumps. It includes: types and nomenclature, definitions, design and application, installation, operation and maintenance.*

ANSI/HI 9.1–9.5-2000, General Pump Standards for Types, Definitions, Application, and Sound Measurements

*Applies to all industrial /commercial pumps including centrifugal, vertical, rotary and reciprocating types. Includes: types, definitions, design and application, airborne sound measurement and decontamination.*
*This document is a revision of that published in 1994 and includes the following changes and additions:*
*Editorial changes to show metric units first and US units in parentheses.*
*Revision in figure 9.1 to show air operated pumps.*
*Addition of section 9.3.2.6.20 Cavitation Resistance of Materials.*
*Addition of Section 9.3.3 Common Polymer Materials of Construction for Various Liquids (already approved as an ANSI standard and published separately by HI).*
*Addition of Section 9.5 Decontamination of Returned Products Procedure.*

ANSI/HI 9.3.3-1997, Pumps: Polymer Material Selection

*Provides a description of non-metallic materials used in industrial pump construction. Included is an extensive table of pumped liquids versus the non-metallic construction materials that have been used to pump such liquids. Maximum operating liquid temperature are also shown. This standard was originally listed for public review in the January 19, 1996 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/HI 9.6.2-2001, Centrifugal and Vertical Pumps for Allowable Nozzle Loads

*Includes recommendations for Allowable Nozzle Loads for the following pump types: (1) Horizontal end suction single stage (American National Standard Specifications for Horizontal End Suction Centrifugal Pumps for Chemical Process ANSI B73.1M-1991 (R1999)); (2) Vertical-in-line single stage (American National Standard Specifications for Vertical In-Line Centrifugal Pumps for Chemical Process, ANSI B73.2M-1991 (R1999)); (3) Axial split case single stage; (4) End suction slurry pumps; and (5) Vertical turbine short set pumps.*

ANSI/HI 9.6.3-1997, Pumps - Allowable Operating Region

*Defines the "Preferred Operation Region" (POR) and the "Allowable Operating Region" (AOR) for centrifugal pumps.*

ANSI/HI 9.6.4-2000, Centrifugal and Vertical Pumps for Vibration Measurement and Allowable Values

*Applies to all industrial/commercial centrifugal and vertical pumps. It covers the vibration dynamics, measurement and allowable vibration limits for such pumps. This standard was first listed in the August 13, 1999 issue of Standards Action. It is being resubmitted due to substantive changes, which are listed here in theri entriety:*

*Substantive Changes*
*Figure 9.6.4.5 - Moved location of vibration measurement from top of motor to bearing Housing.*
*Figure 9.6.4.13 - Eliminated vibration measurement from top of motor. Added mixed flow and propeller pumps to this figure.*
*Figure 9.6.4.14 - Eliminated vibration measurement from top of motor. Removed mixed flow and propeller pumps from this figure. Added "assembled for shipment by the*

ANSI/HI 9.6.5-2000, Centrifugal and Vertical Pumps for Condition Monitoring

*Provides information for centrifugal and vertical pumps, including both sealed and sealess pump design as stated in each section. It is intended to be used as a tool in implementing process safety management, as well as general availability improvement programs.*

ANSI/HI 9.6.7-2004, Effects of Liquid Viscosity on Rotodynamic (Centrifugal and Vertical) Pump Performance

*All worldwide designs of rotodynamic (centrifugal and vertical) pumps of conventional design, in the normal operating range, with open or closed impellers, single or double suction, pumping Newtonian fluids; or fluids that can be treated as Newtonian fluids.*

ANSI/HI 9.8-1998, Pump Intake Design

*Provides intake design recommendations for both suction pipes and all types of wet pits. While specific intake design is beyond the scope of the pump manufacturer's responsibility, their comments may be helpful to the intake designer. This is the second public review for this standard. It first appeared in the September 26, 1997 issue of Standards Action and is being resubmitted now due to substantive changes to the text.*

## HIBCC (Health Industry Business Communications Council)

ANSI/HIBC 1.2-2006, Health Industry Bar Code (HIBC) Provider Applications Standard

*This American Standard: + Specifies the minimum requirements and optional structures for the machine-readable identification for health industry applications; + Provides guidance for the formatting and placement of data presented in linear bar code, two-dimensional symbol, or human readable form; + Makes recommendations as to label placement, size, material and the inclusion of free text and any appropriate graphics.*

ANSI/HIBC 2.2-2006, The Health Industry Bar Code (HIBC) Supplier Labeling Standard

*Specifies the minimum requirements and optional structures for the machine-readable identification for health industry product; + Provides guidance for the formatting and placement of data presented in linear bar code, two-dimensional symbol, or human readable form; + Makes recommendations as to label placement, size, material and the inclusion of free text and any appropriate graphics.*

## HL7 (Health Level Seven)

ANSI/HL7 Arden V2.5-2005, Health Level Seven Arden Syntax, Version 2.5

*Arden Syntax is a formalixm for procedural knowledge representation in clincial decision support systems. Arden Syntax V2.5 is a backwards-compatible successor to Arden Syntax V2.1. This version of the Arden Syntax includes the addition of simply object data types, new operators unique to object data types, extension of read/destination/message statements to support objects, extenion of If/Then statements in actions slots, update of structured citations/links; updated XML appendix and a new annex describing Arden object data types.*

ANSI/HL7 CDA, R2-2005, The HL7 Version 3 Standard: Clinical Data Architecture, Release 1.0

*The HL7 Clinical Document Architecture is in a transition period. Since the publication of Release 1, the HL7 Reference Information Model (RIM) has matured as has the methodology used to derive RIM-based specifications. In addition, early adopters are posing new use cases for incorporation.The main evolutionary steps in Release 2 are that both header and body are fully RIM-derived, and there is a much richer assortment of entries to use within CDA structures.*

ANSI/HL7 CMS V1.5-2004, The Health Level Seven Context Management Specification, Version 1.0

*The HL7 Clinical Context Management Specification V1.5 specifies CCOW support for: temporary context-based synchronization in addition to the constant context-based synchronization of applications; a View context subject enabling applications to temporarily synchronize the content of their displays; PKI in addition to passcodes providing applications with an alternative means to establish a "secure binding"; and clarifications concerning how to set values for repeating context items. Based upon comments received during committee ballot, typographical mistakes have been corrected and certain wording has been clarified.*

*This document specifies CCOW support for PKI in addition to passcodes, and for digital signature and digital notarization context actions.*

ANSI/HL7 EHR, R1-2007, HL7 EHR System Functional Model, Release 1

*The HL7 EHR System Functiona Model provides a reference list of functions that may be present in an Electronic Health Record System (EHR-S). The function list is described from a user perspective with the intent to enable consistent expression of system functionality. Reconciliation revisions from the previous ballot required some substantive changes to functions and conformance criteria.*

ANSI/HL7 SPL, R2-2006, HL7 Structured Product Labeling, Release 2

*Release 2 extends the standard to meet the requirements of the Physicians' Labeling Rule in anticipation of the FDA release of the final rule. Structurally, Release 2 proposes changes to the document model through the addition of highlights, as well as changes to the drug information model through the introduction of Indication and Usage along with Adverse Events,Contraindication,Interactions, and other issues requiring special caution.*

ANSI/HL7 V2 XML-2003, HL7 Version 2: XML Encoding Syntax, Release 1

*The objective of this specification is to present encoding rules for HL7 Version 2.3.1 and 2.4 messages based on the Extensible Markup Language XML that could be used in environments where senders and receivers both understand XML. The v2.xml specification aims to act as a second normative encoding for v2.3.1 and v.2.4 (and future releases of the HL7 v2.x standard).*

ANSI/HL7 V2.5-2003, Health Level Seven Standard Version 2.3 Application Protocol for Electronic Data Exchange in Healthcare

*Various changes to data types, field lengths, and SFT segments in messages found in chapters 2 and 2A, 4, 7, 8, 10 and 15. Chapter 15 added two fields. Various other minor substantive changes made to chapters noted above. Changes are noted at the beginning of each chapter.*

ANSI/HL7 V3 AB, R1-2005, HL7 Version 3 Standard: Accounting and Billing, Release 1

*This document provides support for the creation and management of patient billing accounts and the post of financial transactions against patient billing accounts for the purpose of aggregating financial transactions that will be submitted as claims or invoices for reimbursement. This release adds support for updates and changes to Insurance information, adds changes to resolve negatives in the last ballot cycle, changes acopted by the HL7 Financial Management Technical Committee, and changes approved during the interim harmonziation meeting.*

ANSI/HL7 V3 CMET, R1-2005, HL7 Version 3 Standard: Common Message Element Types, Release 1

*This document provides data on message elements and content shared across multiple domains. This particular ballot is limited to the following substantive changes to the last ballot document: "Choice" boxes appearing at the entry to many CMETs were removed, when the "choice" had been restricted to a single item. This was done for clarity of the diagram, and has no effect on the generated message type. Conversely, when a CMET restricted a choice to a single element elsewhere (not at the entry point) the choice representation was retained, as an aid in recognizing the design pattern from the parent CMET. These representations are cosmetic.*

*Several CMETs were "moved" from the Personel Management domain, and placed in a "virtual" CMET domain. This occurred because the CMET content was not derived from*

ANSI/HL7 V3 COMT, R2-2005, HL7 V3 Standard, Shared Messages, Release 2

*This document provides data on common messages such acknowledgements shared across multiple domains.*

ANSI/HL7 V3 CR, R3-2005, HL7 Version 3 Standard: Claims and Reimbursement, Release 3

*This document provides support for Generic, Pharmacy, Preferred Accommodation, Physician, Oral Health Vision Care and Hospital claims for eligibility, authorization, coverage extension, pre-determination, invoice adjudication, payment advice and Statement of Financial Activity (SOFA) Release 3 of this document adds claims messaging support for Physician, Oral Health Vision Care and Hospital claims and contains changes from early adoperts.*

ANSI/HL7 V3 CTS, R1-2005, Health Level Seven Standard: Common Terminology Services, Version 1

*The Common Terminology Specification (CTS) specification defines a set of platforms- and implementation-neutral Application Programming Interface (API) calls that are used to access terminology content for the HL7 Version 3 programming environment. The specification defines common mechanisms to access disparate terminological content in a consistent, reproducible fashion. Software clients that have been programmed using this API will be able to access any compliant back-end service without requiring knowledge of the underlying data structures and low-level access mechanisms. Similarly, services that implement this API may be utilized by any compliant client. The CTS specification defines the interface elements in Unified Modeling Language (UML), and the actual API is specified using the ISO 14750 Interface Definition Language (IDL.*

ANSI/HL7 V3 DSR, R1-2005, HL7 Version 3 Standard: Drug Stability Reporting, Release 1

*The Stability Refined Message Information Model and Hierarchical message Type capture information relevant for the drug stability testing process. This testing is required in the United States and in other countries as a component of the drug regulatory process. It verifies the correctness of a manufacturer's claims related to the stability--the ability to be stored over time without losing its therapeutic effectiveness--of a product.*

ANSI/HL7 V3 DT, R1-2004, Health Level Seven V3 Standard: Data Types - Abstract Specification, Release 1

*This document provides an in-depth and highly technical discussion of the data types defined for the Version 3 standards*

ANSI/HL7 V3 ECG, R1-2004, Health Level Seven Version 3 Standard: Regulated Studies - Annotated ECG, Release 1

*Clinical trials on candidate drug products often collect biological data from trial subjects as waveforms or algorithmic representations of those waveforms. After the data have been collected, derived measurements such as QT interval are used to draw conclusions about the safety and effectiveness of the candidate drug. Standards exist for transmitting these derived data and their analysis results from the trial sponsor to the regulatory agencies; but these submissions have not historically included representation of the waveforms, or have at best included an image of the device-generated paper waveform. A new request to include the digital waveform, the algorithmic representations, and the annotations identifying the relevant landmarks (e.g. QRS-wave onset, T-wave offset) that support derived ECG measurements has been proposed by the US FDA. This specification will be used to package*

ANSI/HL7 V3 GELLO, R1-2005, HL7 Version 3 Standard: GELLO: A Common Expression Language, Release 1

*GELLO is intended to be a standard query and expression language for decision support. Its specification has been developed in coordination with the HL7 Clinical Decision Support Technical Committee.*

ANSI/HL7 V3 IDC, R1-2006, HL7 Version 3 Standard: Implantable Device Cardiac - Follow-up Device Summary, Release 1

*This message is related to the follow-up of an Implantable Cardiac Device (pacemaker, defibrillator, etc.) that will contain a subset of device observations, current device therapy settings and device diagnostic information. The DMIM walk though, and RMIM model in this version have been updated, based on feedback from the last ballot cycle.*

ANSI/HL7 V3 IM, R1-2004, Health Level Seven Version 3 Standard: Infrastructure Management, Release 1

*Changes for this ballot include: 1) Reversed the direction of the reason relationship between ControlActProcess and the DetecteeIssueEvent,which results in a name change to reasonOF 2) Reversed the direction of the trigger relationship between ActOrderRequired and DetectedIssueEvent which resulted in a name change to triggerFor 3) Reversed the direction of the sourceOf relationship between DetectedIsseuManagement and DetectedIssueEvent which resulted in a name change to targetOf 4) Replaced the three message types with one 5) Added QueryByOaramneter and QueryAck classes to the D-MIM 6) Included a draft R-RMIM that includes the QueryByParameter and QueryAck classes*

ANSI/HL7 V3 MFRI, R1-2006, HL7 Version 3 Standard: Master File/Registry Infrastructure, Release 1

*This domain addresses the communications environment that is considered common to all HL7 Version 3 messaging implementations. It covers the Transmission wrapper as well as the transmission interaction patterns.*

ANSI/HL7 V3 PM, R1-2005, HL7 Version 3 Standard: Personnel Management, Release 1

*This document provides support for Provider and Organization messages as determined to support registry messaging.*

ANSI/HL7 V3 PORT, R1-2004, HL7 Version 3 Standard: Regulated Studies - Periodic Reporting of Clinical Trials Laboratory Results, , Release 1

*This document includes standards developed as part of the family of messages targeted for the exchange of information about the conduct of clinical trials, and the exchange of the data collected during those trials. This family includes, but it not limited to, standards for submission of clinical trials and data to a regulatory agency. This particular version cinludes a messages for Period Reporting of Clinical Trial Laboraty Data.*

ANSI/HL7 V3 RCL, R1-2003, HL7 Standard Version 3 Standard: Refinement, Constraint and Localization to Version 3 Messages, Release 1

*Describes the processes whereby HL7 V3 message specifications may be refined,constrained and extended to support implementation designs, conformance profiles, and realm-specific standards.*

ANSI/HL7 V3 RCMR, R1-2006, HL7 Version 3 Standard: Medical Records/Information Management, Release 1

*This is a second membership ballot of the proposed standard. This revision fixed typographic errors, included application role name changes to follow MnM guidelines, and included modifications to two messages, making one was generic and adding additional information to the other.*

ANSI/HL7 V3 RIM, R1-2003, HL7 Version 3 Standard: Reference Information Model, Release 1

*The RIM is the HL7 information model from which all other informations and messages in :‥e V3 Standard are derived.*

ANSI/HL7 V3 RRCS, R1-2005, HL7 Version 3 Standard: Individual Case Safety Report, Release 1

*The Individual Case Safety Report topic area captures the information needed to support the reporting of individual case safety events and product proboems to regulatory agencies. Initially, it is intended that the message support reporting of this type from healthcare providers. Since the last ballot, changes have been made to the clinical statement contents of teh message to better represent act subjects, and to support recursive clinical information.*

ANSI/HL7 V3 RRNCR, R1-2004, HL7 Version 3 Standard: Notifiable Condition Report

*The Notifiable Condition Report captures the information needed to support case reporting between different jurisdictional levels within the pubolish health system. This specification includes, most particularly, reporting of cases subject to mandatory reporting by statute. It supports reporting of notifiable diseases or conditions. It also supports related reporting such as the messages that would be sent by a field investigation team back to its supporting health department.*

ANSI/HL7 V3 SC, R1-2003, HL7 Version 3 Standard: Scheduling, Release 1

*This document describes a messaging architecture for the notification of scheduling information from a scheduling system to auxiliary systems. The messages in this document can be utilized as is for generic appointments where minimal detail is required. This section can also be used as a pattern for scheduling specialized acrtivities where the details of the acrtivity are published in messages under the section of this ballot responsible for the specialized domain.*

ANSI/HL7 V3 TRMLLP, R2-2006, HL7 Version 3 Standard: Transport Specification - MLLP, Release 2

*This document contains a description of the Minimum Lower Layer Protocol (MLLP). Release 2 extends the MLLP by providing support for a minimal interpretation of reliable messaging.*

ANSI/HL7 V3 UMLITSDT, R1-2004, Health Level Seven Version 3 Standard: UML Implementation Technology Specification - Data Types, Release 1

*The UML Data Types specification binds the V3 data types to the UML/OCL kernel types to allow for formally correct OCL constrains on the V3 data types, and to assist in implementatiion of the V3 data types*

ANSI/HL7 V3 XMLITSDT, R1-2004, Health Level Seven Version 3 Standard: XML Implementation Technology Specification - Data Types, Release 1.

*Note: in previous submission the suggested designation was HL7 V3: DTXMLITS. Please note that I am requesting a change to this designation. This document defines the V3 data types that will be used by all of HL7 V3 and onwards. It also defines the representation of HL7 V3 data types in XML, including the schema necessary to derive XML schemas for HL7 V3 Hierarchical Message Descriptions (HMD*

ANSI/HL7 V3 XMLITSSTR, R1-2005, HL7 Version 3 Standard: XML Implementation Technology Specification - Structures, Release 1.

*NOTE: this document was in previous submission called Health Level Seven Version 3 Standard: Messages XML Implementation Technology Specification and the designation suggested at that submission was HL7 V3: MSGXMLITS. Please note that I am requesting a change to this suggested designation. This document defines the representation of HL7 V3 messages in XML, including the method to derive XML schemas and additional processing rules from HL7 V3 Hierarchical message Descriptions (HMDs*

## HPS (Health Physics Society)

ANSI N13.1-1999, Sampling Airborne Radioactive Materials in Nuclear Facilities, Guide to

*Sets forth guidelines and performance criteria for sampling the emissions of airborne radioactive substances in the air discharge ducts and stacks of nuclear facilities. Emphasis is on extractive sampling from a location in a stack or duct where the contaminant is well mixed. This standard also covers sampling program objectives, quality assurance issues, developing air sampling action levels, system optimization, and system performance verification. Workplace, containment, and environmental air monitoring are not addressed.*

ANSI N13.11-2001, Personnel Dosimetry Performance, Criteria for Testing

*Establishes the test conditions and performance criteria for evaluating personnel dosimetry systems. It applies to dosimetry systems used to determine personal dose equivalent for occupational conditions and absorbed dose for accident conditions.*

ANSI N13.12-1999, Surface and Volume Radioactivity Standards for Clearance

*Applies to unconditional clearance of materials, equipment, and facilities during operations, including decontamination activities. Establishes a dose-based criterion, a methodology for determining corresponding surface and volume radioactivity reference concentration levels, and criteria for implementing these levels.*

ANSI N13.35-1999, Specifications for the Bottle Manikin Absorbtion Phanthom

*Provides specifications for the design, fabrication and quality of the BOMAB phanthom used to calibrate monitoring systems for in vivo measurement of high energy photons emitted form the radionuclides that are homogeneously distributed in the body. The standard does not specify particular fabrication techniques, but instead addresses specifications for the finished phantom.*

ANSI N13.36-2001, Ionizing Radiation Safety Training for Workers

*Establishes minimum requirements and provides recommendations and guidelines for the analysis, design, development, implementation, and evaluation of ionizing radiation safety training for workers. Target audience, responsibilities, training topics, and instructor qualifications are presented. Training program requirements are provided, as well as guidance, to assure that the performance objectives of this standard are met. This standard was listed for public review in the 5/22/1998 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI N13.39-2001, Design of Internal Dosimetry Programs

*Contains the essential elements of the internal dosimetry component of a radiation protection program. It provides general policies and the framework for the design and implementation of an acceptable internal dosimetry program.*

ANSI N13.41-1996, Criteria for Performing Multiple Dosimetry

*Provides criteria for when and how to use multiple dosimeters under conditions incident to routine activities in the presence of ionizing radiation, as well as the recommended methodology for determining the effective dose equivalent when the use of multiple dosimeters has been deemed necessary by radiation protection professionals.*

ANSI N13.42-1997, Internal Dosimetry for Mixed Fission and Activation Products

*Provides the basis for an internal dosimetry program to be employed as part of a radiation protection program. Identifies acceptable methods for assessment of exposure of individuals to radionuclides retained in the body as measured by in vivo (direct) bioassay, in vitro (indirect ) bioassay, or calculated from air sampling results.*

ANSI N13.45-1998, Incineration of Institutional Low-Level Radioactive Waste

*Provides guidelines for incineration of combustible forms of institutional low-level radioactive waste. Addresses the siting, licensing and permitting, operation, monitoring of the incinerator operation, disposal of residues, and decommissioning. This standard may be applied to incineration of mixed wastes, i.e., radioactive wastes that contain other hazardous components as defined by Federal or State agencies, provided consideration is given to additional design features and regulatory permitting required by the hazardous nature of the wastes.*

ANSI N13.49-2001, Performance and Documentation of Radiological Surveys

*Provides minimum requirements for the performance and documentation of radiological surveys. These requirements are incorporated into procedures for specific survey programs, thereby assuring that survey information is complete, uniform, and sufficient for its intended purposes.*

ANSI N13.52-1999, Personnel Neutron Dosimeters (Neutron Energies Less Than 20 MeV)

*Provides guidance for routine personnel neutron dosimetry. Applies to neutrons with energies ranging from thermal to values less than 20 MeV and devices worn by individuals, as contrasted with hand-held or fixed-area instrumentation. Does not apply to dosimetry necessary for extremity monitoring or for criticality accidents. Also includes factors governing the use of dosimeters for proper determination of the individual's whole-body neutron dose equivalent.*

ANSI N13.6-1999, Occupational Radiation Exposure Records Systems, Practice for

*Provides guidance for radiological facility operators for implementing an occupational radiological exposure records program. It sets forth acceptable techniques for the generation, administration, and retention of occupational radiation exposure records and supporting documentation. This standard applies to all facilities that have personal who are monitored for exposure to radiation or radioactive material.*

ANSI N43.10-2001, Safe Design and Use of Panoramic, Wet Source Storage Gamma Irradiators (Category IV) and Dry Source Storage Gamma Irradiators (Category II)

*Applies to panoramic, wet source storage gamma irradiators (Category IV) and dry source storage gamma irradiators (Category II) that contain sealed gamma emitting sources for the irradiation of objects or materials. The standard establishes the criteria to be used in the proper design, fabrication, installation, use, and maintenance of these irradiators which will ensure a high degree of radiation safety.*

ANSI N43.15-2001, Safe Design and Use of Self-Contained Wet Source Storae Gamma Irradiators (Category III)

*Applies to self-contained, wet-source storage irradiators (Category III) that contain sealed gamma emitting sources for the irradiation of objects or materials. The standard establishes the criteria to be used in the proper design, fabrication, installation, use, and maintenance of these irradiators, which will ensure a high degree of radiation safety at all times.*

ANSI N43.17-2002, Radiation Safety for Personnel Security Screening Systems Using X-Rays

*This standard applies to security screening systems that utilize x-radiation and are designed to be used on people. Specifically, it applies to systems used to detect objects carried on the individual being exposed. It provides guidelines specific to the radiation safety aspects of the design and operation of these systems. It does not include electrical safety guidelines or any other safety, performance or use considerations outside of the realm of radiation safety. It is intended for manufacturers, distributors, installers, and users of the systems.*

ANSI N43.2-2001, Radiation Safety for X-ray Diffraction and Fluorescence Analysis Equipment

*Reviews the types of injuries resulting from accidental exposure to ionizing radiation resulting from the operation of analytical x-ray diffraction and fluorescence equipment, establishes equipment design criteria, sets up requirements for approved operating procedures, and recommends the establishment of health surveillance, and personnel monitoring programs. It provides guidelines specific to the radiation safety aspects of the design and operation of x-ray diffraction and fluorescence analysis equipment. It does not include electrical safety guidelines or other safety considerations outside the realm of radiation safety. This standard reviews the types of injuries resulting from accidental exposure to ionizing radiation resulting from the operation of analytical x-ray diffraction and fluorescence equipment, establishes equipment design criteria, sets up*

ANSI N43.4-2000, Classification of Radioactive Self-Luminous Light Sources

*Establishes the classification of certain radioactive self-luminous light sources according to radionuclide, type of source, activity, and performance requirements. The objectives are to establish minimum prototype testing requirements for radioactive selfluminous light sources, to promote uniformity of marking such sources, and to establish minimum physical performance for such sources.*

ANSI N43.6-1997, Classification of Sealed Radioactive Sources

*Establishes a system of classification of sealed radioactive sources based on performance specifications related to radiation safety. It provides manufacturers of sealed sources with*

*a series of tests for evaluating the safety of products under specified conditions, and also assists a user of such sources to select a type that suits the intended application insofar as maintenance of source integrity is concerned. Tests are prescribed for temperature, external pressure, impact, vibration, and puncture over a range of severity.*

ANSI N43.8-2001, Gaging Devices, Classification of Industrial lonizing Radiation (NBS 129)

*Applies to the radiation safety aspects of industrial gauging devices that use sealed radioactive sources or x-ray tubes for the determination or control of thickness, density, level, interface location, particle size distribution, or qualitative or quantitative chemical composition. The standard establishes a system for classification of gauging devices based on performance specifications relating to radiation safety. In addition to specific tests for both use conditions and accident conditions, guidelines for other safety features and considerations are presented.*

## HPVA (Hardwood Plywood & Veneer Association)

ANSI/HPVA EF-2002, Laminated Hardwood Flooring

*Covers the requirements for grading, moisture content, machining, bond line, construction, formaldehyde emissions and finish of laminated (engineered) wood flooring. Test procedures are provided or referenced for determining conformance with various requirements in the Standard. Definitions of trade terms and methods for identifying products that conform to this Standard are included.*

ANSI/HPVA HP-1-2004, Hardwood and Decorative Plywood

*Covers the principal types, face grades, back grades, inner ply grades and constructions of plywood made primarily with hardwood faces, and formaldehyde emissions for hardwood plywood and certain reconstituted wood wall panels. Included are requirements for wood species and plywood veneer grades; for lumber, particleboard, medium density fiberboard, and hardboard cores; for bond line performance; panel construction; moisture content; and panel dimensions and tolerances. Definitions of trade terms, methods of ordering, and methods for identifying products that conform to this Standard are included.*

## I2AMA (International 2-UP ATV Manufacturers Association)

## I3A (International Imaging Industry Association)

ANSI IT4.181-1980 (R2002), Photography (Chemicals) – Benzyl Alcohol

*Establishes the purity requirements and test methods for photographic-grade benzyl alcohol.*

ANSI IT4.205-1984 (R2002), Photography (Chemicals) – 5-Methylbenzotriazole

*Establishes the purity requirements and test methods for photographic-grade 5-Methylbenzotriazole.*

ANSI/I3A IT10.2000-2004, Photography - Digital still cameras - JPEG 2000 DSC profile

*This document specifies a profile of JPEG 2000 suitable for use in digital still cameras (DSC profile). The profile specifies the following items: ·Decoder/Reader conformance requirements for software and hardware devices (including the camera itself) that desire to read images captured on JPEG 2000 based digital still cameras (DSC). This includes both codestream and file format requirements. · Encoder/Writer conformance requirements for the files created by digital still cameras. This includes both codestream and file format requirements, and specifies: · Required file format ·Metadata format and required/recommended metadata fields ·Supported colorspaces · Storage of audio annotations.*

ANSI/I3A IT10.7000-2004, Photography - Digital still cameras - Guidelines for reporting pixel-related specifications

*This standard specifies guidelines for reporting pixel-related specifications (e.g., the number of camera pixels) of a digital still camera, for the purposes of camera labeling, camera packaging, advertising, and the like. It is applicable to monochrome and color digital still cameras using one or more image sensors.*

ANSI/I3A IT10.7466-2002, Photography - Electronic still picture imaging - Reference Input Medium Metric RGB Color encoding (RIMM-RGB)

*Specifies a family of extended color-gamut scene-referred RGB color encoding designated as Reference Input Medium Metric RGB (RIMM RGB).*

ANSI/I3A IT10.7666-2002, Photography - Electronic Still Picture Imaging - Reference Output Medium Metric RGB Color Encoding (ROMM-RGB)

*Specifies a family of extended color-gamut output-referred RGB color encodings designated as Reference Output Medium Metric RGB (ROMM RGB).*

ANSI/I3A IT2.39-1998 (R2004), Photography - Black-and-White, Continuous -Tone Films - Photographic Modulation Transfer Function

*Describes a method for measuring the photographic modulation transfer function of black-and-white, continuous-tone films that have an emulsion coated on one side of a transparent support*

ANSI/I3A IT2.40-2003, Photography (Film) - Root mean square (rms) granularity of film (Images on one side only) - Method for measuring

*Describes a method for the determination of the granularity of photographic films by scanning with a suitable microdensitometer.*

ANSI/I3A IT2.45-2006, Photography - Viewing Conditions for Transilluminated Monochrome Medical Images - Method for Characterizing

*Provides methods for determining luminance and luminance spatial uniformity of illuminators used for viewing medical films that have viewing areas of 18 cm x 24 cm or larger. It also provides a method for measuring the illuminance falling on the medical film from light sources other than the illuminator.*

ANSI/I3A IT4.101-2002, Photography (Chemicals) – Sulfuric Acid

*Establishes criteria for the purity of photographic-grade sulfuric acid and describes the tests to be used to determine the purity.*

ANSI/I3A IT4.104-2002, Photography (Chemicals) – Hydrochloric Acid

*Establishes the purity requirements and test methods for photographic-grade p-Aminophenol hydrochloride.*

ANSI/I3A IT4.107-2002, Photography (Chemicals) – Citric Acid, Anhydrous, and Citric Acid, Monohydrate

*Establishes criteria for the purity of photographic-grade citric acid, anhydrous and monohydrate, and specifies the tests to be used to determine the purity.*

ANSI/I3A IT4.129-2002, Photography (Chemicals) – p-Aminophenol Hydrochloride

*Establishes the purity requirements and test methods for photographic-grade p-Aminophenol hydrochloride.*

ANSI/I3A IT4.14-2002, Photography (Processing) – Developers for Black-and-White Films and Plates – Method for Graininess Evaluation

*Describes a method for evaluating the graininess performance of a developer in comparison with a reference developer and is applicable to black-and-white continuous-tone still-pictorial photography. This standard was incorrectly listed for withdrawal in the public review section of the 10/19/2001 issue of Standards Action. It is being resubmitted for Public Review of a revision and redesignation of ANSI/NAPM IT4.14-1996.*

ANSI/I3A IT4.152-2001, Photography (Chemicals) – Formaldehyde, 37 Percent Solution with Stabilizer

*This standard establishes the purity requirements and test methods for photographic-grade formaldehyde 37% solution with stabilizer.*

ANSI/I3A IT4.154-2006, Processing Chemicals - Specifications for Aluminum Chloride Solution

*Establishes criteria for the purity of photographic-grade aluminum chloride solution and specifies the tests to be used to determine the purity.*

ANSI/I3A IT4.156-2002, Photography (Chemicals) – Sodium Formaldehyde Bisulfite, Anhydrous

*Establishes criteria for the purity of photographic-grade anhydrous sodium formaldehyde bisulfite and describes the tests to be used to determine the purity.*

ANSI/I3A IT4.175-1980 (R2006), Photography (Chemicals) – Sodium Sulfate, Anhydrous

*This standard states the purity requirements and test methods for photographic grade sodium sulfate, anhydrous.*

ANSI/I3A IT4.188-1980 (R2006), Photography (Chemicals) – Ethylenediamine

*This standard states the purity requirements and test methods for photographic grade ethylenediamine.*

ANSI/I3A IT4.22-1997 (R2003), Photography (Processing) – Channel-Type Hangers for Processing Sheet Films and Plates – Specifications

*Sets forth the requirements for channel-type frame hangers used in the processing of single-sheet films and plates and simultaneous processing of multiple sheet films and plates.*

ANSI/I3A IT4.23-2001 (R2006), Photography (Processing) – Roll and Dental Films – Film Clips and Hangers – Bite Dimensions

*This standard specified requirements for film clips and hangers used to hold photographic films and dental radiographic films during processing.*

ANSI/I3A IT4.230-1982 (R2006), Photography (Chemicals) – Sodium Tetraborate Pentahydrate and Sodium Tetraborate Decahydrate

*This specification establishes criteria for the purity of photographic grade sodium tetraborate pentahydrate.*

ANSI/I3A IT4.231-1982 (R2006), Photography (Chemicals) – Sodium Metaborate Octahydrate

*This specification establishes criteria for the purity of photographic grade sodium metaborate octahydrate and describes the tests to be used to determine the purity.*

ANSI/I3A IT4.24-1997 (R2003), Photography (Processing) – Processing Trays and Tanks – Specifications

*Presents specifications for trays and tanks used in processing photographic materials.*

ANSI/I3A IT4.303-1984 (R2003), Photography (Chemicals) – Potassium Persulfate

*Establishes the purity requirements and test methods for photographic-grade potassium persulfate.*

ANSI/I3A IT4.304-2002, Photography (Chemicals) – Sodium Ferrocyanide, Decahydrate

*Establishes the purity requirements and test methods for photographic-grade sodium ferrocyanide decahydrate.*

ANSI/I3A IT4.31-1998 (R2006), Photographic Inertness of Construction Materials Used in Photographic Processing, Specification for Testing the

*This standard provides a laboratory test method for determining whether a metallic or nonmetallic construction material in contact with either a black-and-white or color processing solution causes an adverse effect on sensitized photographic materials. Construction materials such as metals, alloys, plastics, elastomers, paints, and similar materials may be tested by this method.*

ANSI/I3A IT4.36-2003, Photography (Processing) – Photographic Processing Solutions – pH Calibration and Measurements – Test Methods

*Specifies a method for the measurement of pH in working strength and concentrates of photographic processing solutions.*

ANSI/I3A IT4.37-1999 (R2006), Photography (Processing) – Effluents – Identification and Analytical Methods

*This standard provides references for methods of analysis of photographic wastes and makes recommendations for the discharge of photographic processing effluents, for the reuse of chemicals, and for the conservation of water.*

ANSI/I3A IT4.39-1998 (R2006), Photography (Processing) - Effluents - Determination of Chlorine

*This standard establishes a spectrophotometric test method, under controlled conditions, for the determination of the chlorine requirement of photographic processing effluents.*

ANSI/I3A IT4.41-1999 (R2006), Photography (Processing) - Effluents - Determination of Free Cyanide

*This standard specifies a method for the determination of free cyanide at pH 6 in photogrpahic effluents and wastewaters.*

ANSI/I3A IT4.42-1998 (R2006), Photography (Processing) - Determination of Silver

*This standard provides methods for the determination of silver in photogrpahic products, sludges, residues, processing solutions, and effluents of the photograhic processing and manufacturing industries. Sampling, sample preservation, and analytical methodology are included.*

ANSI/I3A IT4.43-1998 (R2006), Photography (Processing) - Effluents - Determination of Total Cyanide

*This standard describes a method for determining the total cyanide in photographic effluents, based on the modified cyanide determination described in American National Standard for Photography (Processing) - Effluents - Determination of Free Cyanide. It measures both free cyanides and complex cyanides.*

ANSI/I3A IT4.99-1996 (R2002), Photography – Photographic-Grade Chemicals – Test Methods

*This standard deals with photographic-grade chemicals and their test methods.*

ANSI/ISO 3665-1996, ANSI/NAPM IT2.49-1997, Photography – Intra-Oral Dental Radiographic Film – Specification

*Specifies sensitometric characteristics of the film/process systems and establishes a speed classification system.*

ANSI/ISO 5989-1995, Photography (Chemicals) – Pre-Packaged Chemicals for the Processing of Photographic Silver Halide Materials – Vocabulary

*Gives terms for and definitions of prepackaged chemicals used in the processing of silver halide-based photographic materials in order to permit correct usage.*

ANSI/ISO 8478-1996, ANSI/PIMA IT3.614-1997, Photography – Camera Lenses – Method for Measuring ISO Spectral Transmittance

*Specifies a method for measuring the spectral transmittance of camera lenses.*

ANSI/ISO 9039-1994, ANSI/PIMA IT3.613-1998, Photography (Optics) – Image Distortion – Method for Testing

*Specifies methods of determining distortion in optical systems that have an optical spectral range from 100nm to 15000nm. Adoption of an International Standard ISO 9039:1994 as a replacement of ANSI PH3.613-1989.*

ANSI/ISO 9335-1995, Optics and Optical Instruments - Optical Transfer Function - Principles and Procedures of Measurement

*Gives general guidance for the construction and use of equipment for measurement of the Optical Transfer Function (OTF) of imaging systems.*

ANSI/NAPM IT3.612-1997, Optics and Optical Instruments - Optical Transfer Function - Principles and Procedures of Measurement

*Gives general guidance for the construction and use of equipment for measurement of the Optical Transfer Function (OTF) of imaging systems.*

^NSI/NAPM IT4.186-1987 (R2002), Photography (Chemicals) – Hydroxylamine Sulfate

*Establishes the purity requirements and test methods for photographic-grade hydroxylamine sulfate.*

ANSI/PIMA IT2.37-2001, Photography - Print Grain Index - Assessment of Print Graininess from Color Negative Films

*Describes a method for determining the "Print Grain Index" of a uniform neutral color photographic print from an unmodulated neutral exposure of a color negative film.This standard describes a method for determining the "Print Grain Index" of a uniform neutral color photographic print from an unmodulated neutral exposure of a color negative film. This standard was listed for public review in the 8/13/1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/PIMA IT3.111-1998, Focal Lengths and Focal Distances of Photographic Lenses, Methods of Designating and Measuring

*Covers lenses intended to be used with very distant objects. It defines the focal plane, the principal focus, the focal length, the calibrated focal length, the front focal distance, the back focal distance, the flange focal distance, and the total length and describes methods for their measurement.*

ANSI/PIMA IT3.602-1997, Photography (Optics) - Camera Lenses - Focal Length, Focusing Scale, and Distance Scale Markings

*Specifies the units and tolerances of the focal length markings used on camera lenses and describes preferred markings for focusing scales and distance scales.*

ANSI/PIMA IT3.604-1999, Distribution of Illuminance Over the Field of a Photographic Objective, Method of Determining the

*Defines terms used to express the distribution of illuminance over the field of a photographic objective and establishes methods for the measurement of this illuminance.*

ANSI/PIMA IT3.606-1998, Aperture Calibration of Motion-Picture Lenses, Method for Determining

*Defines the "F-" and "T-" numbers used to express the relative aperture of a photographic objective and establishes means for calibrating the diaphragms of objectives in both the f- and T- systems.*

ANSI/PIMA IT3.615-1998, Photography (Optics) – Lens and Lens Systems – Measurement Method for Veiling Glare

*Describes a method for measuring the veiling glare of a still-picture camera objective.*

ANSI/PIMA IT3.616-1999, Photography (Optics) – Anti-Reflection Coating for Photographic Lenses – Performance Specifications and Methods for Testing

*Provides performance specifications and describes methods for testing single-layer and multi-layer dielectric anti-reflection coatings on glass and plastic photographic lens elements or other components.*

ANSI/PIMA IT3.619-1998, Photography (Optics) - Rangefinders and Other Focusing Aids - Performance Specifications

*Describes rangefinders and focusing aids and provides methods for testing their accuracy and specifying their performance.*

ANSI/PIMA IT3.620-1999, Photography (Optics) – Camera Viewfinders – Performance Specifications, Test Procedures, Definitions and Terms

*Describes photographic camera viewfinders and methods for testing their accuracy and specifying their performance.*

ANSI/PIMA IT4.155-1981 (R2001), Photography (Chemicals) – Aluminum Sulfate Solution

*Establishes the purity requirements and test methods for photographic-grade aluminum sulfate solution.*

ANSI/PIMA IT4.177-1983 (R2001), Photography (Chemicals) – Sodium Thiocyanate

*Establishes the purity requirements and test methods for photographic-grade sodium thiocyanate crystals and solution (50%).*

ANSI/PIMA IT4.185-1987 (R2001), Photography (Chemicals) – Ethylenediaminetetraacetic Acid (EDTA) [(Ethylenedinitrolo)tetraacetic Acid], and Its Salts

*Establishes the purity requirements and test methods for photographic-grade ethylenediaminetetraacetic acid (EDTA) and its salts.*

ANSI/PIMA IT4.189-1984 (R2001), Photography (Chemicals) – Ferric Ammonium Ethylenediaminetetraacetate Solution and Sodium Ferric Ethylenediaminetetraacetate Trihydrate

*Establishes the purity requirements and test methods for photographic-grade ferric ammonium ethylenediaminetetraacetate solution and ferric ethylenediaminetetraacetate trihydrate.*

ANSI/PIMA IT4.201-1981 (R2001), Photography (Chemicals) – Potassium Iodide

*Establishes the purity requirements and test methods for photographic-grade potassium iodide.*

ANSI/PIMA IT4.206-1984 (R2001), Photography (Chemicals) – 5-Nitrobenzimidazole Nitrate

*Establishes the purity requirements and test methods for photographic-grade 5-Nitrobenzimidazole.*

ANSI/PIMA IT4.207-1982 (R2001), Photography (Chemicals) – Sodium Bromide

*Establishes the purity requirements and test methods for photographic-grade sodium bromide.*

ANSI/PIMA IT4.234-1986 (R2001), Photography (Chemicals) – Trisodium Phosphate, Dodecahydrate

*Establishes the purity requirements and test methods for photographic-grade trisodium phosphate, dodecahydrate.*

ANSI/PIMA IT7.211-1998, Audiovisual Systems – Slide Trays for Projectors – Circular Slide Tray

*Describes the essential dimensions of a horizontal gravity-feed, circular slide tray for nominal size 5 cm X 5 cm thick or thin projector slides.*

ANSI/PIMA IT9.26-1997, Imaging Materials - Life Expectancy of Magneto-Optic (MO) Disks - Method for Estimating, Based on Effects of Temperature and Relative Humidity

*Specifies test methods for estimating the storage life expectancy of information stored on rewritable and write once magneto-optic media.*

ANSI8/I3A IT4.232-2006, Photography - Processing chemicals - Specifications for photographic grade ammonium hydroxide, NH 4 OH (aqueous ammonia

*This standard states the purity requirements and test methods for photographic grade ammonium hydroxide.*

## IACET (International Association for Continuing Education and Training)

## IAPMO (International Association of Plumbing & Mechanical Officials)

ANSI IAPMO Z124.4-2006, Plastic Water Closet Bowls and Tanks

*This standard covers physical requirements and test methods for performance, and dimensions, in addition to general requirements of materials, workmanship and finish of plastic water closets bowls, tanks, tank covers or combinations of same. The materials and equipment which are listed to conduct the tests in this standard are provided for reference in determining compliance with this voluntary standard. Materials and equipment of similar design, composition, and specification shall also be permitted to conduct these tests.*

ANSI/IAPMO UMC 1-2003, 2003 Uniform Mechanical Code

*This code provides minimum standards to safeguard life or limb, health, property & public welfare by regulating & controlling the design, construction, installation, quality of materials, location, operation & maintenance or use of heating, ventilating, cooling, refrigeration systems, incinerators & other miscellaneous heat producing appliances. The provisions of this code apply to the erection, installation, alteration, repair, relocation, replacement, addition to, use or maintenance of any heating, ventilating, cooling, refrigeration systems, incinerators or other miscellaneous heat producing appliance.*

ANSI/IAPMO UPC 1-2003, 2003 Uniform Plumbing Code

*This code provides minimum standards & requirements to safeguard life or limb, health, property & public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation & maintenance or use of plumbing systems. The provisions of this code apply to the erection, installation, alteration, repair, relocation, replacement, addition to, use or maintenance of plumbing systems.*

ANSI/IAPMO Z1000-2006, Prefabricated Septic Tanks

*This standard establishes an acceptable quality standard for prefabricated septic tanks of concrete, fiberglass-reinforced plastic, or polyethylene. These prefabricated septic tanks are intended for use in domestic or commercial sewage disposal systems. Prefabricated Septic tank shall be designed to produce a watertight, structurally sound vessel that will provide adequate space for sludge and scum accumulations.*

ANSI/IAPMO Z1001-2006, Prefabricated Gravity Grease Interceptors

*This standard is to establish specifications regarding the construction of prefabricated gravity grease interceptors. Prefabricated gravity grease interceptors shall be designed to remove grease from effluent and retain grease until accumulations are removed by pumping the interceptor.*

ANSI/IAPMO Z124.1.2-2005, Plastic Bathtub and Shower Units

*Covers physical requirements and test methods for performance requirements of materials and workmanship, and finish of plastic bathtub or shower units with or without walls manufactured integral with the bathtub or shower; or as a multi-piece unit distributed as part of the bathtub or shower unit. Such products shall meet the requirements as outlined in this standard. While this standard covers the performance requirements of plastic bathtub or shower units and describes these performance requirements in terms of methods of test applicable to all such units, a number of different materials and methods of manufacture shall be permitted to be used to meet these requirements. Each of these materials and methods have different properties which will affect its end performance and suitability for the intended use. For this reason, portions of the standard are broken into separate*

ANSI/IAPMO Z124.3-2005, Plastic Lavatories

*Covers requirements and test methods for performance of materials and workmanship, and finish of plastic lavatory units manufactured as a separate bowl or a bowl with integral top. While this standard covers the performance requirements of plastic lavatory units and describes these performance requirements in terms of methods of test applicable to all such units, a number of different materials and methods of manufacture shall be permitted to be used to meet these requirements. Each of these materials and methods have different properties which will affect its end performance and suitability for the intended use. For this reason, portions of the standard are broken into separate requirements designed to identify these individual characteristics. The materials and equipment which are listed as having been used to conduct the testing procedures in this standard are provided solely for informational*

ANSI/IAPMO Z124.5-2006, Plastic Toilet (Water Closets) Seats

*This Standard covers physical requirements and test methods for performance pertaining to structure, water resistance, chemical/stain resistance, ignition testing, cleanability, and other significant properties, in addition to general requirements of materials, workmanship and finish of plastic water closet seats and covers. While this standard covers the performance requirements of plastic water closet seats and covers and describes those performance requirements in terms of methods of test applicable to all such units, a number of different materials and methods of manufacture shall be permitted to be used to meet the requirements.*

ANSI/IAPMO Z124.6-1997, Plastic Sinks

*Covers requirements and test methods for performance pertaining to water resistance, colorfastness, stain resistance, cleanability, and other significant properties, in addition to general requirements of material and workmanship, finish and installation of plastic bath tub liners.*

ANSI/IAPMO Z124.7-1997, Prefabricated Plastic Spa Shells

*Establishes performance standards for plastic spa shells. Intended to serve as a guide for authorities and users and to provide a basis for identifying spa shells that conform to this standard.*

ANSI/IAPMO Z124.9-2004, Plastic Urinal Fixtures

*Covers physical requirements and test methods for performance and in addition, general requirements of materials and workmanship and finish of plastic urinal fixtures. The materials and equipment which are listed as having been used to conduct the testing procedures in this standard are provided solely for informational reference. Material and equipment of similar design, composition and specification may also be used to conduct these testing procedures.*

## ICC (International Code Council)

ANSI/ICC 2.0-1998, Manufactured Housing Construction and Safety Standards

*NOTE: This is the third public review for this standard. It was originally listed in the August 2, 1996 and March 14, 1997 issues of Standards Action. The substantive changes to the second public review draft are published here in their entirety:*

ANSI/ICC 300-2007, Bleachers, Folding and Telescopic Seating, and Grandstands

*The purpose of the effort is the development of appropriate, reasonable and enforceable model health and safety provisions for new and existing installations of all types of bleachers and bleacher-type seating, including fixed and folding bleachers for indoor, outdoor, temporary and permanent installations. Such provisions would serve as a model for adoption and use by enforcement agencies at all levels of government in the interest of national uniformity.*

ANSI/ICC 400-2007, Standard on Design, Construction and Performance of Log Structures

*The objective of this Standard is to provide technical design and performance criteria that will facilitate and promote the design, construction, and installation of safe and reliable structures constructed of log timbers. It is intended that this Standard be used by design professionals, manufacturers, and constructors, and building and other government officials, and for reference in building codes.*

ANSI/ICC A117.1-2003, Accessible and Useable Buildings and Facilities

*The purpose of this standard is to establish the minimum requirements make sites, facilities, buildings and elements accessible to and usable by people with such physical disabilities as the inability to walk, difficulty walking, reliance on walking aids, blindness and visual impairment, deafness and hearing impairment, in coordination, reaching and manipulation disabilities, lack of stamina, difficulty interpreting and reacting to sensory information, and extremes of physical size. The intent of the standard is to allow a person with a physical disability to independently get to, enter, and use a site, facility, building, or element.*

## ICPA (International Cast Polymer Association)

ANSI/ACMA/ICPA UEF-1-2004, Estimating Emission Factors from Open Molding Composite Processes

*The Emission Factors will include emission estimates from the open molding processes used in the industry. It will provide the user with a mechanism to estimate emissions based on the production process, materials being used and techniques employed. The final emission estimates will satisfy state and federal requirements for permit compliance and reporting emissions on Form R.*

ANSI/ICPA SS-1-2001, Performance Standard for Solid Surface Materials

*Establishes minimum performance requirements for solid surface materials including workmanship, structural integrity and physical characteristics such as stain resistance, cleanability, impact and water resistance and ability for the surface to be seamlessly fabricated and renewed.*

## IEEE (Institute of Electrical and Electronics Engineers)

ANSI C37.06-2000, Switchgear – AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis – Preferred Ratings and Related Required Capabilities

*Pertains to indoor and outdoor types of ac high-voltage circuit breakers rated above 1000 volts and rated on a symetrical current basis.*

ANSI C37.06.1-2000, High-Voltage Circuit Breakers Rated on a Symetrical Current Basis Designated Definite Purpose for Fast Transient Recovery Voltage Rise Times

*Supplements BSR C37.06 for Medium-Voltage Indoor Circuit Breakers, used within enclosures, whose applications involve circuits whose TRV rise to crest value much more rapidly than the times specified in Table 1 and Figure A.1 of BSR C37.06.*

ANSI C37.121-1989 (R2000), Switchgear – Unit Substations – Requirements

*Covers the requirements for three-phase unit substations for step-down operation in the range of 112.5 kVA through 1000 kVA at primary voltages of 601 volts through 38 kilovolts.*

ANSI C37.16-2000, Low-Voltage Power Circuit Breakers and AC Power Circuit Protectors, Preferred Ratings, Related Requirements and Application Recommendations for

*Applies to all low-voltage power circuit breakers and AC power circuit protectors as covered in C37.13, C37.14, C37.17, C37.18, C37.29, C37.50, and C37.52.*

ANSI C37.17-1997 (R2003), Trip Devices for AC and General Purpose DC Low-Voltage Power Circuit Breakers

*Pertains to:*
*1. direct-acting over-current electro-mechanical trip devices*
*2. direct-acting over-current electronic trip devices*
*3. reverse-current trip devices*
*4. undervoltage trip devices*

ANSI C37.17-1997, Trip Devices for AC and General Purpose DC Low-Voltage Power Circuit Breakers

*Pertains to direct-acting overcurrent electro-mechanical trip devices; direct-acting overcurrent electronic trip devices; reverse-current trip devices; and undervoltage trip devices. This is the third Public Review for this standard. This standard was previously listed for public review in the January 7, 1994 and the March 3, 1995 issues of Standards Action. It is being resubmitted owing to substantive changes to the text.*

ANSI C37.22-1997 (R2003), Preferred Ratings and Related Required Capabilities for Indoor AC Medium-Voltage Switches Used in Metal-Enclosed Switchgear

*Provides preferred ratings for indoor AC medium-voltage switches used in metal-enclosed switchgear.*

ANSI C37.32-2002, High-Voltage Air Disconnect Switches Interrupter Switches, Fault Initiating Switches, Grounding Switches, Bus supports and Accessories Control Voltage Ranges – Schedule of Preferred Ratings, Construction Guidelines and

*Provides the schedules of preferred ratings and construction specifications for high-voltage disconnect, interrupter, fault initiating, and grounding switches rated above 1000 volts. Switch operator control voltage ranges (formerly C37.33), bus supports and accessories are also covered by this standard. Switches included in ANSI/IEEE C37.20.2-1999, C37.20.3-1987, C37.71-1984 (R1990), C37.72-1987, IEEE C37.20.4, and IEEE C37.73 are not covered by this standard.*

ANSI C37.42-1996, Switchgear – Distribution Cutouts and Fuse Links – Specifications

*This standard establishes specifications for high voltage (above 1000 volts) expulsion type distribution class fuses, cutouts fuse disconnecting switches, fuse links and associated accessories.*

ANSI C37.46-2000, Power Fuses and Fuse Disconnecting Switches, Specifications for

*Establishes the specification for high voltage expulsion & current limiting type power class fuses and accessories. These devices are intended for use on alternating current systems.*

ANSI C37.47-2000, Distribution Fuse Disconnecting Switches, Fuse Supports, and Current-Limiting Fuses, Specifications for

*Applies to high-voltage distribution current-limiting fuses (above 600 volts) and accessories for alternating-current distribution systems.*

ANSI C57.12.10-1998, Transformers 230 kV and Below, 833/958 through 8333/10 417 kVA Single Phase, and 750/862 through 60 000/80 000/100 000 kVA Three Phase, Requirements for

*Covers certain electrical, dimensional and mechanical characteristics and takes into consideration certain safety features of 60-hz, two-winding liquid-immersed transformers used for step-down or step-up purposes rated 833/958 through 8333/10417 kVA, single phase; 750/862 through 60 000/80 000/100 000 kVA, three-phase without load tap changing; and 3750/4687 through 60 000/80 000/100 000 kVA with load tap changing.*

ANSI C57.12.20-1997, Transformers – Overhead-Type Distribution Transformers, 500 kVA and Smaller: High Voltage, 34 500 Volts and Below; Low Voltage, 7970/13 800Y Volts and Below

*Covers certain electrical, dimensional and mechanical characteristics.*

ANSI C57.12.24-2000, Transformers – Underground-Type Three-Phase Distribution Transformers, 2500 kVA and Smaller: High Voltage 34 500 Grd Y/19 920 Volts and Below; Low Voltage, 480 Volts and Below – Requirements

*Covers certain electrical and mechanical characteristics and takes into consideration certain safety features of three-phase, 60-Hz, liquid-immersed, self-cooled, underground-type transformers rated 2500 KVA abd smaller with high voltages of 34 500 GRdY/19 920 volts and below, and with low voltages of 480 volts and below. These transformers are generally used for step-down purposes from an underground primary cable supply and are suitable for occasional submerged operation.*

ANSI C57.12.28-1999, Switchgear and Transformers – Pad-Mounted Equipment – Enclosure Integrity

*Covers conformance tests and requirements for the integrity of above-grade, pad-mounted enclosures containing apparatus energized in excess of 600 volts that may be exposed to the public including but not limited to the following tvpes of equipment enclosures: pad-mounted capacitor inductors; pad-mounted distribution transformers; pad-mounted junction enclosures; pad-mounted metering equipment; and pad-mounted switch gear.*

ANSI C57.12.29-1999, Switchgear and Transformers – Pad-Mounted Equipment – Enclosure Integrity for Coastal Environments

*Covers conformance tests and requirements for the intergrity of above-grade pad-mounted enclosures in coastal environments containing apparatus energized in excess of 600 volts that may be exposed to the public including but not limited to the following types of equipment enclosures: pad-mounted capacitors or inductors; pad-mounted distribution transformers; pad-mounted junction enclosures; pad-mounted metering equipment; and pad-mounted switchgear.*

ANSI C57.12.40-2000, Subway and Vault Types (Liquid Immersed) – Requirements

*Covers certain electrical, dimensional, and mechanical characteristics and takes into consideration certain safety features of three-phase, 60-Hz, liquid-immersed, secondary network transformers with a three-position grounding switch, subway and vault types rated 25000 KVA and smaller; primary 34 400 volts and below; secondary 216Y/125 volts and 480Y/277 volts interchangeability; and safety of the equipment described. Also assists in the proper selection of such equipment.*

ANSI C57.12.50-1981 (R1998), Distribution Transformers 1 to 500 kVA, Single-Phase; and 15 to 500 kVA, Three-Phase with High-Voltage 601–34 500 Volts, Low Voltage 120–600 Volt, Ventilated Dry-Type

*This standard is intended to set forth characteristics relating to performance, limited electrical and mechanical interchangeability, and saftey of the equipment described, and to assist in the proper selection of such equipment.*

ANSI C57.12.51-1981 (R1998), Dry-Type Power Transformers 501 kVA and Larger, Three-Phase with High-Voltage 601 to 34 500 Volts, Low-Voltage 208Y/120 to 4160 Volts, Requirements for Ventilated

*This standard is intended to set forth characteristics relating to performance, limited electrical and mechanical interchangeability, and saftey of the equipment described, and to assist in the proper selection of such equipment.*

ANSI C57.12.52-1981 (R1998), Dry-Type Power Transformers, 501 kVA and Larger, Three-Phase with High-Voltage 601 to 34 500 Volts, Low-Voltage 208Y/120 to 4160 Volts, Requirements for Sealed

*This standard describes certain electrical and mechanical characteristics and takes into consideration certain saftey features of 60-Hz, two winding, three-phase, sealed dry-type transformers rate 501 kVA and larger.*

ANSI C57.12.55-1987 (R1998), Dry-Type Transformers in Unit Installations, Including Unit Substations – Conformance Standard

*This standard describes certain electrical, mechanical, and safety requirements and conformance tests for dry-type distribution and power transformers and for autotransformers. These transformers may either be single-phase or poly-phase, with ventilated, nonventilated or sealed enclosures*

ANSI C63.12-1999, Electromagnetic Compatibility Limits – Recommended Practice

*Includes revisons to the 1987 edition, which was administratively withdrawn.*

ANSI C63.12-1999, Electromagnetic Compatibility Limits – Recommended Practice

*Includes revisons to the 1987 edition, which was administratively withdrawn.*

ANSI C63.14-1998, Dictionary for Technologies of Electromagnetic Compatibility (EMC), Electromagnetic Pulse (EMP), and Electrostatic Discharge (ESD)

*Provides definitions of terms associated with electromagnetic compatibility (EMC), electromagnetic pulse (EMP), and electrostatic discharge (ESD). In addition to definitions, it includes symbols and abbreviations.*

ANSI C63.19-2006, Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids

*This standard sets forth uniform methods of measurement and parametric requirements for the electromagnetic and operational compatibility and accessibility of hearing aids used with wireless communications devices operating in the range of 800 MHz to 3 GHz. However, this version is focused on existing services, which are in common use.*

ANSI C63.4-2003, Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

*This standard specifies U.S. consensus standard methods, instrumentation, and facilities for measurement of radio-frequency (RF) signals and noise emitted from electrical and electronic devices in the frequency range 9 kHz to 40 GHz. It does not include generic nor product-specific emission limits. Where possible, the specifications herein are harmonized with other national and international standards used for similar purposes.*

ANSI C63.5-2006, Electromagnetic Compatibility - Radiated Emission Measurements in Electromagnetic Interference (EMI) Control - Calibration of Antennas (9 kHz to 40GHz)

*The currently published standard ANSI C63.5-2004 is clarified by providing minor revisions to Clause 5.1 and Figure G2.*

.^.NSI C63.7-2005, Guide for Construction of Open-Area Test Sites for Performing Radiated Emission Measurement

*Information that is useful in constructing an open-area test site (OATS) used to perform radiated emission*
*measurements in the frequency range of 3--1000 MHz is provided. Final validity of the test site can only be made by*
*performing site attenuation measurements as described in ANSI C63.4-2003.*

ANSI C93.5-1997, Requirements for Single Function Power-Line Carrier Transmitter/Receiver Equipment

*Applies to single function power-line carrier (PLC) transmitter/receiver equipment used to transfer information over power transmission circuits. Includes technical definitions, performance ratings, test methods, and manufacturing requirements for transmitter/receiver equipment. This standard was originally listed in the August 16, 1996 issue of Standards Action.*
*It is now being resubmitted due to substantive changes to the text.*

ANSI N317-2005, Performance Criteria for Instrumentation Used for Inplant Plutonium Monitoring

*Performance criteria are defined, and plutonium radiation is characterized. Thespecifications apply to plutonium handling and storage facilities, excluding reactors and irradiated fuel reprocessing facilities. This standard does not apply to the construction of specific instruments, nor does it specify instrumentation to be employed for each survey to be conducted, other than in generic terms. It does not define specifications for personnel dosimeters, effluent monitoring systems, or instruments needed in bioassay programs, nor does it define those requirements that may be needed to monitor emergency conditions.*

ANSI N320-2005, Performance Specifications for Reactor Emergency Radiological Monitoring Instrumentation

*The essential performance parameters and general placement for monitoring the release of radionuclides associated with a postulated serious accident at a reactor facility are defined for various types of instrumentation. The predominant consideration in the assessment of radiation emergencies is the measurement of fission products made promptly enough to permit timely emergency decisions. This standard does not specify which of the instruments or systems are required, nor does it consider the number or specific locations of such instruments.*

ANSI N322-1996, Inspection and Test Specifications for Direct and Indirect Reading Quartz Fiber Pocket Dosimeters

*Specifies the procedures to be used for the inspection, test, construction and performance evaluation of direct reading dosimeters of the electrostatic/electroscope type.*

ANSI N323A-1997, Radiation Protection Instrumentation Test and Calibration – Portable Survey Instruments

*Establishes specific requirements for portable radiation protection instruments used for detection ad measurement of levels of ionizing radiation fields.*

ANSI N323B-2003, Installed Radiation Protection Instrumentation Test and Calibration - Portable Survey Instruments for Near Background Operation

*Performance requirements for portable instruments for radiation levels near background.*

ANSI N323D-2002, Installed Radiation Protection Instrumentation

*Contains requirements for installed radiation protection instrumentation.*

ANSI N42.12-1994 (R2004), Calibration and Usage of Thallium-Activated Sodium Iodide Detector Systems for Assay of Radionuclides

*This standard establishes methods for performance testing, calibration, and usage of thallium-activated sodium iodide [NaI(Tl)] detector systems for the measurement of gamma ray emission rates of radionuclides; the assay for radioactivity; and the determination of gamma ray energies and intensities. It covers both energy calibration and efficiency calibration.*

ANSI N42.13-2004, Calibration and Usage of "Dose Calibrator" IonizationChambers for the Assay of Radionuclides

*This standard covers the technique for the quantiÞcation of the activity of identiÞed radionuclides using any of a variety of ionization chambers currently available for this purpose. Application of the standard is limited to instruments that incorporate well-type ionization chambers as detectors.*

ANSI N42.14-1999 (R2004), Calibration and Use of Germanium Spectrometers for the Measurement of Gamma-Ray Emission Rates of Radionuclides

*This standard establishes methods for the calibration and use of germanium (Ge) spectrometers for the measurement of gamma-ray energies and emission rates over the energy range from 59 keV to approximately 3000 keV, and the calculation of source activities from these measurements. This standard establishes minimum requirements for automated peak finding and methods for measuring the full-energy peak efficiency with calibrated sources.*

ANSI N42.15-1997 (R2004), Performance Verification of Liquid-Scintillation Counting Systems

*The specifications for check sources to be used in the evaluation of liquid-scintillation counter performance are included in this standard. Measures of performance considered in this standard are a) Counting system efficiency b) Reproducibility of sample and background count rates c) Preparation of check sources for performance evaluation Definitions of some terms used here are given in Clause 3.*

ANSI N42.17a-2003, Performance Specifications for Health Physics Instrumentation – Portable Instrumentation for Use in Normal Environmental Conditions

*This standard establishes the minimum performance criteria for health physics instrumentation for use in ionizing radiation fields. Testing methods are included to establish the acceptability of each type of instrumentation. This standard does not specify which instruments or systems are required, nor does it consider the number of specific applications of such instruments.*

ANSI N42.17B-1989 (R2005), Performance Specifications for Health Physics Instrumentation – Occupational Airborne Radioactivity Monitoring Instrumentation

*This standard specifies performance criteria and testing procedures for instruments and instrument systems designed to continuously sample and quantify concentrations of radioactivity in ambient air in the workplace. This standard does not specify which instruments or systems are required, nor does it address the specific locations or applications of such instruments.*

ANSI N42.17C-1989 (R2005), Radiation Instrumentation – Performance Specifications for Health Physics Instrumentation – Portable Instrumentation for Use in Extreme Environmental Conditions

*This standard establishes minimum acceptable performance criteria for health physics instrumentation for use in ionizing radiation fields under extreme environmental conditions. Included are testing methods to establish the acceptability of each type of instrumentation. This standard supplements the basic performance requirements for health physics instrumentation as specified in ANSI N42.17A [2]. 1 Specifications in this standard are expected to be called for by the user as required and should not be considered as general specifications.*

ANSI N42.18-2004, Specification and Performance of On-Site Instrumentation for Continuously Monitoring Radioactivity in Effluents

*This standard provides recommendations for the selection of instrumentation specific to the continuous monitoring and quantification of radioactivity in effluents released to the environment. The effluent streams considered may contain radioactive gases, liquids, particulates, or dissolved solids singly or in combination. This standard specifies detection capabilities, physical and operating limits, reliability, and calibration requirements and sets forth minimum performance requirements for effluent monitoring instrumentation. Unless otherwise specified, the criteria herein refer to the total system.*

ANSI N42.20-2003, Performance Criteria for Active Personnel Radiation Monitors

*Prevents performance criteria for active personnel radiation monitors.*

ANSI N42.22-1995 (R2002), Traceability of Radioactive Sources to the National Institute of Standards and Technology (NIST) and Associated Instrument Quality Control

*Presents a mechanism for manufacturers to establish traceability of radionuclide sources that are certified for radionuclide activity; concentration; or alpha, beta, x-, or gamma-ray emission rate to the National Institute of Standards and Technology (NIST) is described.*

ANSI N42.23-1996 (R2004), Measurement and Associated Instrumentation Quality Assurance for Radioassay Laboratories

*The purpose of this standard is to provide a) Guidance for a national program for testing, accrediting, and monitoring of all types of radioassay laboratories b) Guidance for the minimum requirements necessary to maintain a viable service laboratory for the measurement of low and intermediate levels of radioactivity in all types of test media c) Criteria for the establishment of monitoring and reference laboratories d) Operational and QA criteria for service, monitoring, and reference radioassay laboratories e) Guidance for the National Institute of Standards and Technology (NIST) and an accrediting organization to implement this standard.*

ANSI N42.25-1997 (R2004), Calibration and Usage of Alpha/Beta Proportional Counters

*This standard establishes methods for the calibration and use of gas proportional counters with and without active guard detectors. This standard also establishes methods for measuring the alpha and beta counting plateau, crosstalk factors, background, alpha and beta efficiency from prepared standards, correction factors for samples whose self-attenuation or mass differs from that of the standard, and calculation of the sample activities together with their random and total uncertainties.*

ANSI N42.26-1995 (R2004), Radiation Protection Instrumentation - Monitoring Equipment - Personal Warning Devices for X and Gamma Radiations

*The purpose of this standard is to specify the design requirements and performance characteristics of personal warning devices used to give an audible or audible and visual indications related to dose equivalent rate from strongly penetrating raditions(as defined in ICRU Report 47.*

ANSI N42.27-1999 (R2004), Determination of Uniformity of Solid Gamma-Emitting Flood Sources

*The scope of this standard is limited to commercially-produced, solid radioactive flood sources intended to aid in the determination of the system field uniformity of scintillation cameras used in nuclear medicine. This standard is intended to provide a set of minimum informational requirements for a Test and Measurement Report for flood sources used with scintillation cameras. It is not intended to specify the means by which such information is obtained, although it does place requirements and limitations on the methodology.*

ANSI N42.28-2002, Calibration of Germanium Detectors for In-Situ Gamma-Ray Measurements

*Covers performance criteria of measurement techniques for efficiency calibration.*

ANSI N42.30-2002, Performance Specification for Tritum Monitors

*Contains performance requirements and test methods for tritium motors.*

ANSI N42.31-2003, Measurement Procedures for Resolution and Efficiency of Wide-Bandgap Semiconductor Detectors of Ionizing Radiation

*Measurement and test procedures are established for wide-bandgap semiconductor detectors such as cadmium-telluride (CdTe) cadmium-zinc-telluride (CdZnTe), and mercuric iodide (HgI2) that can be used at room temperature for the detection and quantitative characterization of gamma-rays, X-rays and charged particles. Standard terminology and descriptions of the principal features of the detectors are included.*

ANSI N42.32-2006, Criteria for Alarming Personal Radiation Detectors for Homeland Security

*This standard describes the testing methods used to evaluate the performance of instruments that are carried on the body and used to detect the presence and magnitude of radiation from sources encountered by first responders. This standard does not apply to the performance of health physics instrumentation, which is covered in ANSI Standards N42.17A and C, N42.20 and N13.27. The instruments covered by this standard are not intended to provide the dose for radiation workers. This standard does not supercede ANSI N42.17A and C, N42.20 or N13.27. This standard specifies the performance criteria for radiation detection and measurement instruments that may be used in the extreme environmental conditions encountered by first responders. The performance criteria contained in this standard are meant to provide a means for verifying the*

ANSI N42.33-2006, Portable Radiation Detection Instrumentation for Homeland Security

*This standard establishes performance and design criteria, test and calibration requirements, and operating and training instruction requirements for portable radiation detection instruments used for detection and measurement of radioactive substances for the purposes of interdiction and emergency response. The appendices of this standard provide reference information. This standard includes:*
*Design and performance requirements for specific instrument types and applications Type testing and certification requirements for these instruments; Calibration and test intervals Required calibration equipment Required documentation, including the instrument instruction manual.*

ANSI N42.34-2006, Performance Criteria for Hand-held Instruments for the Detection and Identification of Radionuclides

*This standard applies to hand-held instruments used for the detection and identification of radioactive isotopes and for indication of gamma dose rate. Instruments covered by this standard are not intended to provide accurate measurement of dose rate. This standard specifies general requirements, test procedures and radiation response, electrical, mechanical and environmental requirements.*

ANSI N42.35-2006, Evaluation and Performance of Radiation Detection Portal Monitors for Use in Homeland Security

*This standard provides the criteria for evaluating, categorizing, and periodic operational testing of Radiation Detection Portal Monitors to detect radioactive materials that could be used for nuclear weapons or radiological dispersal devices, (RDDs). Portal monitors may be used in permanent installations, in temporary installations for short-duration detection needs, or as a transportable system. These systems are used to provide monitoring of people, packages and vehicles to detect illicit radioactive material transportation, or for emergency response to an event that releases radioactive material. The evaluation is performed under a set of test conditions, radiation emission, and radiation response to determine the portal monitors' lowest level of performance in a realistic operating environment. Portal monitors are categorized by determining their lowest level of*

ANSI N42.37-2006, Training Requirements for Homeland Security Purposes Using Radiation Detection Instrumentation for Interdiction and Prevention

*The scope of this standard describes requirements for training in the use of personal radiation detectors (ANSI N42.32), portable radiation detection instruments (ANSI N42.33), portable radionuclide identifiers (ANSI N42.34) and portal radiation monitors (ANSI N42.35). Other types of radiation detectors may be included in revisions of this standard as new equipment is developed. This standard provides training requirements for three identified and defined levels of training.*

ANSI N42.38-2006, Performance Criteria for Spectroscopy-Based Portal Monitors used for Homeland Security

*This standard specifies the operational and performance requirements for spectroscopy-based portal monitors used in Homeland Security applications. Spectroscopy-based portal monitors have the ability to detect radioactivity and identify radionuclides that may be present in or on persons, vehicles, or containers through the use of gamma spectroscopy techniques. Performance requirements for those portals that do not provide information about the specific radionuclide present are addressed by ANSI N42.35.*

ANSI N42.42-2006, Data format standard for radiation detectors used for Homeland Security

*This standard specifies the data format that shall be used for both required and optional data available at the output of radiation instruments for homeland security applications. The performance requirements for these types of instruments are described in other standards; such as, ANSI/IEEE N42.32, ANSI/IEEE N42.33, ANSI/IEEE N42.34, ANSI/IEEE N42.35, and ANSI/IEEE N42.38.*

ANSI N42.43-2006, Performance Criteria for Mobile and Transportable Radiation Monitors used for Homeland Security

*This standard specifies the operational and performance requirements for transportable and/or mobile radiation monitors used in Homeland Security applications. Transportable radiation monitors are designed to be transported to a location and used for a specific task or for a specified period of time and do not require permanent mounting platforms. Transportable monitors are typically mounted to a vehicle such as a trailer, and are only used when the vehicle is stationary. Mobile monitors are those systems that are typically in operation on a platform that is in motion. These monitors may be mounted in vehicles including water craft, towed systems, or those monitors mo.*

ANSII/IEEE 308-2001, Power Systems for Nuclear Power Generating Stations, Criteria for Class 1E

*Provides the following: 1) The principal design criteria and the design features of the Class 1E power systems that enable the systems to meet their functional requirements under the conditions produced by the applicable design basis events; 2) the requirements for tests and surveillance of the Class 1E power systems; 3) the criteria for sharing Class 1E power systems in multiunit stations; 4) the requirements for documentation of the Class 1E power systems.*

IEEE 1-2000 (R2005), General Principles for Temperature Limits in the Rating of Electric Equipment and for the Evaluation of Electrical Insulation

*Intended to serve in the preparation of standards that are principally concerned with thermal endurance of EIM [electrical insulating materials] and simple combinations of such materials, with the establishment of limiting temperatures of EIS [electrical insulation systems], and with the provision of general principles for thermal classification of EIS.*

IEEE 1003.1-2002, Information Technology - Portable Operating System Interface (POSIX)

*Provides a single standard addressing the needs of users of all the documents being revised and supported by as much of the overall industry as possible. Address problems discovered during the lifetimes of the current documents. The current standards are approaching ten years or more in age; and this is the promised revision, whose scope is being expanded by including accepted practice based on the contents of the Single UNIX Specification.*

IEEE 1003.1-2002/Cor 1-2002, Information Technology - Portable Operating System Interface (POSIX) - Technical Corrigendum Number 1

*Technical corrigendum addresses issues raised in defect reports and interpretation requests.*

IEEE 1003.1-2002/Cor 2-2004, Standard for Information Technology - Portable Operating System Interface (POSIX) - Technical Corrigendum Number 2

*Addresses issues raised in defect reports and interpretation requests submitted.*

IEEE 1003.13-2003, Standard for Information Technology - Standardized Application Environment Profile - POSIX Realtime and Embedded Application Support (AEP)

*Establishes a set of Realtime and Embedded Environment Profiles based on ISO/IEC 9945:2003, IEEE 1003.26-2003, ISO/IEC 14519:2001, and related standards specifying foundations for realtime applications*

IEEE 1003.26-2003, Standard for Information Technology - Portable Operating System Interface (POSIX) - Part 26: Device Control Application Program Interface (API) [C Language]

*Defines extensions to POSIX.1 to support application portability at the source-code level. It is intended to be used by both application developers and system implementers*

IEEE 1003.5-1992 (R2004), Standard for Information Technology - POSIX Ada Language Interfaces - Part 1: Binding for System Application Program Interface (API)

*Part of the POSIX series of standards for applications and user interfaces to open systems. It defines the Ada language bindings as package specifications and accompanying textual descriptions of the application program interface (API.*

IEEE 1003.5b-1996 (R2004), Information Technology – POSIX Ada Language Interfaces – Part 1: Binding for System Application Program Interface (API) – Amendment 1: Realtime Extension

*Part of the POSIX series of standards for applications and user interfaces to open systems. It defines the Ada language bindings as package specifications and accompanying textual descriptions of the application program interface (API.*

IEEE 1003.5c-1998 (R2004), Standard for Information Technology - POSIX Ada Language Interfaces - Part 1: Binding for System Application Program Interface (API) - Amendment 2: Protocol Independent Interfaces

*Part of the POSIX series of standards for applications and user interfaces to open systems. It defines the Ada language bindings as package specifications and accompanying textual descriptions of the application program interface (API.*

IEEE 1008-2002, Standard for Software Unit Testing

*Defines an integrated approach to systematic and documented unit testing. The approach uses unit design and unit implementation information, in addition to unit requirements, to determine the completeness of the testing.*

IEEE 101-1995 (R2004), Guide for the Statistical Analysis of Thermal Life Test Data

*Statistical analyses of data from thermally accelerated aging tests are described. The basis and use of statistical calculations are explained. Data analysis, estimation of the relationship between life and temperature, and the comparison between two sets of data are covered.*

IEEE 1010-2006, Guide for Control of Hydroelectric Power Plants

*Serves as a reference document for practicing engineers in the hydroelectric industry. It documents prevailing industry practices in hydroelectric power plant control system logic, control system configurations, and control modes. It describes the control and monitoring*

*requirements for equipment and systems associated with conventional and pumped-storage hydroelectric plants. It includes typical methods of local and remote control, details of the control interfaces for plant equipment, requirements for centralized and off-site control.*

IEEE 1012-2004, Standard for Software Verification and Validation

*Addresses all software life cycle processes including acquisition, supply, development, operation, and maintenance. Applies to software being acquired, developed, maintained, or reused (legacy, modified, Commercial Off The Shelf [COTS], Non-Developmental Items [NDI]).*

IEEE 1013-2000, Recommended Practice for Sizing Lead-Acid Batteries for Photovoltaic Systems

*Describes a method for sizing both vented and valve-regulated lead-acid batteries used with photovoltaic (PV) systems.*

IEEE 1015-2006, Recommended Practice for Applying Low-Voltage Circuit Breakers Used in Industrial and Commercial Power Systems (Blue Book)

*Information is provided for selecting the proper circuit breaker for a particular application. It helps the application engineer specify the type of circuit breaker, ratings, trip functions, accessories, acceptance tests, and maintenance requirements.*

IEEE 1017-2004, Recommended Practice for Field Testing Electric Submersible Pump Cable

*Presents procedures and test voltage values for acceptance and maintenance testing of Electric Submersible Pump cable systems. Provides a guideline for performing leakage current so it can be used as a cable quality tool; provides guidelines for evaluation of the test results; defines terms that have a specific meaning to the guide.*

IEEE 1018-2004, Recommended Practice for Specifying Electric Submersible Pump Cable - Ethylene-Propylene Rubber Insulation

*Establishes requirements for three-conductor new round and flat-type oil-well cables used in supplying three-phase ac electric power to submersible pump motors. The three major cables by components are: cables with copper conductors, ethylene-propylene diene monomer (EPDM) insulation, nitrile jacket, and galvanized armor; cables with copper conductors, EPDM insulation, EPDM jacket, and galvanized armor; cables with copper conductors, EPDM insulation, Lead Sheath and galvanized armor.*

IEEE 1019-2004, Recommended Practice for Specifying Electric Submersible Pump Cable - Polypropylene Insulation

*Establishes requirements for three-conductor new round and flat-type oil-well cables used in supplying three-phase ac electric power to submersible pump motors. The major cable components are: copper conductors, polypropylene insulation, polymeric jacket, and galvanized armor.*

IEEE 1023-2004, Recommended Practice for the Application of Human Factors Engineering to Systems, Equipment, and Facilities of Nuclear Power Generating Stations and Other Nuclear Facilities

*Provides recommended practices for applying human factors engineering (HFE) to systems and equipment that have significant human interfaces in nuclear power generating stations and other nuclear facilities.*

IEEE 1025-1993 (R1999), Assembly and Erection of Concrete Pole Structures

*Presents various approaches of good practice that will improve the ability to assemble and erect self-supporting and guyed concrete pole structures. This guide covers construction aspects after foundation installation and up to the conductor stringing operation.*

IEEE 1027-1996 (R2004), Standard Method for Measurement of the Magnetic Field in the Vicinity of a Telephone Receiver

*Describes the methodology for measuring the magnetic field strength in the vicinity fo a telephone receiver.*

IEEE 1028-2002, Software Reviews

*Defines systematic reviews applicable to software acquisitions, supply, development, operation, and maintenance.*

IEEE 1031-2000, Guide for the Functional Specification of Transmission Static VAR Compensators

*Assists users in specifying the functional requirements for static VAR compensators in AC transmission substations, but not those primarily associated with DC converter stations, nor with the correction of disturbing load or phase unbalance.*

IEEE 1043-1996 (R2003), Recommended Practice for Voltage Endurance Testing of Form Wound Bars and Coils

*Covers the voltage endurance testing of form-wound bars and coils for use in large rotating machine stator windings*

IEEE 1044-1994 (R2002), Classification for Software Anomalies

*Defines the minimum requirements for classifying anomalies.*

IEEE 1045-1993 (R2003), Software Productivity Metrics

*Standardizes software productivity metrics terminology to ensure an understanding of measurement for both code and documentation production. It defines a set of units to measure the output products and input effort.*

IEEE 1048-2003, Guide for Protective Grounding of Power Lines

*Provides guidelines for grounding methods to protect workers and the public from voltages that might develop in the work area during de-energized maintenance of overhead transmission and distribution lines.*

IEEE 1050-2004, Guide for Instrumentation and Control Equipment Grounding in Generating Stations

*Intended to give information on grounding methods for generating station instrumentation and control equipment. Identifies instrumentation and control equipment grounding methods to achieve both a suitable level of protection for personnel and equipment, and suitable electric noise immunity for signal ground references in generating stations.*

IEEE 1057-2002, Standard for Digitizing Waveform Recorders

*Provides common terminology and test methods for describing the performance of waveform recorders.*

IEEE 1058-1998, Software Project Management Plans

*ANSI/IEEE 1058.1-1987 is overage and is administrativrly withdrawn effective 2/12/99. It is being introduced as a new standard for public comment.*
*This standard prescribes the format and contents of software management plans. A software management plan is the controlling document for managing a software project; it provides the technical and managerial activities necessary to satisfy the requirements for the software project.*

IEEE 1061-1998 (R2004), Software Quality Metrics Methodology

*Provides a methodology for establishing quality requirements and identifying, implementing, analyzing, and validating process and product software quality metrics.*

IEEE 1062-1994 (R2002), Recommended Practice for Software Acquisition

*Describes a set of useful quality practices that can be selected and applied during one or more steps in a software acquisition process.*

IEEE 1062a-1998, Recommended Practice for Software Acquisition

*To establish a correlation between the content of software acquisition plans as defined in 1062 and the content of such plans as defined in IEEE 12207.1, Guide for Information Technology - Software Life Cycle Processes - Life Cycle Data by adding an annex which will correlate the assumptions relating to content of the two documents and trace content between subject documentation.*

IEEE 1063-2002, Standard for Software User Documentation

*Provides minimum requirements for the structure, information content, and format of user documentation, including both printed and electronic documents used in the work environment by users of systems containing software. Includes printed user manuals, online help, and user reference documentation.*

IEEE 1067-2005, Guide for In-Service Use, Care, Maintenance, and Testing of Conductive Clothing for Use on Voltages up to 765 kV AC

*Provides recommendations for the in-service visual inspection, use, care, maintenance, and electrical testing of conductive clothing, including suits, gloves, socks, and boots, for use during linework on voltages up to 765 kV ac and +/- 750 kV dc.*

IEEE 1068-1996, Recommended Practice for the Repair and Rewinding of Motors for the Petroleum and Chemical Industry

*Provides a basic or primary document that can be utilized and referenced by owners of motors that need repair as well as by owners and operators of establishments that offer motor repair services.*

IEEE 1070-2006, Guide for the Design and Testing of Transmission Modular Restoration Structure Components

*Provides the industry with a generic specification, including design and testing, for transmission modular restoration structure components. Can be used by companies for acquisition of transmission modular restoration components.*

IEEE 1073.1.1.1-2004, Standard for Health Informatics – Point-of-Care Medical Device Communication – Nomenclature

*Defines a nomenclature for communications of information from point-of-care medical devices. Primary emphasis is placed on acute care medical devices and patient vital signs information.*

IEEE 1073.1.2.1-2004, Standard for Health Informatics – Point-of-Care Medical Device Communication – Domain Information Model

*Defines a general object-oriented information model that may be used to structure information and identify services used in point-of-care medical device communications.*

IEEE 1073.2.1.1-2004, Standard for Health Informatics – Point-of-Care Medical Device Communication – Application Profiles – Base Standard

*Defines the base message syntax and data encoding for medical device application profiles. The definitions will augment and, in some cases, optimize related industry standards, chiefly ISO Systems Management standards, particularly with respect to cost-performance improvements for real-time medical data communciation.*

IEEE 1073.3.2-2000, Medical Device Communications - Transport Profile - IrDA Based - Cable Connected

*Defines an IrDA-based transport profile for medical device communications.*

IEEE 1073.3.3-2004, Standard for Health Informatics – Point-of-Care Medical Device Communication – Transport Profile – IrDA Based – Infrared Wireless

*Defines an IrDA-based transport profile for medical device communication that uses short-range infrared, as a companion standard to IEEE Std. 1073.3.2, which specifies a cable-connected physical layer.*

IEEE 1074-2006, Standard for Developing a Software Project Life Cycle Process

*Provides a process for creating a software project life cycle process. It is primarily directed at the process Architect for a given software project.*

IEEE 1076-2002, VHDL Language Reference Manual

*Intent is to define VHDL accurately. Primary audience is implementers of tools supporting the language and the advanced user of the language.*

IEEE 1076.1-1999, Standard VHDL Analog and Mixed-Signal Extensions

*The IEEE 1076 language has been primarily designed for the description and the simulation of digital hardware systems. As such, it provides only limited capabilities when used in analog modeling. VHDL 1076.1 aims to enhance VHDL 1076 such that it can support the description and simulation of circuits and systems that exhibit continuous behavior over time and over amplitude.*

IEEE 1076.1.1-2004, Standard VHDL Analog and Mixed-Signal Extensions - Packages for Multiple Energy Domain Support

*Defines a collection of VHDL Std. 1076.1 packages, compatible with IEEE Std. 1076.1-1999, IEEE Standard VHDL Analog and Mixed-Signal Extensions, along with recommendations for conforming use, in order to facilitate the interchange of simulation models of physical components and subsystems. The packages include the definition of standard types, subtypes, natures and constants for modeling in multiple energy domains (electrical, fluidic, mechanical, etc.).*

IEEE 1076.2-1996 (R2002), Standard VHDL Language Mathematical Packages

*The set of packages provides a standard for the declaration of most frequently used real and complex elementary functions required for numerically oriented modeling applications. Use of these packages with their defined data types, constants, and functions is intended to provide a mechanism for writing VHDL models that are portable and interoperable with other VHDL models adhering to this standard.*

IEEE 1076.4-2000, Standard for VITAL Application Specific Integrated Circuit (ASIC) Specification

*Provides a standard method of modeling ASICs [Application Specific Integrated Circuits] in VHDL. This method is aimed at providing efficient, accurate, and tool-independent simulation suitable for large chip-level designs typical of those that are based on ASICs.*

IEEE 1076.6-2004, Standard for VHDL Register Transfer Level Synthesis

*Defines a subset of VHDL that ensures portability of VHDL descriptions between register transfer level synthesis tools.*

IEEE 1076a-2000, Standard for VHDL Language Reference Manual (Amendment)

*Adds mutual exclusion semantics to the sharded variables feature in VHDL.*

IEEE 1082-1997 (R2003), Guide for Incorporating Human Action Reliability Analysis for Nuclear Power Generating Stations

*Provides a structured framework for the incorporation of human/system interactions into probabilistic risk assessments (PRAs).*

IEEE 11-2000, Rail and Road Vehicles, Rotating Electric Machinery for

*Applies to rotating electric machinery which forms part of the propulsion and major auxiliary equipment on internally and externally powered electrically propelled rail and road vehicles and similar large transport and haulage vehicles and their trailers where specified in the contract. Major auxiliary equipment includes equipment such as blower and compressor motors, motor-generator and motor-alternator sets, auxiliary generators, and exciters, usually larger than 3 kilowatts.*

IEEE 1100-2005, Recommended Practice for Powering and Grounding Electronic Equipment

*Presents recommended design, installation, and maintenance practices for electrical power and grounding (including both safety and noise control) and protection of electronic loads such as industrial controllers, computers and other information technology equipment used in commercial and industrial applications.*

IEEE 1101.10-1996 (R2002), Additional Mechanical Specifications for Microcomputers Using the IEEE 1101.1 Equipment Practice

*Specifies dimensions which will ensure the mechanical and "Requirements and Tests of Environmental Conditions for Structures for Electronic Equipment" interchangeability of subracks and plug-in units, based on IEEE Std 1101.1, IEC 297-3, IEC 297-4, using IEC 603-2 based connectors and IEC 48D/1587-1 and IEC 48D/1587-3 requirements.*

IEEE 1101.11-1998, Mechanical Rear Plug-in Units Specifications for Microcomputers Using the IEEE 1101.10 Equipment Practice

*Specifies dimensions that will ensure mechanical interchangeability of rear-mounted plug-In units (Transition Modules) in sub-racks based on American National Standard for Mechanical Core Specifications for Microcomputers Using IEC 603-2 Connectors, ANSI/IEEE 1101.1-1992; American National Standard for Additional Mechanical Specifications for Microcomputers Using the IEEE 1101.1 Equipment Practice, ANSI 1101.10-1996; IEC 297-3; and IEC 297-4.*

IEEE 1101.2-1993 (R2001), Mechanical Core Specification for Conduction Cooled Eurocards

*Defines the mechanical requirements for Eurocard-based conduction-cooled circuit card assemblies (CCAs).*

IEEE 1106-2005, Recommended Practice for Installation, Maintenance, Testing, and Replacement of Vented Nickel-Cadmium Batteries for Stationary Applications

*Provides recommendations for installation design and for installation, maintenance, and testing procedures that can be used to optimize the life and performance of vented nickel-cadmium batteries used in stationary standby applications. Also provides guidance for determining when the batteries should be replaced.*

IEEE 111-2000, Standard for Wide Band (Greater than 1 Decade) Transformers

*Pertains to electronic wide-band transformers transmitting power within a wide band of frequencies covering typically at least one decade in the frequency spectrum. Provision is made for including data for use in the design of feedback amplifiers and control networks or other circuits in which the knowledge of the transformer amplitude and phase-frequency response is needed by the system designer. These transformers are required to transform voltage within specified tolerances of amplitude and phase when operating between specified impedances. Guides to the application and test procedures are included. These appendixes contain certain precautions and recommended practices. The standard also pertains to hybrid transformers, primarily used in the telecommunications industry. The hybrid transformer is a wide-band transformer used in a manner which makes it part of a capacitance,*

IEEE 1110-2002, Guide for Synchronous Generator Modeling Practices and Applications in Power System Stability Analyses

*Summarizes available practices in synchronous machine models used in power system stability studies.*

IEEE 1115-2000 (R2005), Recommended Practice for Sizing Nickel-Cadmium Batteries for Stationary Applications

*The sizing of nickel-cadmium batteries used in full float operation for stationary applications is covered.*

IEEE 112-2004, Test Procedures for Polyphase Induction Machines

*Covers instructions for conducting and reporting the more generally applicable and acceptable tests of polyphase induction motors and generators.*

IEEE 1120-2004, Guide to the Factors to Be Considered in Planning, Design, and Installation of Submarine Power and Communication Cable

*Provides a list of factors to consider when planning, designing, permitting, installing, commissioning, and repairing submarine power cable systems.*

IEEE 1124-2003, Guide for Analysis and Definition of DC Side Harmonic Performance of HVDC Transmission Systems

*Contains information and recommendations pertaining to the analysis and specification of the performance on the dc side of a high-voltage direct-current converter station concerning electrical noise at harmonic frequencies up to 5 kHz generated by converter stations in a dc transmission system. Also contains information and suggestions pertaining to measurement of dc filter performance and noise level induced in wireline communications circuits from harmonic currents on dc transmission lines.*

IEEE 1125-1994 (R2004), Guide for Moisture Measurement and Control in SF6 Gas-Insulated Equipment

*Establishes guidelines for moisture level measurement, moisture data interpretation, and moisture control in gas-insulated transmission class equipment.*

IEEE 1127-1998 (R2004), Guide for the Design, Construction, and Operation of Safe and Reliable Substations for Environmental Acceptance

*Identifies significant community acceptance and environmental compatibility items to be considered during the planning and design phases, the construction period, and the operation of electric supply substations, and documents ways to address these concerns to obtain community acceptance and environmental compatibility.*

IEEE 1137-2003, Guide for the Implementation of Inductive Coordination Mitigation Techniques and Application

*Offers users assistance in controlling or modifying the inductive environment and the susceptibility of affected wire-line telecommunications facilities in order to operate within the acceptable levels of steady-state or surge-induced voltages of the environmental interface (probe wire) defined by IEEE Std 776.*

IEEE 1138-1994 (R2002), Standard Construction of Composite Fiber Optic Groundwire (OPGW) for use on Electric Utility Power Lines

*Covers the construction, mechanical and electrical performance, installation guidelines, acceptance criteria, and test requirements for a composite overhead ground wire with optical fibers commonly known as OPGW. Provides both construction and performance requirements that ensure within the guidelines of the standard that the ground wire function and maintenance of optical fiber integrity and optical transmissions are proper.*

IEEE 1139-1999, Standard Definitions of Physical Quantities for Fundamental Frequency and Time Metrology - Random Instabilities

*Affects all documents dealing with the reporting or specification of time and frequency measurements and instrumentation.*

IEEE 114-2001, Standard Test Procedure for Single-Phase Induction Motors

*To review the procedure for testing single-phase induction motors to include all changes in measurement technology and manufacturing developments in the revised testing procedure.This standard covers instructions for conducting and reporting the more generally applicable and acceptable tests to determine the performance characteristics of single-phase induction motors, including non-excited synchronous motors. It is not intended that this standard shall cover all possible tests used in production or tests of a research nature. The standard shall not be interpreted as requiring the making of any or all of the tests described herein in any given transaction.*

IEEE 1140-1994 (R1999), Procedures for the Measurement of Electric and Magnetic Fields from Video Display Terminals (VDTs) from 5 Hz to 400 kHz

*Provides procedures for the measurement of electric and magnetic fields in close proximity to video display terminals (VDTs) in the frequency range of 5 Hz to 400 kHz.*

IEEE 1143-1994 (R1999), Guide on Shielding Practice for Low Voltage Cables

*Informs and familiarizes the reader with shielding practice. An overview of shielding practice, systems and test methods is provided.*

IEEE 1147-2005, Guide for the Rehabilitation of Hydroelectric Power Plants

*Describes alternatives hydroelectric power plant owners should consider when undertaking a rehabilitation of the facilities.*

IEEE 1149.1-2001, Standard Test Access Port and Boundary Scan Architecture

*Defines test logic that can be included in an integrated circuit to provide standardized approaches to: a) testing the interconnections between integrated circuits once they have been assembled onto a printed circuit board or other substrate; b) testing the integrated circuit itself; and c) observing or modifying circuit activity during the component's normal operation. The test logic consists of a boundary-scan register and other building blocks and is accessed through a Test Access Port (TAP).*

IEEE 1149.4-1999, Standard for a Mixed-Signal Test Bus

*Interface system between mixed-signal electronic components, assemblies, and systems, and external or built-in-test equipment to provide those components, assemblies, and systems with testability attributes.*

IEEE 1149.6-2003, Standard for Boundary-Scan Testing of Advanced Digital Networks

*Defines extensions to IEEE Std 1149.1 to standardize the Boundary-Scan structures and methods required to ensure simple, robust, and minimally intrusive Boundary-Scan testing of advanced digital networks. Also specifies software and BSDL extensions to IEEE Std 1149.1, which are required to support new I/O test structures.*

IEEE 115-1995 (R2002), Synchronous Machines, Test Procedure for

*Contains instructions for conducting the more generally applicable and accepted tests to determine the performance characteristics of synchronous machines.*

IEEE 1156.1-1993 (R2003), Microcomputer Environmental Specifications for Computer Modules

*Fundamental information on minimum environmental withstand conditions is provided. Intended to be used in those cases in which a generic or detail specification for a certain module has been prepared. Intent is to achieve uniformity and reproducibility in the test conditions for all modules that may make up larger systems and are purported to have a rated environmental performance level.*

IEEE 1156.2-1996 (R2003), Environmental Specifications for Computer Systems

*Contains minimum environmental withstand conditions applicable to computer systems and all of their associated components.*

IEEE 1159-1995 (R2001), Recommended Practice on Monitoring Electric Power Quality

*Encompasses the monitoring of electric power quality of single-phase and polyphase ac power systems.*

IEEE 1159.3-2003, Recommended Practice for the Transfer of Power Quality Data

*Develops a recommended practice for a file format suitable for exchanging power quality related measurement and simulation data in a vendor independent manner.*

IEEE 1160-1993 (R2006), Test Procedure for High-Purity Germanium Crystals for Radiation Detectors

*Applies to the measurement of bulk properties of high-purity germanium as they relate to the fabrication and performance of germanium detectors for gamma rays and x-rays.*

IEEE 1174-2000, Standard Serial Interface for Programmable Instrumentation

*Defines a serial, full-duplex, asynchronous, 9-pin, DTE communications port that follows American National Standrd for Synchronous Interface between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Binary Data Interchange, ANSI/TIA/EIA 574-1990 (R1998), and related standards. It will apply to point-to-point instrument systems composed of a measurement, stimulus, or interconnect device and an instrumentation controller. It will cover mechanical, electrical, and functional requirements of the interface.*

IEEE 1175.1-2002, Guide for CASE Tool Interconnections – Classification and Description

*Describes the scope of applications and inter-relationships for the members of the 1175 family of standards, and it points the reader to the appropriate members for clarifying issues involved in effectively integrating computing system tools into a productive engineering environemnt.*

IEEE 1175.2-2006, Recommended Practice for CASE Tool Interconnections - Characterization of Interconnections

*Describes interconnections that need to be understood and evaluated when buying, building, testing, or using Computer-Aided Software Engineering (CASE) tools.*

IEEE 1175.3-2004, CASE Tool Interconnections - Reference Model for Specifying Software Behavior

*Specifies a common set of modeling concepts based on those found in commercial CASE tools for describing the operational behavior of a software product.*

IEEE 1177-1994 (R1999), FASTBUS Standard Routines (included in ANSI/IEEE 960-1994)

*Provides standard routines that have the same meaning to all users so as to minimize duplication of software effort, and maximize interchangeability of FASTBUS systems, subsystems and software.*

IEEE 1178-1991 (R2002), Scheme Programming Language

*Specifies the representation of Scheme programs, their syntax, the semantic rules for interpreting them, and the representation of data to be input or output by them.*

IEEE 1184-2006, Guide for Batteries for Uninterruptible Power Supply Systems

*Discusses various battery systems so that the user can make informed decisions on selection, installation design, installation, maintenance, and testing of stationary standby batteries used in Uninterruptible Power Supply (UPS) systems.*

IEEE 1185-1994 (R2000), Guide for Installation Methods for Generating Station Cables

*Provides installation methods to improve cable installation practices in generating stations.*

IEEE 1187-2002, Recommended Practice for Installation Design and Installation of Valve Regulated Lead-Acid Storage Batteries for Stationary Applications

*Provides recommended design practices and procedures for storage, location, mounting, ventilation, instrumentation, preassembly, assembly, and charging of valve-regulated lead-acid (VRLA) storage batteries.*

IEEE 1188-2005, Recommended Practice for Maintenance, Testing and Replacement of Valve Regulated Lead-Acid Batteries for Stationary Applications

*Describes recommended maintenance and testing schedules, and testing procedures to optimize the life and performance of valve-regulated lead-acid (VRLA) batteries for stationary applications. Also provides guidance to determine when batteries should be replaced.*

IEEE 1189-1996, Guide for the Selection of Valve-Regulated Lead-Acid (VRLA) Batteries for Stationary Application

*Describes methods for selecting the appropriate type of valve-regulated, immobilized-electrolyte, recombinant lead-acid battery for any of a variety of potential stationary float applications.*

IEEE 1193-2003, Guide for Measurement of Environmental Sensitivities of Standard Frequency

*Describes the nature of the environmental effects, as well as test methods to evaluate, quantify, and report the sensitivity of the frequency of standard frequency generators under environmental influences such as magnetic fields, atmospheric pressure, humidity, shock, vibration, acceleration, temperature, ionizing radiation, and intermittent operation.*

IEEE 120-1989 (R1997), Master Test Guide for Electrical Measurements in Power Circuits

*Provides methods that are related to measurements (made with either analog or digital indicating or integrating instruments) of power, energy, voltage and current, in direct-current or alternating-current rotating machines, transformers, induction apparatus, arc and resistance heating equipment, mercury arc, thermionic, or solid state rectifiers and inverters. Measurements made with supplementary instruments and devices are also included.*

IEEE 1202-2006, Standard for Flame-Propagation Testing of Wire & Cable

*Establishes a test protocol and performance criteria to determine the flame propagation tendency of cables in a vertical cable tray.*

IEEE 1204-1997 (R2003), Guide for Planning DC Links Terminating at AC Locations Having Low Short-Circuit Capacities, Part I: AC/DC Interaction Phenomena, Part II: Planning Guide

*Discusses the effects of various aspects of the ac/dc interactions on the design and performance of dc schemes where the ac system appears as a high impedance at the ac/dc interface bus; I.e., low and very low short-circuit conditions*

IEEE 1205-2000, Assessing, Monitoring, and Mitigating Aging Effects on Class 1E Equipment Used in Nuclear Power Generating Sations

*Provides the guidelines for assessing, monitoring and mitigating aging degradation effects on Class 1E equipment used in nuclear power generating stations.*

IEEE 1205-2000/Cor1-2006, Guide for Assessing, Monitoring, and Mitigating Aging Effects on Class 1E Equipment Used in Nuclear Power Generating Stations - Corrigendum 1: Thermal Aging Model Corrections

*Corrects typographical errors related to the performance of thermal aging analysis.*

IEEE 1207-2004, Guide for the Application of Turbine Governing Systems for Hydroelectric Generating Units

*Provides guidance for the design and application of hydroelectric turbine governing systems. It complements IEEE Std.125-1988, providing application details and addressing the impact of plant and system features upon hydroelectric unit governing performance.*

IEEE 1210-2004, Standard Tests for Determining Compatibility of Cable Lubricants with Wire and Cable

*Describes tests for determining the compatibility of cable-pulling lubricants with cable jacket or other exterior cable covering.*

IEEE 1212-2001, Information Technology – Microprocessor Systems – Control and Status Registers (CSR) Architecture for Microcomputer Buses

*This is a full-use standard, a revision of ISO/IEC 13213:1994; its scope reflects accumulated experience with the CSR architecture since it was first promulgated as a standard in 1991. In the intervening years, two bus standards, Scaleable Coherent Interface (SCI), IEEE Std 1596-199x, and Serial Bus, IEEE Std 1394-1995, have been the source of most practical implementation experience. The revised scope of the CSR architecture is given below: a) The overall architectural framework partitions the total available address space into equal spaces available to individual nodes. A node's address space is in turn partitioned into regions which have different usage models, e.g., memory space, private space for vendor uses, configuration ROM and an I/O space (units space) where transactions may have side effects; b) A minimal transaction set (read, write and lock requests and their associated*

IEEE 1212.1-1993 (R2001), Communicating Among Processors and Peripherals Using Shared Memory (DMA – Direct Memory Access)

*Describes a DMA Framework that provides recommended architectures for high-performance interfaces between Functions and System Memory, connected by buses that are generally compatible with the IEEE Std 1212 CSR Architecture.*

IEEE 1214-1992 (R2006), MCA Histogram Data Interchange Format for Nuclear Spectroscopy

*This standard applies to multichannel pulse height data used in nuclear spectroscopy. It is independent of the source of the data, the device which wrote the data, the device which reads the data, and the medium containing the data.*

IEEE 1215-2002, Guide for the Application of Separable Insulated Connectors

*Covers the application of separable connectors, rated 601V and above, 600 A or less, for use on power distribution systems. Included are design considerations and guidelines for the construction, installation, and operation of 200 A loadbreak connectors and for 200 and 600 A deadbreak (non-loadbreak) connectors. Intended as a supplement to the training in high voltage electrical equipment, established safe operating procedures and the manufacturer's instructions for the application of separable insulated connectors.*

IEEE 1216-2000 (R2006), Guide for the Application of Faulted Circuit Indicators for 200A, Single-Phase Underground Residential Development (URD)

*Provides information on what a basic faulted circuit indicator (FCI) is designed to do, and describes methods for selecting FCIs. The application of FCIs to single-phase, 200 A, underground residential distribution (URD) circuits is described.*

IEEE 1217-2001, Guide for Preservative Treatment of Wood Distribution and Transmission Line Structures

*Presents a practical guide to the utility engineers for specifying preservative treatments for wood structures used on distribution and transmission lines.*

IEEE 122-1992 (R2003), Recommended Practice for Functional Performance Characteristics of Control Systems for Steam Turbine Generator Units

*Recommends functional and performance characteristics related to speed/load-control systems for steam turbine-generator units that may be interconnected on a power system, such that this recommended practice may be included in prime-mover purchase specifications.*

IEEE 1220-2005, Standard for Application and Management of the Systems Engineering Process

*(First para of existing 1.1, Scope): This standard defnes the interdisciplinary tasks that are required throughout a system's life cycle to transform customer needs, requirements, and constraints into a system solution. This document is intended to guide the development of systems (which include humans, computers, and software) for commercial, government, military, and space applications. The information applies to an enterprise within an enterprise that is responsible for developing a product design and establishing the life cycle infrastructure needed to provide for life cycle sustainment. The scope of the revision is to be unchanged.*

IEEE 1222-2003, Standard for All-Dielectric Self-Supporting Fiber Optic Cable

*Covers the construction, mechanical, electrical, and optical performance, installation, guidelines, acceptance criteria, test requirements, environmental considerations, and accessories for an all-dielectric, non-metallic, self-supporting fiber optic (ADSS) cable*

IEEE 1227-1990 (R2002), Guide for the Measurement of DC Electric Field Strength and Ion-Related Quantities

*Provides guidance for the measurement of the electric-field strength, ion-current density, conductivity, monopolar space-charge density, and net space-charge density in the vicinity of high-voltage dc (HVDC) power lines, in converter substations, and in apparatus designed to stimulate the HVDC power-line environment.*

IEEE 1228-1994 (R2002), Standard for Software Safety Plans

*Applies to the Software Safety Plan used for the development, procurement, maintenance, and retirement of safety-critical software; for example, software products whose failure could cause loss of life, serious harm, or have widespread negative social impact.*

IEEE 1232-2002, Standard for Artificial Intelligence Exchange and Service Tie to All Test Environments (AI-ESTATE)

*Defines formal specifications for supporting system diagnosis. These specifications support the exchange and processing of diagnostic information and the control of diagnostic processes (which include testability analysis, diagnosability assessment, di*

IEEE 1235-2000, Guide for the Properties of Identifiable Jackets for Underground Power Cables and Ducts

*Provides recommendations for red stripe and raised ridge identification markings on insulating and semiconducting linear low density polyethylene (LLDPE), medium density polyethylene (MDPE), high density polyethylene (HDPE) and polyvinyl chloride (PVC) jacketed underground power cables and high density polyethylene (HDPE) duct containing jacketed or unjacketed underground power cables.*

IEEE 1240-2000 (R2006), Guide for the Evaluation of the Reliability of HVDC Converter Stations

*Intended to servce high-voltage direct current (HVDC) converter station reliability by suggesting significant objectives, design, operation, monitoring, and specification details.*

*Includes the CIGRE performance protocol and reliability-related mathematical concepts.*

IEEE 1241-2000, Standard for Terminology and Test Methods for Analog-to-Digital Converters

*Provides common terminology and test methods for the testing and evaluation of analog-to-digital converters (ADCs). It considers only those ADCs whose output values have discrete values at discrete times, i.e. they are quantized and sampled.*

IEEE 1242-1999 (R2005), Guide for Specifying and Selecting Power, Control and Special Purpose Cable for Petroleum and Chemical Plants

*Provides information on the specification and selection of power, control, and special-purpose cable, as typically used in petroleum, chemical, and similar plants.*

IEEE 1243-1997, Design Guide for Improving the Lightning Performance of Transmission Lines

*Contains a guide designed for use by the transmission line designer.*

IEEE 1244.3-2000, Standard for Media Management System (MMS) Media Management Protocol (MMP)

*Specifies the Media Management Protocol that is used by client and administrative applications in the Media Management System to allocate, de-allocate, mount and dismount volumes, and to administer the system.*

IEEE 1244.4-2000, Standard for Media Management System (MMS) Drive Management Protocol (DMP)

*Specifies the Drive Management Protocol (DMP) used between two software components of the Media Management System (MMS): the central management core and a program that manages a drive that is used to access removable media.*

IEEE 1244.5-2000, Standard for Media Management System (MMS) Library Management Protocol (LMP)

*Provides a common set of storage system management interfaces and a catalog of managed object class definitions consistent with other P1244 storage system standards and IEEE management standards.*

IEEE 1246-2002, Guide for Temporary Protective Grounding Systems Used in Substations

*Covers the design, performance, use, testing, and installation of temporary protective grounding systems, including the connection points, as used in premanent and mobile substations.*

IEEE 1247-2005, Standard for Interrupter Switches for Alternating Current, Rated Above 1000 Volts

*The basic requirements of interrupter switches used indoors, outdoors, and in enclosures are covered.*

IEEE 1249-1996, Guide for Computer-Based Control for Hydroelectric Power Plant Automation

*Addresses the application, design concepts, and implementation of computer-based control systems for hydroelectric plant automation.*

IEEE 125-1996, Recommended Practice for Preparation of Equipment Specifications for Speed-Governing of Hydraulic Turbines Intended to Drive Electric Generators

*Applies to mechanical-hydraulic or electric-hydraulic type governors for all type of hydraulic turbines.*

IEEE 1250-2002, Guide for Service to Equipment Sensitive to Momentary Voltage Disturbances

*Describes momentary voltage disturbances (short-duration transients) occurring in ac power distribution and utilization systems, their potential effects on sensitive equipment, and guidance toward mitigation of these effects.*

IEEE 1255-2000, Guide for Evaluation of Torque Pulsations During Starting of Synchronous Motors

*Assists in providing a uniform method for calculating and measuring torque pulsations which occur during starting of synchronous motors.*

IEEE 1264-2004, Guide for Animal Deterrents for Electric Power Supply Substations

*Documents methods and designs to mitigate interruptions and equipment damage resulting from animal intrusions into electric power supply substations, thereby improving reliability and minimizing the associated revenue loss.*

IEEE 1267-2005, Guide for Development of Specification for Turnkey Substation Projects

*The technical requirements to engineer, design, specify, fabricate, manufacture, furnish, install, test, commission, and provide as-built documents for air-insulated substations are covered.*

IEEE 1268-2005, Guide for the Safe Installation of Mobile Substation Equipment

*Establishes general transport, set-up, and installation guidelines for the safe use of mobile substation equipment. Identifies specific areas of concern and offers design assistance in those areas.*

IEEE 1276-2006, Guide for the Application of High-Temperature Insulation Materials in Liquid-Immersed Power Transformers

*Technical information is provided related to liquid-immersed power tranformers insulated with high-temperature materials. Guidelines for applying existing qualified high-temperature materials to certain insulation systems, recommendations for loading high-temperature liquid-immersed power transformers, and technical information on insulation-system temperature ratings and test procedures for qualifying new high-temperature materials are included.*

IEEE 1278.1-1995 (R2002), Distributed Interactive Simulation – Application Protocols

*Part of a set of standards for Distributed Interactive Simulation (DIS) applications As a whole, the set will define an interoperable simulated battle environment. This standard*

*defines the data messages, known as Protocol Data Units (PDUs), that are exchanged on a network between simulation applications.*

IEEE 1278.2-1995 (R2002), Standard for Distributed Interactive Simulation – Communication Services and Profiles

*Part of a set of standards for Distributed Interactive Simulation (DIS) applications As a whole, the set will define an interoperable simulated battle environment. This standard establishes the requirements for the communication services to be used in a DIS application.*

IEEE 1278.3-1996 (R2002), Recommended Practice for Distributed Interactive Simulation - Exercise Management and Feedback

*Part of a set of standards for Distributed Interactive Simulation (DIS) applications As a whole, the set will define an interoperable simulated battle environment. This standard establishes guidelines for exercise management and feedback in DIS exercises.*

IEEE 1278.4-2002, Recommended Practice for Distributed Interactive Simulation – Verification, Validation, and Accreditation

*Part of a set of standards for Distributed Interactive Simulation (DIS) applications As a whole, the set will define an interoperable simulated battle environment. This standard establishes guidelines for the verification, validation, and accreditation (VV&A) of DIS exercises.*

IEEE 1283-2004, Guide for Determining the Effects of High Temperature Operation on Conductors, Connectors, and Accessories

*Provides general recommendations for consideration when designing new overhead transmission lines which will be operated at high temperatures. It may also be used to evaulate existing transmission lines for operation at higher temperatures.*

IEEE 1284-2000 (R2006), Signaling Method for a Bi-Directional Parallel Periperal Interface for Personal Computers

*A signaling method for asynchronous, fully interlocked, bidirectional parallel communications between hosts and printers or other peripherals is defined.*

IEEE 1284.1-1997 (R2003), Information Technology - Transport Independent Printer/System Interface (TIP/SI)

*Defines a standard protocol for the control of printers that is independent of the underlying data stream or page description language (PDL) used to create the printed page. This protocol is usable by all classes of printers.*

IEEE 1285-2005, Standard for Scalable Storage Interface

*Specifies a scalable interface between mass-storage devices and controlling hardware/software. The interface has been optimized for low-latency interconnects, assuming that the processor/controller and the storage device can often be co-located on the same printed-circuit board.*

IEEE 1289-2004, Guide for the Application of Human Factors Engineering in the Design of Computer-Based Monitoring and Control Displays for Nuclear Power Generating Stations

*Provides system design considerations, identifies information display and control techniques for use with computer-based displays, and provides human factors engineering guidance for the use of these techniques in nuclear power generating stations.*

IEEE 1290-1996 (R2005), Guide for Motor Operated Valve (MOV) Motor Application, Protection, Control, and Testing in Nuclear Power Generating Stations

*Motors used to drive valve operators in nuclear power generating stations are discussed. Guidelines to evaluate the adequacy of motors used to drive valve operators; to provide recommendations for motor application; and to provide methods for protection, control, and testing of motors used for valve operation are presented.*

IEEE 1291-1993 (R2005), Guide for Partial Discharge Measurements in Power Switchgear

*Defines methods of measuring partial discharges that may occur in energized power switchgear apparatus in flaws, voids, and interfaces of non-self-restoring insulation that may then result in dielectric failure of the switchgear.*

IEEE 1293-2003, Standard Specification Format Guide and Test Procedure for Linear, Single-Axis, Non-Gyroscopic Accelerometers

*Defines the requirements for a linear, single-axis, nongyroscopic accelerometer. Defines not only the performance requirements of an inertial accelerometer as a unique device, but also its specific variational but repeatable and predictable performance parameters.*

IEEE 1299/C62.22.1-1996 (R2003), Guide for the Connection of Surge Arresters to Protect Insulated, Shielded Electric Power Cable Systems

*Suggests surge arrester installation methods at distribution cable terminal poles in order to minimize the total impressed transient voltage on medium-voltage distribution cables.*

IEEE 1300-1997 (R2002), Guide for Cable Connections for Gas Insulated Substations

*Provides detailed directions for coordination of design, material supply, installation, and test procedures for connection of a gas-insulated substation to cables.*

IEEE 1301-1992 (R2001), Metric Equipment Practice for Microcomputers – Coordination Document

*Applies to all fields of electronics where equipment and installations are required to conform to a metric modular order.*

IEEE 1301.1-1992 (R2001), Metric Equipment Practice for Microcomputers – Convection Cooled with 2-mm Connectors

*Detail standard for subtracks, plug-in units, printed boards, and backplanes to be used in conjunction with Std 1301 and a 2mm connector as defined in EIA IS-64 (1991).*

IEEE 1301.2-1993 (R2001), Implementation of a Metric Equipment Practice (IEEE 1301)

*Gives guidance in the implementation of the generic standard, 1301, and the connector-related standards.*

IEEE 1301.3-1993 (R2003), Metric Equipment Practice for Microcomputers – Convection Cooled with 2.5-mm Connector

*Dimension requirements are presented for subracks, plug-in units, printed boards, and backplanes to be used in conjunction with IEEE Std 1301 and with a 2.5 mm connector as defined in IEC 48B (Central Office) 245.*

IEEE 1301.4-1997 (R2002), Metric Equipment Practice for Microcomputers – Coordination Document for Mezzanine Cards

*Establishes the metric modular order for parallel mounted, interconnected electronic circuit assemblies (mezzanine cards).*

IEEE 1303-1994 (R2000), Guide for Static Var Compensator Field Tests

*Establishes general guidelines and criteria for field testing to verify the specified performance of SVC systems.*

IEEE 1307-2004, Standard for Fall Protection for Utility Work

*Provides general recommendations for a fall protection program for substation and generation structures and equipment, communication [including Community Antenna Television (CATV)], transmission, and distribution structures.*

IEEE 1308-1994 (R2002), Recommended Practice for Instrumentation for Magnetic Flux Density and Electric Field Strength Meters – 10Hz to 3kHz

*Identifies specifications that should be provided to characterize instrumentation used to measure the steady state rms values of magnetic and electric fields with sinusoidal frequency content in the range 10Hz to 3 kHz in residential and occupational settings as well as in transportation systems.*

IEEE 1309-2005, Standard for Calibration of Electromagnetic Field Sensors and Probes, Excluding Antennas, from 9 kHz to 40 GHz

*Provides consensus calibration methods for electromagnetic field sensors and field probes.*

IEEE 1310-2004, Recommended Practice for Thermal Cycle Testing of Form-Wound Stator Bars and Coils for Large Generators

*A test method to determine the relative ability of high-voltage, form-wound stator bars and coils of large rotating machines to resist deterioration due to rapid heating and cooling resulting from machine load cycling is described.*

IEEE 1312-1993 (R2004), Standard Preferred Voltage Ratings for Alternating-Current Electrical Systems and Equipment Operating at Voltages Above 230 kV Nominal

*Provides preferred voltage ratings above 230 kV nominal for alternating-current (ac) systems and equipment.*

IEEE 1313.1-1997 (R2002), Power systems – Insulation Coordination

*Applies to three-phase ac systems above 1kV. Specifies the procedure for selection of the withstand voltages for equipment phase-to-ground and phase-to-phase insulation systems. Identifies a list of standard insulation levels, based on the voltage str*

IEEE 1313.2-1999 (R2005), Guide for the Application of Insulation Coordination

*The calculation method for selection of phase-to-ground and phase-to-phase insulation withstand voltages for equipment is presented. Gives methods for insulation coordination of different air-insulated systems like transmission lines and substations.*

IEEE 1320.1-2004, Functional Modeling Language - Syntax and Semantics for IDEF0

*Provides requirements for the construction of semantically and syntactically correct Integration Defintion 0 (IDEF0) models and diagrams.*

IEEE 1320.2-2004, Conceptual Modeling Language - Syntax and Semantics for IDEF1X97 (IDEFobject)

*Describes the semantics and syntax of IDEF1X, a language used to represent a conceptual schema.*

IEEE 1325-1996 (R2002), Recommended Practice for Reporting of Power Circuit Breaker Field Failures

*Attempts tro standardize reporting of field failures and to use these experiences to improve the reliability of power circuit breakers.*

IEEE 1329-1999, Standard Method for Measuring Transmission Performance of Handsfree Telephone Sets

*Provides techniques for objective measurement of electroacoustic and voice switching characteristics of analog and digital handsfree telephone sets.*

IEEE 1332-2004, Reliability Program for the Development and Production of Electronic Systems and Equipment

*Encouracges suppliers and customers to cooperatively integrate their reliability processes.*

IEEE 1344-1995 (R2001), Synchrophasors for Power Systems

*Addresses synchronization of data sampling, data-to-phasor conversions, and formats for timing input and phasor data output from a Phasor Measurement Unit (PMU).*

IEEE 1346-1998 (R2004), Recommended Practice for Evaluating Electrical Power System Compatibility with Electronic Process Equipment

*Recommends a standard methodology for the technical and financial analysis of compatibility of process equipment with an electric power system.*

IEEE 1349-2001, Guide for Application of Electric Motors in Class I Division 2 Hazardous (Classified) Locations

*Emphasis is on the use of general-purpose enclosures and precautions against excessive surface temperatures and sparking of rotor bars and enclosure joints. Provides guidance for maintaining the life-cycle integrity of motors in Class 1 Division 2 locations. Three-phase and single-phase AC synchronous and induction electric motors in sizes from fractional horsepower and larger are covered.*

IEEE 1361-2003, Guide for Selection, Charging, Test and Evaluation of Lead-Acid Batteries Used in Stand-Alone Photovoltaic (PV) Systems

*Provides guidance in understanding lead-acid battery charging requirements in relation to the operational parameters that affect overall PV system design and battery performance. Aids in battery selection, evaluation, and PV system design.*

IEEE 1363-2000, Standard Specifications for Public Key Cryptography

*Specifications of common public-key cryptographic techniques, including mathematical primitives for secret value (key) derivation, public-key encryption, and digital signatures, and cryptographic schemes based on those primitives. Specifications of related cryptographic parameters, public keys and private keys.*

IEEE 1363a-2004, Specifications for Public-Key Cryptography - Amendment 1: Additional Techniques

*Specification of common public-key cryptographic techniques supplemental to those considered in IEEE Std. 1363-2000, including mathematical primitives for secret value (key) derivation, public-key encryption, digital signatures, and identification, and cryptographic schemes based on those primitives.*

IEEE 1364-2006, Standard for Verilog Hardware Description Language

*Defines the Verilog Hardware Description Language. Verilog HDL is a formal notation intended for use in all phases of the creation of electronic systems.*

IEEE 1364.1-2002, Standard for Verilog Register Transfer Level Synthesis

*Defines a set of modeling rules for writing Verilog HDL descriptions for synthesis.*

IEEE 1366-1998, Trial Use Guide for Power Distribution Reliability Indices

*Identifies a set of terms and definitions that can be used to calculate power distribution reliability indices and factors.*

IEEE 1366-2003, Guide for Electric Power Distribution Reliability Indices

*Identifies distribution reliability indices and factors that affect their calculation. It includes indices, which are useful today, as well as ones that may be useful in the future. The indices are intended to apply to distribution systems, substations, circuits, and defined regions*

IEEE 1375-1998 (R2003), Guide for Protection of Stationary Battery Systems

*Provides guidance in the protection of stationary battery systems*

IEEE 1378-1997 (R2002), Guide for Commissioning High-Voltage Direct-Current (HVDC) Converter Stations and Associated Transmission Systems

*Provides general guidelines for commissioning high-voltage direct-current (HVDC) converter stations and associated transmission systems. Applies to HVDC systems utilizing 6-pulse ot 12-pulse thyristor-valve converter units operated as a two-terminal HVDC transmission system or an HVDC back-to-back system.*

IEEE 1379-2000 (R2006), Recommended Practice for Data Communications Between Remote Terminal Units and Intelligent Electronic Devices in a Substation

*A uniform set of guidelines for communications and interoperations of remote terminal units (RTUs) and intelligent electronic devices (IEDs) in an electric utility substation is provided. A mechanism for adding data elements and message structures to this recommended parctice is described.*

IEEE 1386-2001, Common Mezzanine Card Family: CMC

*Provides the parent document for a family of mezzanine cards to be used on single slot VME boards, Multibus boards, desktop computers and other computer applications. Also provides the common mechanical definition and common referenced environmental specification for this family of mezzanine cards.*

IEEE 1386.1-2001, Physical and Environmental Layers for PCI Mezzanine Cards: PMC

*Defines a family of high speed low profile modular mezzanine cards for VME, Multibus, desktop computers and other computer systems with the logical and electrical layers based on PCI Special Interest Group's PCI Specification, Rev 2.1. The Common Mezzanine Card Family (1386) standard will be referenced for the mechanical layer. The environmental layer is defined within the standard.*

IEEE 139-1988 (R1999), Recommended Practice for the Measurement of Radio Frequency Emission from Industrial, Scientific, and Medical Equipment (ISM) Installed on Users' Premises

*Recommends procedures for measuring the radio frequency (rf) energy emitted by industrial, scientific, and medical (ISM) equipment installed, ready for use, in the user's plant or laboratory. It is not intended for testing equipment on a test site, or as it comes off a production line.*

IEEE 1394.1-2004, Standard for High Performance Serial Bus Bridges

*Intends to standardize the model, definition and behaviors of High Performance Serial Bus bridges, which are devices that may be used to interconnect two separately enumerable buses.*

IEEE 1394.3-2003, Standard for a High Performance Serial Bus Peer-to-Peer Data Transport Protocol (PPDT)

*Definition of a peer-to-peer data transport (PPDT) protocol between Serial Bus devices that implement ANSI NCITS 325-1998, Serial Bus Protocol 2.*

IEEE 1394a-2000, High Performance Serial Bus

*Provide a supplement to 1394-1995 that defines or clarifies features and mechanisms that facilitate management of Serial Bus resources, at reconfiguration or during normal operation, and that defines alternate cables and connectors that may be needed for specialized applications.*

IEEE 1394b-2002, High Performance Serial Bus (High Speed Supplement)

*Provides a supplement to IEEE Std 1394-1995 and to IEEE Std 1394a-2000 that defines features and mechanisms that provide gigabit speed extensions in a backwards compatible fashion and the ability to signal over single hop distances of up to 100M.*

IEEE 1402-2000, Guide for Electric Power Substations Physical and Electronic Security

*Identifies and discusses security issues related to human intervention during the construction, operation (except for natural disasters), and maintenance of electric power supply substations.*

IEEE 141-1993 (R1999), Recommended Practice for Electric Power Distribution for Industrial Plants (Red Book)

*Provides a recommended practice for the electrical design of industrial facilities. It is likely to be of greatest value to the power-oriented engineer with limited industrial plant experience. It can also be an aid to all engineers responsible for the electrical design manual. It should be considered a guide and general reference on electrical design for industrial plants and buildings.*

IEEE 1410-2004, Guide for Improving the Lightning Performance of Electric Power Overhead Distribution Lines

*Identifies factors that contribute to lightning-caused faults on overhead distribution lines and suggests improvements to existing and new construction.*

IEEE 1413-1998, Standard Methodology for Reliability Predictions and Assessment for Electronic Systems and Equipment

*Provides a standard medium for developing reliability predictions of electronic systems and equipment.*

IEEE 1413.1-2002, Guide for Selecting and Using Reliability Predictions Based on IEEE 1413

*Focuses on hardware reliability prediction methodologies for electronic systems and equipment, and specifically excludes software reliability, availability and maintainability, human reliability, and proprietary reliability prediction data and methodologies.*

IEEE 14143.1-2000 (R2005), Information Technology - Software Measurement - Functional Size Measurement - Part 1: Definition of Concepts

*IEEE implementation of ISO/IEC*

IEEE 1416-2004, Recommended Practice for the Interface of New Gas-Insulated Equipment in Existing Gas-Insulated Substations

*Recommendations for the connection of a gas-insulated substation to another gas-insulated substation of a different make are given.*

IEEE 1420.1-2002, Standard for Information Technology - Software Reuse - Data Model for Reuse Library Interoperability: Basic Interoperability Data Model (BIDM)

*Defines a minimal set of information about assets that reuse libraries should be bale to exchange to support interoperability.*

IEEE 1425-2001, Guide for the Evaluation of the Remaining Life of Impregnated Paper Insulated Transmission Cable Systems

*Provides technical information regarding factors that can affect the life of an impregnated paper insulated transmission cable system, and reviews available methods to evaluate the remaining life of such systems and preventive maintenance to extend their service life.*

IEEE 1428-2004, Guide for Installation Methods for Fiber Optic Cables in Electric Power Generating Stations and in Industrial Facilities

*Provides guidance for the selection, application,and installation of fiber optic cable in power generating plants and industrial facilities.*

IEEE 1431-2004, Specification Format Guide and Test Procedure for Coriolis Vibratory Gyros

*Specification and test requirements for a single-axis Coriolis vibratory gyro (CVG) for use as a sensor in attitude control systems, angular displacement measuring systems, and angular rate measuring systems are defined. A standard specification format guide for the preparation of a single-axis CVG is provided.*

IEEE 1434-2000, Trial-Use Guide to the Measurement of Partial Discharges in Rotating Machinery (TRIAL USE STANDARD - NOT AN AMERICAN NATIONAL STANDARD)

*Discusses both on-line and off-line partial discharge (PD) measurements on complete windings of any type, as well as measurements on individual form-wound coils and bars. Measurements selected from those which are outlined may be appropriate for application during the manufacture, installation, operation and maintenance of windings of ac rotating machinery. Trial use period: 5/19/2000 through 5/19/2002*

IEEE 1434-2005, Guide to the Measurement of Partial Discharges in Rotating Machinery

*A review of the nature of partial discharge in machine windings, how it can be measured under both off-line and on-line conditions, how it can be measured for individual form-wound coils or bars, and the significance and limitations of the measured values are covered.*

IEEE 1441-2004, Guide for Inspection of Overhead Transmission Line Construction

*Covers the inspection procedures and practices for right-of-way issues, foundations, structures, and wire installation for overhead lines.*

IEEE 1445-1998 (R2004), Standard for Digital Test Interchange Format (DTIF)

*Defines the information content and the data formats for the interchange of digital test program data between digital automated test program generators (DATPGs) and automatic test equipment (ATE) for board-level printed circuit assemblies.*

IEEE 1448-1996, Information Technology - Software Life Cycle Processes

*This standard provides US industry the basis for software practices that would be usable for both national and international business.*

IEEE 1448a-1996, Information Technology - Software Life Cycle Processes

*This standard provides US industry the basis for software practices that would be usable for both national and international business.*

IEEE 145-2004, Standard Definitions of Terms for Antennas

*Definitions of terms in the field of antennas are provided.*

IEEE 1450-1999, Standard Test Interface Language (STIL) for Digital Test Vector Data

*This project is to define a standard language that a) facilitates the transfer of large volumes of digital test information from computer Aided-Engineering (CAE) environments to Automated Test Equipment (ATE) environments; b) specifies pattern, format, and timing information sufficient to define the application of test vectors to a Device Under Test (DUT); c) supports the large bulk test information generated from structured test and integral test techniques for very large scale and ultra large scale integrated circuit designs in a format optimized for transportation and application in Automated Test Equipment (ATE) environments; d) supports device testing for integrated circuit, very large scale and ultra large scale integrated circuit test environments, but not restricted from application to other digital test environments.*

IEEE 1450.1-2005, Standard for Extensions to Standard Test Interface Language (STIL) (IEEE Std. 1450-1999) for Semiconductor Design Environments

*Standard Test Interface Language (STIL) provides an interface between digital test generation tools and test equipment. Extensions to the test interface language are defined that a) facilitate the use of the language in the design environment and b) facilitate the use of the language for large designs encompassing sub-designs with reusable patterns.*

IEEE 1450.2-2002, Standard for Extensions to Standard Test Interface Language (STIL) (IEEE Std. 1450-1999) for DC Level Specification

*Extends IEEE Std. 1450 to support the definition of DC Levels. The DC levels information consists of the per pin reference levels, the device power supply levels, and the sequencing of these levels for powering up the device, powering down the device, or to change levels of the device.*

IEEE 1450.6-2005, Standard Test Interface Language (STIL) for Digital Test Vector Data - Core Test Language (CTL)

*Develops a language that will provide a sufficient description of a core to support reuse of test data developed for that core after integration into SoC [Systems on Chip] environments, and to enable the creation of test patterns for the logic in the SoC external to the core.*

IEEE 1451.1-1999, Standard for a Smart Transducer Interface for Sensors and Actuators - Network Capable Application Processor (NCAP) Information Model

*Establishes a standard interface for connecting network capable processors to control networks through the development of a common control network information or object model for smart sensors and actuators. The object model includes transducer block, function block, physical block, and network block and their underlying structures. This project will not define individual device algorithms or the specifics of what will be implemented using the model.*

IEEE 1451.3-2003, Standard for a Smart Transducer Interface for Sensors and Actuators - Digital Communication and Transducer Electronic Data Sheet (TEDS) Formats for Distributed Multidrop Systems

*Defines a digital interface for connecting multiple physically separated transducers. Defines the TEDS format, the electrical interface, channel identification protocols, hot swap protocols, time synchronization protocols, and the read and write logic functions used to access the TEDS and transducer data.*

IEEE 1451.4-2004, Standard for a Smart Transducer Interface for Sensors and Actuators - Mixed-Mode Communication Protocols and Transducer Electronic Data Sheet (TEDS) Formats

*Defines the protocol and interface that allows analog transducers to communicate digital information with an IEEE 1451 object. It also defines the format of the transducer TEDS.*

IEEE 1453-2004, Recommended Practice for Measurement and Limits of Voltage Flicker on AC Power Systems

*Provides specifications for measurement of voltage flicker and recommends acceptable levels for 120 V, 60 Hz AC electric power systems. It adopts IEC 61000-4-15 for a functional design specification for flicker measuring apparatus intended to indicate the correct flicker perception level for all practical voltage fluctuation waveforms.*

IEEE 1455-1999 (R2006), Standard for Message Sets for Vehicle/Roadside Communications

*Those characteristics of a dedicated short-range communications (DRSC) system that are independent of the Physical and Data Link Layers (ISO model Layers 1 and 2) are specified. The required and optional features of the roadside equipment (RSE) and the onboard equipment (OBE) are specified.*

IEEE 1460-1996 (R2002), Guide for the Measurement of Quasi-Static Magnetic and Electric Fields

*Provides a listing of possible measurement goals related to characterizing quasi-static magnetic and electric fields and possible methods for their accomplishment.*

IEEE 1471-2000, Recommended Practice for Architectural Description for Software-Intensive Systems

*Addresses the architectural description of software-intensive systems. A software-intensive system is any system where software contributes essential influences to the design, construction, deployment, and evolution of the system as a whole.*

IEEE 1473-1999, Communications Protocol Aboard Trains

*Defines the protocol for Inter-car and Intra-car serial data communications between subsystems aboard passenger trains. It sets forth the minimum acceptable parameters for a network that can simultaneously handle monitoring and controls traffic from multiple systems. While the network itself is not vital, it is intended to be capable of carrying vital messages. The standard will be structured with respect to the OSI seven layer model.*

IEEE 1474.1-2004, Communications-Based Train Control (CBTC) Performance and Functional Requirements

*Establishes a set of performance and functional requirements necessary for enhancing performance, availability, operations, and train protection using a communications-based train control system.*

IEEE 1474.2-2003, Standard for User Interface Requirements in Communications Based Train Control (CBTC) Systems

*Provides for consistent user interfaces that take advantage of the characteristics of communications-based train control (CBTC) systems to enhance service effectivesness of a rail transit system.*

IEEE 1475-1999 (R2005), Standard for the Functioning of and Interfaces Among Propulsion, Friction Brake, and Train-borne Master Control on Rail Rapid Transit Vehicles

*The interfaces between and among functional systems on rail rapid transit vehicles is prescribed. The systems themselves are treated as 'black boxes'; requirements for the input signals and the output response are given.*

IEEE 1476-2000, Standard for Passenger Train Auxiliary Power Systems Interfaces

*Prescribes the electrical interface between the components comprising the auxiliary power systems and their electrical interface with other train-borne systems. As such, this standard treats the auxiliary power system components (static inverters and converters, low voltage dc power supplies, back-up battery systems and battery chargers) as black boxes and addresses only their interface requirements.*

IEEE 14764-2006, Standard for Software Engineering - Software Life Cycle Processes - Maintenance

*Prescribes requirements for process, control, and management of the planning, execution, and documentation of software activities.*

IEEE 1477-2003, Standard for Passenger Information System for Rail Transit Vehicles

*Applies to external and internal audiovisual communication of passenger information, destination/trip information, and announcements related to safety and emergencies, as well as advertisements/community information for rail transit vehicles*

IEEE 1478-2001, Environmental Conditions for Transit Rail Car Electronic Equipment

*Specifies baseline environmental conditions under which transit rail car electronic equipment shall both operate and/or survive. Environmental conditions include temperature, humidity, atmospheric pressure, water, corrosive elements, and vibration/shock.*

IEEE 1481-1999, Standard for Delay and Power Calculation System

*Describes delay and power calculation for integrated circuit design.*

IEEE 1482.1-1999 (R2005), Standard for Rail Transit Vehicle Event Recorder

*On-board devices/systems, with crashworthy memory, that record data to support accident/incident analysis for rail transit vehicles, are covered.*

IEEE 1483-2000, Standard for the Verification of Vital Functions in Processor-Based Systems Used in Rail Transit Control

*Provides a set of standard verification tasks for processor-based equipment used in safety critical applications on rail and transit systems. It is limited to processes that verify the level of safety achieved in the implementation of safety critical functions that are required to be fail-safe.*

IEEE 1484.1-2003, Standard for Learning Technology - Learning Technology Systems Architecture (LTSA)

*Specifies a high level architecture for information technology-supported learning, education, and training systems that describes the high-level system design and the componenets of these systems.*

IEEE 1484.11.1-2004, Standard for Learning Technology - Data Model for Content Object Communication

*Describes a data model to support the interchange of agreed upon data elements and their values between a learning-related content object and a runtime service (RTS) used to support learning management.*

IEEE 1484.11.2-2003, Standard for Learning Technology - ECMAScript Application Programming Interface for Content to Runtime Services Communication

*Describes an ECMAScript application programming interface (API) for content-to-runtime-services communication. Based on an API defined in the 'CMI Guidelines for Interoperability' , version 3.4, defined by the Aviation Industry CBT Committee (AICC). Defines common API services in the ECMAScript language that enable the communication of information between learning-related content and a runtime sevice (RTS) used to support learning management.*

IEEE 1484.11.3-2005, Standard for Learning Technology Extensible Markup Language (XML) Schema Binding for Data Model for Content Object Communication

*Specifies a World Wide Web Consortium (W3C) Extensible Markup Language binding of the data model defined in IEEE 1484.11.1-2004. The purpose is to allow the creation of IEEE 1484.11.1-2004 data-model instances in XML.*

IEEE 1484.12.1-2002, Standard for Learning Object Metadata

*Specifies a conceptual data schema that defines the structure of a metadata instance for a learning object. A learning object is defined as any entity, digital or non-digital, that may be used for learning, education, or training. A metadata instance*

IEEE 1484.12.3-2005, Standard for Learning Technology - Extensible Markup Language (XML) Schema Definition Language Binding for Learning Object Metadata

*Defines World Wide Web Consortium (W3C) Extensible Markup Language (XML) structure and constraints on the contents of XML 1.1 documents that can be used to represent learning object metadata (LOM) instances as defined in IEEE 1484.12.1-2002.*

IEEE 1489-1999, Standard for Data Dictionaries for Intelligent Transportation Systems

*Develop a standard for functional area data dictionaries for intelligent transportation systems. Specific issues will be addressed including documenting and coordinating data elements, ownership and identifying attributes for unambiguous data transfer.*

IEEE 149-2003, Standard Test Procedures for Antennas

*Comprises test procedures for the measurement of antenna properties.*

IEEE 1490-2003, Adoption of PMI Standard - A Guide to the Project Management Body of Knowledge (PMBOK Guide)

*Identifies and describes that subset of the PMBOK that is generally accepted and then adopts it as an IEEE Std*

IEEE 1491-2005, Guide for Selection and Use of Battery Monitoring Equipment in Stationary Applications

*Discusses operational parameters that may be observed by battery monitoring equipment used in stationary applications, and the relative value of such observations.*

IEEE 1497-2001, Delay Format (SDF) for the Electronic Design Process

*The Standard Delay Format (SDF) is an existing OVI standard for the representation and interpretation of timing data for use at any stage of the electronic design process. The ASCII data in the SDF file is represented in a tool and language independent way and includes path delays, timing constraint values, interconnect delays and high-level technology parameters. This document describes the IEEE version of the SDF standard.*

IEEE 1499-1998 (R2004), Standard Interface for Hardware Description Models of Electronic Components

*Defines an open interface between models and simulators that enables model interoperability while protecting the model provider's intellectual property. This software interface is called the Open Model Interface (OMI). Permits an OMI-compiled model to be used with any OMI-compliant application that supports that class of OMI model, regardless of the programming language in which the model was developed.*

IEEE 1500-2005, Standard Testability Method for Embedded Core-Based Integrated Circuits C/TT

*Defines a protocol and management elements suitable for advertising information to stations attached to the same 802 LAN for the purpose of populating physical topology and device discovery management information databases.*

IEEE 1505-2006, Standard for Receiver Fixture Interface

*Provides a mechanical and electrical specification for implementing a common interoperable mechanical quick disconnect interconnect system for use by industry for interfacing large numbers of electrical signals (digital, analog, RF, power, etc).*

IEEE 1511-2004, Guide for Investigating and Analyzing Power Cable, Joint, and Termination Failures on Systems Rated 5kV Through 46 kV

*Provides an introduction to failure analysis. It is the first in a series of guides covering failure analysis for cables, joints, terminations, and separable insulated connectors used on shielded power cable systems rated 5 kV through 46 kV.*

IEEE 1512-2006, Standard for Common Incident Management Message Sets for Use by Emergency Management Centers

*Addresses the exchange of vital data about public safety and emergency management issues involved in transportation-related events, through common incident management message sets. Message sets specified are consistent with the National Intelligent Transportation Architecture and are described using Abstract Syntax Notation One ("ASN.1" or "ASN") syntax.*

IEEE 1512.1-2006, Standard for Common Traffic Incident Management Message Sets for Use by Emergency Management Centers

*Specifies messages, data frames, and data elements for communicating information about traffic and infrastructure management in support of real-time interagency transportation-related incident management.*

IEEE 1512.2-2004, Standard for Public Safety Incident Management Message Sets for Use By Emergency Management Centers

*Specifies messages, data frames and data elements for communicating information specific to Public Safety in support of real-time interagency transportation-related incident management. It also addresses the unique disciplines associated with communications dealing with the control and confinement of Hazardous Materials during and following an incident.*

IEEE 1512.3-2006, Hazardous Material Incident Management Message Sets for Use By Emergency Management Centers

*Companion to IEEE 1512. Specifies messages, data frames and data elements for communicating general and cargo information to other responders in support of real-time interagency transportation-related incident management. Addresses the unique disciplines associated with communications dealing with the control and confinement of Hazardous Materials during and following an incident.*

IEEE 1513-2001, Recommended Practice for Qualification of Concentrator Photovoltaic (PV) Receiver Sections and Modules

*Establishes recommended procedures and specifications for qualification tests that are structured to evaluate concentrator photovoltaic receiver sections and modules intended for power generation applications.*

IEEE 1515-2000, Recommended Practice for Electronic Power Subsystems: Parameter Definitions, Test Conditions, and Test Methods

*Provides a standard specification language for common parameters used to characterize the performance of electronic power distribution subsystem elements.*

IEEE 1516-2000, Standard for Modeling and Simulation (M&S) High Level Architecture (HLA) - Framework and Rules

*Provides an overview of the High Level Architecture (HLA), defines a family of related HLA documents, and defines the principles of HLA in terms of responsibilities that federates (simulations, supporting utilities, or interfaces to live systems) and federations (sets of federates working together) must uphold.*

IEEE 1516.1-2000, Standard for Modeling and Simulation (M&S) High Level Architecture (HLA) - Federate Interface Specification

*Defines the interface between federates (simulations, supporting utilities, or interfaces to live systems) and the underlying software services that support inter-federate communication in a distributed simulation domain.*

IEEE 1516.2-2000, Standard for Modeling and Simulation (M&S) High Level Architecture (HLA) - Object Model Template (OMT) Specification

*Defines the format and syntax for recording information in HLA object models, to include objects, attributes, interactions, and parameters. It does not define the specific data (e.g., vehicles, unit types) that will appear in the object models.*

IEEE 1516.3-2003, Recommended Practice for High Level Architecture (HLA) Federation Development and Execution Process (FEDEP)

*Defines the processes and procedures that should be followed by users of the High Level Architecture (HLA) to develop and execute federations.*

IEEE 1517-1999 (R2004), Standard for Information Technology - Software Life Cycle Processes - Reuse Processes

*Provides a common framework for extending the software life cycle processes to include the systematic practice of software reuse. It specifies the processes, activities, and tasks to be applied during each phase of a software life cycle to enable a software product to be constructed from assets.*

IEEE 1523-2002, Guide for the Application, Maintenance, and Evaluation of Room Temperature Vulcanizing (RTV) Silicone Rubber Coatings for Outdoor Ceramic Insulators

*Discusses various important aspects that are needed for satisfactory long term performance of High Voltage Insulator Coatings (HVIC), namely, various possible application scenarios, maintenance issues on coated insulators, factors affecting long term performance, the question of aging, laboratory accelerated tests and functional outdoor evaluation.*

IEEE 1526-2003, Recommended Practice for Testing the Performance of Stand-Alone Photovoltaic Systems

*Provides test methods and procedures for determining stand-alone PV system performance and conducting design verification. Test procedures provided are intended to assist designers, manufacturers, system integrators, users, and laboratories in conducting these performance tests.*

IEEE 1527-2006, Recommended Practice for the Design of Flexible Buswork Located in Seismically Active Areas

*Provides guidance to the substation designer on flexible buswork seismic design and provides information accounting for the current state of knowledge concerning the dynamic effects of conductors and high current connections.*

IEEE 1528-2003, Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques

*Specifies protocols for the measurement of the peak spatial-average specific absorption rate (SAR) in a simplified model of the head of users of handheld radio transceivers used for personal wireless communications services and intended to be operated while held next to the ear.*

IEEE 15288-2004, Adoption of ISO/IEC 15288-2002, Systems Engineering - System Life Cycle Processes

*Provides a common process framework covering the life cycle of man-made systems. This life cycle spans the conception of ideas through to the retirement of a system. It provides the processes for acquiring and supplying systems. In addition, the framework provides for the assessment and improvement of the life cycle processes.*

IEEE 1528a-2005, Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques - Amendment 1: Include CAD File for Human Head Model (SAM

*Addresses ambiguity in the language of certain sections of the base document and provides a compact disk with a CAD data file of the original project's human head model.*

IEEE 1531-2003, Guide for Application and Specification of Harmonic Filters

*Addresses the selection of the 1. Components, 2. Protection and 3. Control of harmonic filters.*

IEEE 1532-2002, Standard for In-System Configuration of Programmable Devices

*Describes a series of mandatory and optional programming instructions and associated data registers that define a standard methodology for accessing and configuring programmable devices.*

IEEE 1534-2002, Recommended Practice for Specifying Thyristor Controlled Series Capacitors

*Specifies Thyristor Controlled Series Capacitor (TCSC) installations used in series with transmission lines. Addresses issues that consider ratings for TCSC thyristor valve assemblies, capacitors, and reactors as well as TCSC control characteristics, p*

IEEE 1536-2002, Standard for Rail Transit Vehicle Battery Physical Interface

*Prescribes the maximum dimensional requirements of each battery tray for a specific number of cells and battery capacity or performance rating.*

IEEE 1538-2000 (R2005), Guide for Determination of Maximum Winding Temperature Rise in Liquid Filled Transformers

*Provides guidance for determining the hottest-spot temperature in distribution and power transformers built in accordance with IEEE C57.12.00-2000.*

IEEE 1540-2001, Standard for Software Life Cycle Processes - Risk Management

*Describes a process for the management of risk during software acquisition, supply, development, operations, and maintenance.*

IEEE 1541-2002, Prefixes for Binary Multiples

*Defines names and letter symbols for prefixes that denote multiplication of a unit by the binary multiplier 2^10n, where n=1, 2, 3, 4, 5, or 6.*

IEEE 1546-2000 (R2006), Guide for Digital Test Interchange Format (DTIF) Application

*An aid in the understanding and use of digital test interchange format (DTIF) files is provided in this guide. This information will be an aid to users in developing tools such as preprocessors and postprocessors of DTIF data and other utilities.*

IEEE 1547-2003, Standard for Interconnecting Distributed Resources with Electric Power Systems

*Establishes criteria and requirements for interconnection of distributed resources (DR) with electric power systems (EPS).*

IEEE 1547.1-2005, Standard for Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems

*Provides tests and procedures for verifying conformance of interconnection systems to IEEE 1547. Specifies the Type, Production, and Commissioning tests that shall be performed to demonstrate that the interconnection functions and equipment of the distributed resource conform.*

IEEE 1554-200x, Recommended Practice for Inertial Sensor Test Equipment, Instrumentation, Data Acquisition, and Analysis

*Recommended practices for gyroscope and accelerometer testing are discussed, ranging from the equipment and instrumentation employed to the way that tests are carried out and data are acquired and analyzed. Recommendations are made on techniques for acquisition, filtering, storage, and analysis of the test data in keeping with modern practice.*

IEEE 1558-2004, Standard for Software Documentation for Rail Equipment and Systems

*Establishes the minimum requirements for application software documentation throughout the software development life cycle for rail equipment and systems including associated test and maintenance equipment.*

IEEE 1560-2005, Standard for Methods of Measurement of Radio Frequency Power Line Interference Filter in the Range of 100 Hz to 10 GHz

*Develops a standard method of measurement for evaluating the electromagnetic and radio frequency suppression capability of power-line filters in the frequency range of 100 Hz to 10 GHz. Applies to EMI/RFI filters in general (i.e., DC, single phase of poly phase systems rated for 600 V and below 1000 A). The method of measurement will describe general considerations, such as method of standardizing source impedance for nonlinear loads, temperature rise, attenuation measurement, components, and/or derating requirements when supplying non-sinusoidal load currents and operating in matched or mismatched impedance environments.*

IEEE 1566-2005, Standard for Performance of Adjustable Speed AC Drives Rated 375 kW and Larger

*Applies to AC adjustable speed drive (ASD) systems rated above 375 kW and above 750 V output voltage as used in petrochemical and similar applications. It covers the performance requirements for an ASD system including, but not limited to, input transformer or reactor as required, power electronics, control interfaces, cooling system, switchgear, and motor.*

IEEE 1568-2003, Recommended Practice for Electrical Sizing of Nickel-Cadmium Batteries for Rail Passenger Vehicles

*Prescribes a method for electrical sizing of nickel-cadmium batteries for use on passenger rail cars used for battery back up of low voltage dc auxiliary power systems.*

IEEE 1570-2002, Standard for the Interface Between the Rail Subsystem and the Highway Subsystem at a Highway Rail Intersection

*Defines the logical and physical interfaces, and the performance attributes for the interface between the rail subsystem and the highway subsystem at a highway rail intersection.*

IEEE 1572-2004, Guide for Application of Composite Line Post Insulators

*An application guide for non-ceramic line posts that handles recommendations, interpretations of manufacturer ratings, contamination considerations, and equivalency with porcelain.*

IEEE 1573-2003, Recommended Practice for Electronic Power Subsystems: Parameters, Interfaces, Elements, and Performance

*Provides a technical basis for implementation of electronic power subsystems. It is intended for electronic systems engineers and integrators, electronic power subsystem designers and integrators, as well as power element manufacturers and suppliers. It addresses system-level issues in element or subsystem integration, adaptation, and accommodation. It also defines system interface parameters, test methods, and test conditions.*

IEEE 1584-2002, Guide for Performing Arc Flash Hazard Calculations

*Provides techniques for designers and facility operators to apply in determining the arc flash hazard distance and the incident energy to which employees could be exposed during their work on or near electrical equipment.*

IEEE 1584a-2004, Guide for Performing Arc-Flash Hazard Calculations - Amendment

*Provides techniques for designers and facility operators to apply in determining the arc-flash hazard distance and the incident energy to which employees could be exposed during their work on or near electrical equipment - correction of errors.*

IEEE 1585-2002, Guide for the Functional Specification of Medium Voltage (1 – 35 kV) Electronic Series Devices for Compensation of Voltage Fluctuations

*Provides general guidelines for the preparation of a functional specification for solid-state electronic series devices used mainly for compensation of voltage fluctuation. The guide covers devices rated to medium voltage (1-35 kV).*

IEEE 1588-2002, Precision Clock Synchronization Protocol for Networked Measurement and Control Systems

*Defines a protocol enabling precise synchronization of clocks in measurement and control systems implemented with technologies such as network communication, local computing and distributed objects.*

IEEE 1590-2003, Recommended Practice for the Electrical Protection of Optical Fiber Communication Facilities Serving, or Connected to, Electrical Supply Locations

*Presents engineering design procedures for the electrical protection of optical fiber communications facilities serving, or connected to, electrical supply locations*

IEEE 16-2004, Standard for Electrical and Electronic Control Apparatus on Rail Vehicles

*Prescribes design, application, and test requirements for electrical and electronic control apparatus on rail vehicles.*

IEEE 1603-2003, A Standard for an Advanced Library Format (ALF) Describing Integrated Circuit (IC) Technology, Cells, and Blocks

*The Advanced Library Format (ALF) is a modeling language for library elements used in integrated circuit (IC) technology. ALF enables description of electrical, functional, and physical models in a formal language suitable for Electronic Design Automation (EDA) application tools targeted for design and analysis of an IC. Provides rules that describe ALF and how tool developers, integrators, library creators, and library users should use it.*

IEEE 1613-2003, Standard Environmental and Testing Requirements for Communications Networking Devices in Electric Power Substations

*Specifies standard service conditions, standard ratings, environmental performance requirements and testing requirements for communications networking devices installed in electric power substations.*

IEEE 1613-2003/Cor1-2006, Standard Environmental and Testing Requirements for Communications Networking Devices in Electric Power Substations - Corrigendum 1

*Deletion of a paragraph to bring the document into conformance with IEEE C37.90.*

IEEE 1616-2004, Standard for Motor Vehicle Event Data Recorder (MVEDR)

*Defines a protocol for Motor Vehicle Event Data Recorder (MVEDR) output data compatibility and export protocols of MVEDR data elements.*

IEEE 1620-2004, Standard for Test Methods for the Characterization of Organic Transistors and Materials

*Descibes a method for characterizing organic electronic devices, including measurement techniques, methods of reporting data, and the testing conditions during characterization.*

IEEE 1620.1-2006, Standard for Test Methods for the Characterization of Organic Transistor-Based Ring Oscillators

*Recommended methods and standardized reporting practices for electrical characterization of printed and organic ring oscillators are covered. Describes the most common sources of measurement errors, particularly for high-impedance electrical measurements commonly required for printed and organic ring oscillators. Also gives recommended practices in order to minimize and/or characterize the effect of measurement artifacts and other sources of error encountered while measuring printed and organic ring oscillators.*

IEEE 1621-2004, Standard for User Interface Elements in Power Control of Electronic Devices Employed in Office/Consumer Environments

*Covers the user interface for the power status control of electronic devices that ordinary people commonly interact with in their work and home lives, including, but not limited to, office equipment and consumer electronics. Key elements are terms, symbols, and indicators.*

IEEE 1623-2004, Guide for the Functional Specification of Medium Voltage (1 kV - 35 kV) Electronic Shunt Devices for Dynamic Voltage Compensation

*Provides general guidelines for the preparation of a functional specification for solid-state electronic shunt devices used mainly for compensation of voltage fluctuation. Covers devices rated to medium voltage (1 -35 kV.*

IEEE 1625-2004, Rechargeable Batteries for Portable Computing

*Guides manufacturers/suppliers in planning and implementing the controls for the design and manufacture of Li-Ion an Li-Ion Polymer rechargeable battery packs used for portable computing.*

IEEE 1641-2004, Standard for Signal and Test Definition

*Provides the means to define and describe signals used in testing. Provides a set of common basic signals, mathematically underpinned so that signals can be combined to form complex signals usable across all test platforms.*

IEEE 1646-2004, Standard Communication Delivery Time Performance Requirements for Electric Power Substation Automation

*Defines communication delivery times of information to be exchanged within and external to substation integrated protection, control, and data acquisition systems.*

IEEE 1647-2006, Standard for the Functional Verification Language 'e'

*Defines the 'e' functional verification language. The 'e' functional verification language is an application-specific language, aimed at automating the task of verifying electronic designs with respect to their specifications. Aims to serve as an authoritative source for the definition of a) syntax and semantics of 'e' language constructs, b) the 'e' language interaction with standard simulation languages, c) 'e' language libraries.*

IEEE 1650-2005, Standard Test Methods for Measurement of Electrical Properties of Carbon Nanotubes

*Recommended methods and standardized reporting practices for electrical characterization of carbon nanotubes are covered.*

IEEE 1666-2005, Standard SystemC Language Reference Manual

*Defines SystemC as an ANSI standard C++ class library for system and hartdware design.*

IEEE 1680-2006, Standard for Environmental Assessment of Personal Computer Products (including Notebook Personal Computers, Desktop Personal Computers, and Personal Computer Monitors)

*Defines environmental performance standards for personal computer products, including desktop computers, notebook computers, and computer monitors, that are marketed to institutions, and includes key concepts and implementation procedures related to reduction or elimination of environmentally sensitive materials, materials selection, design for end of life, life cycle extension, energy conservation, end of life management, corporate performance and packaging.*

IEEE 1725-2006, Standard for Rechargeable Batteries for Cellular Telephones

*Establishes criteria for design analysis for quality, and establishes criteria for reliability of rechargeable Li-Ion and Li-Ion polymer batteries for mobile telephone applications.*

IEEE 18-2002, Shunt Power Capacitors

*Applies to capacitors rated 216 V or higher, 2.5 kvar or more, and designed for shunt connection to alternating current transmission and distribution systems operating at a nominal frequency of 50 Hz or 60 Hz, within the guidelines of IEEE Std 1036.*

IEEE 1800-2005, Standard for SystemVerilog: Unified Hardware Design, Specification and Verification Language

*Specifies extensions for a higher level of abstraction for modeling and verification with the Verilog Hardware Description Language. The additions extend Verilog into the systems space and the verification space. SystemVerilog is built on top of the IEEE 1364 standard for the Verilog Hardware Description Language. The SystemVerilog standard includes design specification methods, embedded assertions language, testbench language including coverage and assertions API, and a direct programming interface.*

IEEE 1802.3-2001, Conformance Test Methodology for Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications Type 10BASE-T MAU Conformance Testing Section 6

*Defines abstract methods for the conformance testing of IEEE 802.3 Clause 14 (10BASE-T MAU) implementations in order to satisfy conformance requirements arising from the ISO/IEC 8802-3 specification.*

IEEE 181-2003, Standard on Transitions, Pulses, and Related Waveforms

*Provides definitions of terms pertaining to transitions, pulses, and related waveforms and provides definitions and descriptions of techniques and procedures for measuring their parameters. The waveforms considered in this standard are those that make a number of transitions andd that remain relatively constant in the time intervals between transitions.*

IEEE 1850-2005, Standard for PSL: Property Specification Language

*The IEEE Property Specification Language (PSL) is defined. PSL is a formal notation for specification of electronic system behavior, compatible with multiple electronic system design languages, including IEEE 1076 VHDL, IEEE 1364 Verilog, IEEE P1666 SystemC, and IEEE 1800 SystemVerilog, thereby enabling a common specification and verification flow for multi-language and mixed-language designs.*

IEEE 187-2003, Standard Measurement Methods of Emissions from FM and Television Broadcast Receivers in the Frequency Range of 9 kHz to 40 GHz

*Describes the potential sources of spurious radiation from receivers intended for the reception of sound and television broadcast, and measurement methods for them*

IEEE 2001-2002, Recommended Practice for Internet Practices - Web Page Engineering - Intranet/Extranet Applications

*Defines recommended practices for World Wide Wed page engineering for Intranet and Extranet environments, based on World Wide Web Consortium (W3C) and related industry guidelines.*

IEEE 2003-2003, Standard for Information Technology - Requirements and Guidelines for Test Methods Specifications and Test Method Implementations for Measuring Conformance to POSIX Standards

*Applicable to the development and use of conformance test method specifications for POSIX standards and may be applicable to other application programming interface specifications. Defines requirements and guidelines for developing assertions and related test methods for measuring conformance of an implementation under test (IUT) to POSIX standards.*

IEEE 2003.2-1996 (R2002), Information Technology – Test Methods for Measuring Conformance to POSIX – Part 2: Shell and Utilities

*Defines a standard for test methods for the interface to command interpretation, or 'shell', services and common utility programs for application programs.*

IEEE 205-2001, Standard on Television: Measurement of Luminance Signal Levels

*Describes a method of measuring the amplitude levels of an NTSC color or monochrome television video signal as described in American National Standard for Television - Composite Analog Video Signal - NTSC for Studio Applications, ANSI/SMPTE 170M-1994. It is concerned with luminance measurements at various points in transmission systems where the signals are at video frequencies.*

IEEE 208-1995 (R2005), Standard on Video Techniques: Measurement of Resolution of Camera Systems, 1993 Techniques

*The methods for measuring the resolution of camera systems are described. The primary application is for users and manufacturers to quantify the limit where fine detail contained in the original image is no longer reproduced by the camera system.*

IEEE 211-1997 (R2003), Definitions of Terms for Radio Wave Propagation

*Defines terms and definitions used in the context of electromagnetic wave propagation relating to the fields of telecommunications, remote sensing, radio astronomy, optical waves, plasma waves, the ionosphere, the magnetosphere, and magnetohydrodynamic, acoustic, and electrostatic waves.*

IEEE 241-1991 (R1997), Electric Power Systems in Commercial Buildings (Gray Book)

*Provides a recommended practice for design of commercial buildings.*

IEEE 242-2001, Protection and Coordination of Industrial and Commercial Power Systems, Recommended Practice for

*Covers the proper selection, application, and coordination of the components that constitute system protection for industrial plants and commercial buildings.*

IEEE 252-1995 (R2002), Motors Having Liquid in the Magnetic Gap, Test Procedure for Polyphase Induction

*Covers instructions for conducting and reporting the more generally applicable and acceptable tests to determine the performance characteristics of polyphase induction motors having liquid in the magnetic gap.*

IEEE 259-1999 (R2004), Standard Test Procedure for Evaluation of Systems of Insulation for Dry-Type Specialty and General-Purpose Transformers

*Provides guidelines for preparing samples, conducting tests, and analyzing results of test procedures performed to evaluate insulation designed for dry-type specialty and general-purpose transformers.*

IEEE 260.1-2004, Letter Symbols for Units of Measurement

*Covers letter symbols for units of measurement.*

IEEE 260.3-1993 (R2006), Mathematical Signs and Symbols for Use in Physical Sciences and Technology

*Signs and symbols used in writing mathematical text are defined.*

IEEE 260.4-1996 (R2002), Letter Symbols and Abbreviations for Quantities Used in Acoustics

*Covers letter symbols for physical quantities used in the science and technology of acoustics.*

IEEE 269-2002, Methods for Measuring Transmission Performance of Analog and Digital Telephone Sets

*Provides the techniques for objective measurement of electroacoustic characteristics of analog and digital telephones, handsets, and headsets.*

IEEE 270-2006, Standard Definitions for Selected Quantities, Units, and Related Terms, with Special Attention to the International System of Units (SI)

*Provides definitions for physical quantities and units commonly used in applied science and technology, and for related terms that concern systems of measurement. Particular emphasis is placed on the International System of Units (SI).*

IEEE 280-1985 (R2003), Quantities Used in Electrical Science and Electrical Engineering, Letter Symbols for

*Covers letter symbols used to represent physical quantities in the field of electrical science and electrical engineering. The symbols are independent of the units employed or special values assigned.*

IEEE 286-2000 (R2006), Recommended Practice for Measurement of Power Factor Tip-Up of Electric Machinery Stator Coil Insulation

*Covers the power factor tip-up testing of stator coils and bars for use in large electric machinery.*

IEEE 292-1969 (R2005), Specification Format for Single-Degree-of-Freedom Spring-Restrained Rate Gyros

*Defines the requirements for a single-degree-of-freedom spring-restrained rate gyro for [aircraft, missile, spacecraft,_] applications.*

IEEE 293-1969 (R2005), Test Procedure for Single-Degree-of-Freedom Spring-Restrained Rate Gyros

*Compilation of recommended rate gyro test procedures derived from those currently in use, including test conditions to be considered*

IEEE 295-1969 (R2000), Electronics Power Transformers

*Pertains to power transformers and inductors that are used in electronic equipment and supplied by power lines or generators of essentially sine wave or polyphase voltage. Guides to application and test procedures are included.*

IEEE 299-2006, Standard Method for Measuring the Effectiveness of Electromagnetic Shielding Enclosures

*Uniform measurement procedures and techniques are provided for determining the effectiveness of electromagnetic shielding enclosures at frequencies from 9 kHz to 18 GHz (extendable to 50 Hz and 100 GHz, respectively) for enclosures having all dimensions equal to or greater than 2.0 m.*

IEEE 300-1988 (R2006), Test Procedures for Semiconductor Charged-Particle Detectors

*This standard applies to semiconductor radiation detectors that are used for the detection of high-resolution spectroscopy of charged particles.*

IEEE 301-1988 (R2006), Amplifiers and Preamplifiers for Semiconductor Detectors for Ionizing Radiation, Test Procedures for

*This standard covers amplifier and preamplifier systems with linear pulse-shaping networks for use with semiconductor, scintillation, and proportional detectors in the spectroscopy of ionizing radiation.*

IEEE 303-2004, Auxiliary Devices for Motors in Class 1 – Groups A, B, C, and D, Division 2 Locations

*Brings together a brief description of basic electrical practices in regard to the application and installation of auxiliary devices to rotating electrical machines operating in Division 2 or Zone 2 locations using ANSI/NFPA 70, CEC C22.1-02 (2002) or Zone 2 locations using IEC/CENELEC EN60079-14:1997.*

IEEE 309/N42.3-1998 (R2006), Test Procedure and Bases for Geiger-Muller Counters

*Test procedures for the Geiger-Mueller counters that are used for the detection of ionizing radiation are presented so that they have the same meaning to both manufacturers and users. Also included is information on bases (i.e., connections) for the counters.*

IEEE 317-1983 (R2003), Electric Penetration Assemblies in Containment Structures for Nuclear Power Generating Stations

*Prescribes the requirements for the design, construction, qualification, test, and installation of electric penetration assemblies in nuclear containment structures for stationary nuclear power generating stations*

IEEE 32-1972 (R1998), Neutral Grounding Devices, Standard Requirements, Terminology, and Test Procedure for

*Reviews and updates requirements and tests for equipment used for neutral grounding devices, and the terminology presently used.*

IEEE 323-2003, Qualifying Class 1E Equipment for Nuclear Power Generating Stations

*Describes the basic requirements for qualifying Class 1E equipment and interfaces that are to be used in nuclear power generating stations. The principles, methods and procedures described are intended to be used for qualifying equipment, maintaining and extending qualification, and updating qualification, as required, if the equipment is modified.*

IEEE 325-1996 (R2002), Germanium Gamma-Ray Detectors, Test Procedures for

*Establishes terminology and standard test procedures so they have the same meaning to both manufacturers and users. Applies to germanium radiation detectors that are used for the detection and high-resolution spectrometry of gamma rays, X rays, and charged particles that produce hole-electron pairs in the crystal lattice.*

IEEE 334-2006, Standard for Qualifying Continuous Duty Class 1E Motors for Nuclear Power Generating Stations

*Establishes criteria for qualification of continuous duty Class 1E Motors, located in mild and harsh environments in Nuclear Power Generating Stations in order to demonstrate their ability to perform their intended safety functions under all required conditions.*

IEEE 336-2005, Guide for Installation, Inspection, and Testing for Class 1E Power, Instrumentation, and Control Equipment at Nuclear Facilities

*Provides considerations for pre-installation, installation, inspection, and testing of Class 1E power, instrumentation, and control equipment and systems of a nuclear facility in the process of installing, inspecting, and testing during new construction, modification and maintenance.*

IEEE 338-1987 (R2000), Criteria for the Periodic Surveillance Testing of Nuclear Power Generating Station Safety Systems

*Provides design and operational criteria for the performance of periodic testing as part of the surveillance program of nuclear power generating station safety systems.*

IEEE 344-2004, Recommended Practice for Seismic Qualification of Class 1E Equipment for Nuclear Power Generating Stations

*Describes recommended practices for establishing seismic qualification procedures that will yield quantitative data to demonstrate that the Class 1E equipment can meet its performance requirements during and/or following one safe shutdown earthquake (SSE)*

*event preceded by a number of operating basis earthquake (OBE) events.*

IEEE 352-1994 (R2004), Guide for General Principles of Reliability Analysis of Nuclear Power Generating Station Safety Systems

*Provides the designers and operators of nuclear power plant safety systems and the concerned regulatory groups with the essential methods and procedures of reliability engineering that are applicable to such systems.*

IEEE 356-2001, Guide for Measurements of Electromagnetic Properties of Earth Media

*Describes the measurement principles of the electrical properties of naturally occurring solid materials and serves as a guide for the measurement of any solid material. These properties include the conductivity (In S/m) and the permittivity (or dielectric constant) (in F/m).*

IEEE 367-1996 (R2002), Recommended Practice for Determining the Electric Power Station Ground Potential Rise and Induced Voltage from a Power Fault

*Provides guidance for the calculation of power station GPR and LI voltages, as well as guidance for their appropriate reduction from worst-case values for use in metallic telecommunication protection design.*

IEEE 377-1997 (R2005), Recommended Practice for Measurement of Spurious Emission from Land-Mobile Communication Transmitters

*Covers definitions of terms, controlled test conditions, test apparatus, test methods and data presentation, all of which form the basis for establishing the energy levels of spurious emissions of mobile communication transmitters designed to generate frequency-modulated (FM) signals in the frequency range of 25 MHz to 1000 MHz.*

IEEE 379-2000, Application of the Single-Failure Criterion to Nuclear Power Generating Station Safety Systems

*Covers the application of the single-failure criterion to the electrical power, instrumentation, and control portions of nuclear power generating station safety systems.*

IEEE 382-1996 (R2004), Actuators for Power-Operated Valve Assemblies with Safety-Related Functions for Nuclear Power-Plants, Qualification of

*Describes the qualification of all types of power-driven valve actuators, including damper actuators, for safety-related functions in nuclear power generating stations.*

IEEE 383-2003, Standard for Qualifying Class 1E Electric Cables and Field Splices for Nuclear Power Generating Stations

*Provides general requirements, direction and methods for qualifying Class 1E electric cables, field splices, factory splices and factory rework for service in nuclear power generating stations*

IEEE 384-1992 (R1998), Independence of Class 1E Equipment and Circuits, Criteria for

*Describes the independence requirements of circuits and equipment comprising or associated with Class 1E systems. It sets forth criteria for the independence that can be acheived by physical separation and electrical isolation of circuits and equipment that are redundant, but does not address the determination of what is to be considered redundant.*

IEEE 386-2006, Separable Insulated Connector Systems for Power Distribution Systems above 600 V

*Establishes definitions, service conditions, ratings, interchangeable construction features and tests for loadbreak and deadbreak separable insulated connector systems rated 601 V and above, 600 A or less, for use on power distribution systems.*

IEEE 387-1995 (R2001), Standard Criteria for Diesel-Generator Units Applied as Standby Power Supplies for Nuclear Power Generating Stations

*Describes the criteria for the application and testing of diesel-generator units as Class 1E standby power supplies in nuclear power generating stations.*

IEEE 388-1992 (R1998), Transformers and Inductors in Electronic Power Conversion Equipment

*Pertains to transformers and inductors of both the saturating and nonsaturating type that are used in electronic power conversion equipment. Power conversion equipment includes items known as inverters, converters, power conditioners, switching power supplies, switched mode power supplies, and the like. These items are mostly devices used to change dc power from one voltage to another, to change dc power to ac, and to change ac power of one frequency to another frequency. This equipment is best described as utilizing transistors, silicon controlled rectifiers (SCRs), or other similar devices that switch power on and off at a high rate in order to achieve the power conversion or regulation desired. Therefore, this standard covers the various transformers and inductors that are used in any of the above mentioned equipment or devices, except for transformers operated directly from*

IEEE 389-1996, Recommended Practice for Testing Electronic Transformers and Inductors

*Presents a number of tests for use in determining the significant parameters and performance characteristics of electronic transformers and inductors.*

IEEE 393-1991 (R1998), Magnetic Cores, Test Procedures for

*Specifies applicable tests to describe the significant properties of magnetic cores used in electronic applications. It is primarily concerned with magnetic cores of the type used in electronics transformers, magnetic amplifiers, inductors, and related devices. However, many of the tests specified herein are general in scope and adaptable to magnetic cores used in many other applications. Standards covered by this publication include tests for specifying or measuring, or both, permeability, core loss, apparent core, induction, hysteresis, thermal characteristics, and other properties of all commonly used types of magnetic cores.*

IEEE 398-1972 (R2006), Standard Test Procedures for Photo-Multipliers for Scintillation Counting and Glossary for Scintillation Counting Field

*The standard outlines procedures for testing carried out on photomultipliers for scintillation and Cerenkov counting.*

IEEE 399-1997, Analysis (IEEE Brown Book), Recommended Practice for Power System

*Describes the Analytical Principle and Recommended Techniques most often employed in the Design, Operation and Trouble-Shooting of Electric Power Systems for Industrial Facilities and Commerical Buildings. Covers the Basic Principles and Specific Techniques for Short-Circuit, Load Flow, Transient Stability, Coordination and other Types of Analysis.*

IEEE 400-2002, Direct Voltage Tests on Power Cables in the Field, Guide for Making

*Provides an overview of the various tests available for evaluating the insulation of cable systems in the field, and to set the stage for a series of Guides covering each test method.*

IEEE 400.2-2004, Guide for Field Testing of Shielded Power Cable Systems Using Very Low Frequency (VLF)

*Describes very low frequency withstand and diagnostic tests and measurements that are performed in the field on shielded medium voltage cables with extruded and laminated dielectric insulation.*

IEEE 400.3-2006, Guide for Partial Discharge Testing of Shielded Power Cable Systems in a Field Environment

*Covers the diagnostic testing of new or service-aged installed shielded power cable systems, which include cable, joints and terminations, using partial discharge (PD) detection, measurement and location.*

IEEE 404-2000, Cable Joints for Use with Extruded Dielectric Cable Rated 5 000 – 138 000 V and Cable Joints for Use with Laminated Dielectric Cable Rated 2 500–500 000 V

*Establishes electrical ratings and test requirements of cable joints used with extruded and laminated dielectric shielded cables rated in preferred voltage steps from 2500 to 500000 V. It also defines a variety of common joint constructions. This standard was listed for public review in the 2/18/1994 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

IEEE 420-2001, Standard for the Design and Qualification of Class 1E Control Boards, Panels and Racks Used in Nuclear Power Generating Stations

*Applies to the design and qualification of Class 1E control boards, panels, and racks.*

IEEE 421.3-1997 (R2004), Standard for High-Potential Test Requirements for Excitation Systems for Synchronous Machines

*Establishes requirements for high-potential dielectric testing of complete excitation systems and their components for synchronous machines.*

IEEE 421.4-2004, Guide for the Preparation of Excitation System Specifications

*Provides to the specification writer the necessary material to prepare a specification for the procurement of an excitation system for a synchronous machine.*

IEEE 421.5-2005, Recommended Practice for Excitation System Models for Power System Stability Studies

*Includes excitation system models on both older equipment as well as modern state-of-the-art excitation system designs. Includes an explanation of each model, definitions of model nomenclature, sample data for most models, etc.*

IEEE 43-2000 (R2006), Testing Insulation Resistance of Rotating Machinery, Recommended Practice for

*Describes the recommended procedure for measuring insulation resistance of armature and field windings in rotating machines rated 1hp, 750 W or greater. It applies to synchronous machines, induction machines, dc machines, and synchronous condensers.*

IEEE 436-1991 (R1998), Guide for Making Corona (Partial Discharge) Measurements on Electronics Transformers

*This guide covers the detection of corona (partial discharge) and the measurement of its magnitude in electronics transformers. Test conditions, test apparatus, and test requirements are included.*

IEEE 442-1981 (R2003), Soil Thermal Resistivity Measurements, Guide for

*Covers the measurement of soil thermal resistivity. A thorough knowledge of the thermal properties of a soil will enable the user to properly install and load underground cables.*

IEEE 446-1995 (R2000), Emergency and Standby Power Systems for Industrial and Commercial Applications

*Presents recommended engineering principles, practices, and guidelines for the selection, design, installation, application, operation, and maintenance of emergency and standby power systems.*

IEEE 449-1998, Ferroresonant Voltage Regulators

*Pertains to ferroresonant voltage regulators that operate at relatively constant frequencies and provide substantially constant output voltages in spite of relatively large changes of input voltage, and to controlled ferroresonant regulators which maintain substantially constant output voltage regardless of variations, within limits, of input voltage, temperature, frequency and output load. Guides to application and test procedures are included. Provision is made for relating the rectifiers and circuits. Definitions pertaining to ferroresonance and ferroresonant regulators that have not been found elsewhere are included with an appropriate discussion.*

IEEE 45-2002, Recommended Practice for Electrical Installations on Shipboard

*Establishes the minimally acceptable guidelines for the design, selection, and installation of systems and equipment aboard marine vessels applying electrical apparatus for power, propulsion, steering, automation, navigation, lighting, and communications.*

IEEE 450-2002, Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations, Practice for

*Provides recommended maintenance, test schedules, and testing procedures that can be used to optimize the life and performance of permanently installed vented lead-acid storage batteries used for standby power applications. It also provides guidance to determine when batteries should be replaced.*

IEEE 475-2000, Radiation-Field-Disturbance Sensors, Measurement Procedure for

*Sets forth a test procedure for measurement of radio frequency (RF) emissions from intrusion-alarm field disturbance sensors in the frequency range 300 MHz to 40 GHz.*

IEEE 48-1996 (R2003), Standard Test Procedures and Requirements for High-Voltage Alternating-Current Cable Terminations

*Covers all indoor and outdoor cable terminations used on alternating-current cables having laminated or extruded insulation rated 2.5 kV through 765 kV, except separable insulated connectors, which are covered by IEEE Std 386.*

IEEE 484-2002, Recommended Practice for Installation Design and Installation of Vented Lead-Acid Batteries for Stationary Applications

*Provides recommended design practices and procedures for storage, location, mounting, ventilation, instrumentation, preassembly, assembly, and charging of vented lead-acid batteries.*

IEEE 485-1997 (R2003), Recommended Practice for Sizing Lead-Acid Batteries for Stationary Applications

*Describes methods for defining the dc load and for sizing a lead-acid battery to supply that load for stationary battery applications in full float operations*

IEEE 487-2000, Communication Facilities Serving Electric Power Stations, Guide for the Protection of Wire-Line

*Presents engineering design practices for special high-voltage protection systems intended to protect wire-line telecommunication facilities serving electric supply locations.*

IEEE 488.1-2003, Digital Interface for Programmable Instrumentation

*Applies to interface systems used to interconnect both programmable and nonprogrammable electronic measuring apparatus with other apparatus and accessories necessary to assemble instrumentation systems.*

IEEE 488.2-1993 (R2004), Codes, Formats, Protocols, and Common Commands

*Specifies a set of codes and formats to be used by devices connected via the IEEE 488.1 bus. Also defines communication protocols necessary to effect application independent device-dependent message exchanges and further defines common command and characteristics useful in instrument system applications.*

IEEE 492-1999 (R2005), Guide for Operation and Maintenance of Hydro-Generators

*General recommendations for the operations, loading, and maintenance of synchronous hydro-generators and generator/motors are covered.*

IEEE 497-2002, Standard Criteria for Accident Monitoring Instrumentation for Nuclear Power Generating Stations

*Applies to accident monitoring instrumentation intended for use by control room operators: a) as required for preplanned operator action related to accident mitigation; or b) for assessing plant conditions, safety system performance and making decisions related to plant response to abnormal events; or c) for achieving and maintaining safe shutdown following an accident.*

IEEE 499-1997, Cement Plant Electric Drives and Related Electrical Equipment, Recommended Practice for

*Applies to all electric drives and includes motors, control, and control wiring associated with machinery or equipment commonly used in the manufacturing areas of cement plants.*

IEEE 4a-2001, Amendment to High Voltage Test Techniques

*Applicable to dielectric tests with alternating voltages and impulse voltages, when testing apparatus with air gaps up to 1 meter in length. Specifies correction factors for air density and humidity, which may be applied when the specific apparatus standard allows.*

IEEE 502-1985 (R1999), Fossil-Fueled Unit-Connected Steam Stations, Guide for Protection, Interlocking, and Control of

*Presents information regarding the essential subsystems that make up a fossil-fueled unit-connected boiler-turbine-generator (BTG) station and describes typical interlocking, control, and protection for operating them in a coordinated order to ensure proper start-up and safe shutdown. The primary purpose of this guide is to provide a basis for (1) Qualitative evaluating of overall design of a unit-connected fossil fuel plant; (2) Writing general operating guides of an educational nature, thereby serving to aid in acquainting personnel with boiler-turbine-generator systems.*

IEEE 505-1977 (R2001), Nomenclature for Generating Station Electric Power Systems

*Applies to electric power systems in stationary generating stations that provide electric power to the power system. Nomenclature is included for the following interrelated systems: a) Generating unit power system, b) Generating unit auxiliaries power system, c) Station auxiliaries power system, d) Generating unit dc auxiliaries power system, e) Station dc auxiliaries power system.*

IEEE 515-2004, Cables, Heating-Testing, Design, Installation, and Maintenance of Electrical Resistance Heat Tracing for Industrial Applications, Recommended Practice for

*Provides requirements for the testing, design, installation, and maintenance of electrical resistance heat tracing in general industries as applied to pipelines, vessels, pre-traced and thermally insulated instrument tubing and piping, and mechanical equipment.*

IEEE 515.1-2005, Standard for the Testing, Design, Installation, and Maintenance of Electrical Resistance Heat Tracing for Commercial Applications

*Specific test requirements for qualifying electrical resistance heat tracing for commercial service. A basis for electrical and thermal design is included. Heating device characteristics are addressed and installation and maintenance requirements are detailed. Recommendations and requirements for unclassified heating device applications are provided.*

IEEE 516-2003, Guide for Maintenance Methods on Energized Power Lines

*Provides general recommendations for performing maintenance work on energized power lines.*

IEEE 517-1974 (R2005), Single-Degree-of-Freedom Rate-Integrating Gyros, Specification Format Guide and Test Procedure for

*Defines the requirements for a single-degree-of-freedom rate-integrating gyro to be used as a sensor in [an attitude control system, a gimbal platform, an angular displacement measuring system, an angular rate measuring system, __]*

IEEE 521-2002, Letter Designations for Radar-Frequency Bands

*Removes confusion which developed from the misapplication to radar of letter-band designations of other microwave frequency users, as it relates the letter terms in common usage to frequency ranges that they represent.*

IEEE 522-2004, Guide for Testing Turn-to-Turn Insulation on Form-Wound Stator Coils for Alternating-Current Rotating Electric Machines

*Makes suggestions for testing the dielectric strength of the insulation separating the various turns from each other within multiturn form-wound coils to determine acceptability of the coils.*

IEEE 524-2003, Installation of Overhead Transmission Line Conductors, Guide to the

*Provides general recommendations for the selection of methods, equipment, and tools that have been found to be practical for the stringing of overhead transmission line conductors and overhead groundwires.*

IEEE 524a-1993 (R1998), Guide to Grounding During the Installation of Overhead Transmission Line Conductors

*Provides general recommendations for the selection of methods, equipment, and tools that have been found to be practical for the stringing of overhead transmission line conductors and overhead ground wires. Its purpose is to present in one document sufficient details of present day methods, materials, and equipment to outline the basic considerations necessary for maintaining safe and adequate control of conductors during stringing operations.*

IEEE 525-1993 (R1999), Design and Installation of Cable Systems in Substations

*Covers the design, installation, and protection of wire and cable systems in substations with the objective of minimizing failures and their consequences. This guide is not intended for use in the design of wire and cable systems in generating stations.*

IEEE 528-2001, Inertial Sensor Terminology

*Presents terms and definitions related to inertial sensors.*

IEEE 529-1980 (R2005), Supplement for Strapdown Applications to IEEE Standard Specification Format Guide and Test Procedure for Single-Degree-of-Freedom Rate-Integrating Gyros

*Defines the requirements for a single-degree-of-freedom rate-integrating gyro to be used as a strapdown sensor for an [inertial navigation system, an attitude reference unit, __] in an aircraft, missile,__] application.*

IEEE 539-2005, Standard Definitions of Terms Relating to Corona and Field Effects of Overhead Power Lines

*Defines the most widely used terms specific to or associated with overhead power-line corona and field effects.*

IEEE 551-2006, Recommended Methods for Calculating AC Short-Circuit Currents in Industrial and Commercial Power Systems

*Provides short circuit current information including calculated short circuit current duties for the application in industrial plants and commercial buildings, at all power system voltages, of power system equipment that senses, carries, or interrupts short circuit currents.*

IEEE 563-1991 (R2002), Guide for Conductor Self-Damping Measurements

*Emphasis on improving existing methods and the development of new techniques for controlling vibration of overhead conductors, emphasis on self-damping characteristics of conductors.*

IEEE 572-2004, Standard for Qualification of Class 1E Connection Assemblies for Nuclear Power Generating Stations

*Provides general requirements, direction, and methods for qualifying Class 1E connection assemblies for service in nuclear power generating stations. These include connectors, terminations, and environmental seals in combination with related cables or wires as assemblies.*

IEEE 576-2000, Recommended Practice for Installation, Termination, and Testing of Insulated Power Cable as Used in Industrial and Commercial Applications

*Provides a guide for installing, splicing, terminating, and field proof testing of cable systems in industrial and commercial applications.*

IEEE 577-2004, Reliability Analysis in the Design and Operation of Safety Systems for Nuclear Power Generating Stations, Requirements for

*Provides uniform, minimum acceptable requirements for the performance of reliability analyses for safety-related systems found in nuclear facilities.*

IEEE 583-1982 (R2006), Modular Instrumentation and Digital Interface System (CAMAC)

*This standard serves as a basis for a range of modular instrumentation capable of interfacing transducers and other devices to digital controllers for data and control. It consists of mechanical standards and signal standards that are sufficient to ensure physical and operational compatibility between units regardless of source.*

IEEE 595-1982 (R2006), Serial Highway Interface System (CAMAC) (Computer Automated Measurement and Control)

*This standard defines a Serial Highway (SH) system using byte-organized messages, and configured as a unidirectional loop to which are connected a system controller and up to sixty-two CAMAC crate assemblies or other controlled devices.*

IEEE 596-1982 (R2006), Parallel Highway Interface System (CAMAC) (Computer Automated Measurement and Control)

*This standard defines the CAMAC Parallel Highway Interface System for interconnecting up to seven CAMAC crates (or other devices) and a system controller.*

IEEE 610.12-2002, Glossary of Software Engineering Terminology

*Defines terms in the field of software*

IEEE 62-1995 (R2005), Guide for Diagnostic Field Testing of Electric Power Apparatus – Part 1: Oil Filled Power Transformers, Regulators, and Reactors

*This guide describes diagnostic tests and measurements which are performed in the field on oil-immersed power transformers and regulators. Whenever possible, shunt reactors are treated in a similar manner to transformers.*

IEEE 620-1997 (R2003), Guide for the Presentation of Thermal Limit Curves for Squirrel Cage Induction Machines

*Defines thermal limit curves for induction machines, establishes a standard procedure for the presentation of these curves, and provides guidance for the interpretation and use of these curves for machine thermal protection.*

IEEE 625-2001, Recommended Practices to Improve Electrical Maintenance and Safety in the Cement Industry

*Applies to all electrical equipment such as substations, power transformers, motor controls, generators, distribution systems, instruments, and storage batteries commonly used in cement plants.*

IEEE 628-2001, Raceway Systems for Class 1E Circuits for Nuclear Power Generating Stations, Criteria for the Design, Installation, and Qualification of

*Contains the requirements for the Design, Installation, and Qualification of Raceway Systems for Class 1E Circuits external to the electric equipment and components for nuclear power generating stations.*

IEEE 634-2004, Standard for Cable Penetration Fire Stop Qualification Test

*Provides two methods for qualifying the performance of cable penetration fire stops when they are installed in rated fire resistive barriers.*

IEEE 635-2003, Guide for Selection and Design of Aluminum Sheaths for Power Cables

*Outlines requirements and establishes design guidelines for the selection of aluminum sheaths for extra-high, high-, medium-, and low-voltage cables; establishes basic installation parameters for aluminum-sheathed cables; provides references to industry standards and codes incorporating design and installation requirements of aluminum-sheathed cables; provides a comprehensive bibliography of literature related to the subject*

IEEE 637-1985 (R2002), Reclamation of Insulating Oil and Criteria for Its Use, Guide for

*Covers mineral insulating oil commonly defined as transformer oil; definition and description of reclaiming procedures; the test methods used to evaluate the progress and end point of the reclamation process, and what criteria recommended for the use of reclaimed oils are considered suitable.*

IEEE 638-1992 (R2006), Standard for Qualification of Class 1E Transformers for Nuclear Power Generating Stations

*Procedures for demonstrating the adequacy of new Class 1E transformers, located in a mild environment of a nuclear power generating station, to perform their required safety functions under postulated service conditions are presented. Single and three phase transformers rated 601 V to 15 000 V for the highest voltage winding and up to 2500 kVA (self-cooled rating) are covered.*

IEEE 643-2004, Guide for Power-Line Carrier Applications

*Provides application information to users of carrier equipment as applied on power transmission lines.*

IEEE 644-1994 (R2002), Procedures for Measurement of Power Frequency Electric and Magnetic Fields from AC Power Lines

*Establishes uniform procedures for the measurement of power frequency electric and magnetic fields form ac overhead power lines and for the calibration of the meters used in these measurements.*

IEEE 647-2006, Standard Specification Format Guide and Test Procedure for Single-Axis Laser Gyros

*Defines the specification and test requirements for a single-axis laser gyro for use as a sensor in attitude control systems, angular displacement measuring systems, or angular rate measuring systems, including the electronics necessary to operate the gyro and to condition the output signals.*

IEEE 649-2006, Qualifying Class 1E Motor Control Centers for Nuclear Power Generating Stations

*Describes the basic principles, requirements, and methods for qualifying Class 1E motor control centers for both harsh and mild environment applications in nuclear power generating stations.*

IEEE 650-2006, Standard for Qualification of Class 1E Static Battery Chargers and Inverters for Nuclear Power Generating Stations

*Methods for qualifying static battery chargers and inverters for Class 1E installations outside containment in nuclear power generating stations are described.*

IEEE 656-1993 (R2006), Standard for the Measurement of Audible Noise from Overhead Transmission Lines

*Uniform procedures are established for manual and automatic measurement of audible noise from overhead transmission lines. Their purpose is to allow valid evaluation and comparison of the audible noise performance of various overhead lines.*

IEEE 661-1979 (R1998), Determining Objective Loudness Ratings of Telephone Connections, Method for

*Determines the loudness rating of partial and complete telephone connections. For complete telephone connections, comprising overall and sidetone transmission paths, the procedures involve measurement of acoustic input and output pressures. For partial telephone connections comprising transmitting, receiving, or connection paths, the procedures involve measurement of acoustics pressures and electric voltages.*

IEEE 664-1994 (R2000), Laboratory Measurement of the Power Dissipation Characteristics of Aeolian Vibration Dampers for Single Conductors

*Describes the current methodologies, including apparatus, procedures, and measurement accuracies, for the testing of vibration dampers.*

IEEE 665-1995 (R2001), Guide for Generating Station Grounding

*Provides a guide for the design of generating station grounding systems and for grounding practices applied to generating station indoor and outdoor structures and equipments. Identifies grounding practices that have generally been accepted by the electric utility industry as contributing to effective grounding systems for personnel safety and equipment protection in generating stations.*

IEEE 666-2006, Electric Power Service Systems for Generating Stations, Design Guide for

*Applies to station service systems that supply electric power to auxiliary loads for electric power generating stations. Provides the practices, criteria, and range of system parameters that relate to the service system requirements and assist in the application of existing engineering documents.*

IEEE 67-2005, Guide for the Operation and Maintenance of Turbine Generators

*Covers general recommendations for the operation, loading, and maintenance of turbine-driven synchronous generators that have cylindrical rotors.*

IEEE 671-1985 (R2003), Format Guide and Test Procedure for Nongyroscopic Inertial Angular Sensors: Jerk, Acceleration, Velocity, and Displacement

*Defines the requirements and test procedures for a [single, multi-] axis nongyroscopic angular [jerk, acceleration, velocity, displacement] sensor. The output is [an analog signal, a digital electrical pulse train] proportional to angular [jerk, acceleration, velocity, displacement].*

IEEE 675-1982 (R2006), Multiple Controllers in a CAMAC Crate

*Defines a method for incorporating more than one source of control into a CAMAC crate.*

IEEE 683-1976 (R2006), Block Transfers in CAMAC Systems, Recommended Practice for

*Presents recommended algorithms to encourage uniformity in design of CAMAC modules and controllers with resulting increased compatibility.*

IEEE 686-1997, Radar Definitions

*Promotes clarity and consistency in the use of radar terminology.*

IEEE 690-2004, Design and Installation of Cable Systems for Class 1E Circuits in Nuclear Power Generating Stations

*Provides direction for the design and installation of safety related electrical cable systems, including associated circuits, in nuclear power generating stations.*

IEEE 692-1997 (R2005), Standard Criteria for Security Systems for Nuclear Power Generating Stations

*Criteria are provided for the design of an integrated security system for nuclear power generating stations. Requirements are included for the overall system, interfaces, subsystems, and individual electrical and electronic equipment. Addresses equipment for security-related detection, surveillance, access control, communication, and data acquisition.*

IEEE 693-2005, Recommended Practice for Seismic Design of Substations

*Seismic design recommendations for substations, including qualification of each equipment type, are discussed. Design recommendations consist of seismic criteria, qualification methods and levels, structural capacities, performance requirements for equipment operation, installation methods, and documentation.*

IEEE 7-4.3.2-2003, Criteria for Digital Computers in Safety Systems of Nuclear Power Generating Stations

*Serves to amplify criteria in IEEE Std 603-1998 to address the use of computers as part of safety systems in nuclear power generating stations.*

IEEE 716-1995 (R2006), Standard Test Language for All Systems – Common/Abbreviated Test Language for All Systems (C/ATLAS)

*Defines a high order language for testing; describes tests in terms that are independent of any specific test system. It has been constrained to ensure that it can be implemented on automatic test equipment. Defines an operational standard that was originally based upon the language defined be the reference document for the ATLAS language, IEEE Std 416-1984.*

IEEE 726-1982 (R2006), Real-Time BASIC for CAMAC

*To provide a standard for reference to achieve maximum compatibility between different implementations of ANSI BASIC for use with CAMAC.*

IEEE 730-2002, Software Quality Assurance Plans

*Provides uniform, minimum acceptable requirements for preparation and content of Software Quality Assurance Plans.*

IEEE 739-1995 (R2000), Energy Conservation and Cost-Effective Planning in Industrial Facilities

*To establish an engineering guide for use in electrical design for energy conservation.*

IEEE 741-2002, Standard Criteria for the Protection of Class 1E Power Systems and Equipment in Nuclear Power Generating Stations

*Prescribes criteria that establish protection requirements for Class 1E power systems and equipment. Desribes the purpose of and the means for obtaining protection from electrical and mechanical damage, or failures that can occur within a time period t*

IEEE 758-1979 (R2006), CAMAC – Subroutines

*Describes a set of standard subroutines to provide access to CAMAC facilities in a variety of computer-programming languages. It is specifically intended that the subroutines be suitable for use with FORTRAN, although they are not restricted to that language.*

IEEE 759-1984 (R1999), Semiconductor X-Ray Energy Spectrometers, Test Procedures for

*Presents standard test procedures for semiconductor x-ray energy spectrometers. Such systems consist of a semiconductor radiation detector assembly and signal processing electronics interfaced to a pulse height analyzer/computer.*

IEEE 762-2006, Standard Definitions for Use in Reporting Electric Generating Unit Reliability, Availability, and Productivity

*Standardizes terminology and indexes for reporting electric generating unit reliability, availability, and productivity performance measures.*

IEEE 765-2006, Standard for Preferred Power Supply (PPS) for Nuclear Power Generating Stations (NPGS)

*Describes the design criteria of the Preferred Power Supply (PPS) and its interfaces with the Class 1E power system, switchyard, transmission system, and alternate ac (AAC) source. Provides PPS requirements for nuclear power generating stations (NPGS) and guidance in the areas of ACC power source interfaces with the PPS, physical independence of the PPS power and control circuits, and expanded PPS criteria for multi-unit stations.*

IEEE 771-1998 (R2004), ATLAS, Guide to the Use of

*Provides principles of good practice in the use of ATLAS for writing test requirements.*

IEEE 776-1993 (R2003), Guide for Inductive Coordination of Electric Supply and Communication Lines

*Addresses the inductive environment that exists in the vicinity of electric power and wire-line telecommunications systems and the interfering effect that may be produced thereby; guidance is offered for the control or modification of the environment and the susceptibility of the affected systems in order to maintain an acceptable level of interference.*

IEEE 80-2000, AC Substation Grounding, Safety in

*Concerned with the outdoor ac substations, either conventional or gas-insulated. These include distribution, transmission, and generating plant substations.*

IEEE 802.11-1999 (R2003), Information Technology - Telecommunications and information exchange between systems - Local and Metropolitan networks - Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications

*Develops a medium access control (MAC) and physical layer (PHY) specification for wireless connectivity for fixed, portable, and moving stations within a local area.*

IEEE 802.11a-1999, Supplement to Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and

*Presents methods to develop a Higher Speed PHY for use in fixed, moving or portable Wireless Local Area Networks. The PHY will be used in conjunction with the 802.11 Medium Access Control (MAC). The 802.11 MAC will be reviewed to assure its capability to operate at the speeds targeted.*

IEEE 802.11b-1999, Supplement to Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and

*The project will evaluate the possibility of taking advantage of the provisions for rate expansion that are in place on the current standard PHYs. The 802.11 MAC defines a mechanism for operation of stations supporting different data rates in the same area.*

IEEE 802.11b-1999/Corrigenda 1-2002, Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and

*Corrects deficiencies in the MIB definition of IEEE 802.11b-1999.*

IEEE 802.11d-2001, Telecommunications and Information Exchange Between Systems - LAN/MAN Specific Requirements - Part 11: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Specification for Operation in Additional Regulatory

*Defines the physical layer requirements (channelization, hopping patterns, new values for current MIB attributes, and other requirements) to extend the operation of 802.11 WLANs to new regulatory domains (countries).*

IEEE 802.11e-2005, Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and

*Enhances the 802.11 Medium Access Control (MAC) to improve and manage Quality of Service, and provide classes of service. Considers efficiency enhancements in the areas of the Distributed Coordination Function (DCF) and Point Coordination Function (PCF).*

IEEE 802.11e-2005, Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and

*Enhances the 802.11 Medium Access Control (MAC) to improve and manage Quality of Service, and provide classes of service. Considers efficiency enhancements in the areas of the Distributed Coordination Function (DCF) and Point Coordination Function (PCF).*

IEEE 802.11g-2003, Supplement to Standard [for] Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and

*Develops a higher speed(s) PHY extension to the 802.11b standard*

IEEE 802.11h-2003, Standard [for] Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and

*Defines mechanisms for dynamic frequency selection (DFS) and transmit power control (TPC) that may be used to satisfy regulatory requirements for operation in the 5 GHz band in Europe.*

IEEE 802.11i-2004, Amendment to Standard [for] Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and

*Enhances the 802.11 Medium Access Control (MAC) to improve security and authentication mechanisms.*

IEEE 802.11j-2004, Amendment to Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and

*Enhances the 802.11 standards and amendments, to add channel selection for 4.9 GHz and 5 GHz in Japan to additionally conform to the Japanese rules for radio operation.*

IEEE 802.15.1-2005, Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 15.1: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications

*Defines physical layer (PHY) and medium access control (MAC) specifications for wireless connectivity with fixed, portable, and moving devices within or entering a personal operating space (POS). A POS is the space about a person or object that typically extends up to 10 m in all directions and envelops the person whether stationary or in motion.*

IEEE 802.15.2-2003, Recommended Practice for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 15.2: Coexistence of Wireless Personal Area Networks with

*Develops a recommended practice for an IEEE 802.15 wireless personal area network that coexists with other selected wireless devices operating in unlicensed frequency bands.*

IEEE 802.15.3-2003, Standard for Telecommunications and Information Exchange Between Systems - LAN/MAN Specific Requirements - Part 15.3: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for High Rate Wireless Personal Area

*Defines the PHY and MAC specifications for high data rate wireless connectivity with fixed, portable, and moving devicces within or entering a personal operating space.*

IEEE 802.15.3b-2005, Amendment to Standard for Telecommunications and Information Exchange Between Systems – Local and Metropolitan Area Networks Specific Requirements – Part 15.3: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications

*Contains changes to IEEE Std. 802.15.3 required to improve implementation and interoperability. It will improve the ability of 802.15.3 to support emerging wireless multimedia applications; e.g., multimedia strreaming, time synchronization, low latency data transfer, and peripheral connectivity.*

IEEE 802.15.4-2006, Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 15.4: Wireless Medium Access Control (MAC) and

*Defines the protocol and compatible interconnection for data communication devices using low data rate, low power and low complexity, short-range radio frequency (RF) transmissions in a wireless personal area network (WPAN).*

IEEE 802.16-2004, Local and Metropolitan Area Networks - Part 16: Air Interface for Fixed Broadband Wireless Access Systems

*This corrigendum contains substantive corrections to IEEE Standard 802.16-2004. It corrects errors, inconsistencies, and ambiguities in that standard. It does not contain new material.*

IEEE 802.16-2004/Cor1-2005, Corrigendum to IEEE Standard for Local and Metropolitan Area Networks - Part 16: Air Interface for Fixed Broadband Wireless Access Systems

*Contains substantive corrections to IEEE Std. 802.16-2004. Corrects errors, inconsistencies, and ambiguities. No new material.*

IEEE 802.16.2-2004, Local and Metropolitan Area Networks - Recommended Practice for Coexistence of Fixed Broadband Wireless Access Systems

*Specifies extensions and modifications addressing two distinct topics. The first is coexistence between multipoint systems and point-to-point systems in the frequency range 10-66 GHz. The second is coexistence among fixed broadband wireless access systems operating in licensed bands within the frequency range 2-11 GHz.*

IEEE 802.16/Conformance01-2003, Standard for Conformance to IEEE Standard 802.16 - Part 1: Protocol Implementation Conformance Statement (PICS) Proforma for 10-66 GHz WirelessMAN-SC Air Interface

*This standard represents the Protocol Implementation Conformance Statement (PICS) Proforma, per ISO/IEC Standard 9646-7 (1995) and ITU-T X.296, for conformance specification of base stations and subscriber stations based upon the WirelessMAN-SC (10-66 GHz) air interface specified in IEEE Std 802.16.*

IEEE 802.16/Conformance02-2003, Standard for Conformance to IEEE Standard 802.16 - Part 2: Test Suite Structure and Test Purposes (TSS&TP) for 10-66 GHz WirelessMAN-SC Air Interface

*Represents the Test Suite Structure and Test Purposes (TSS & TP), per ISO/IEC Standards 9646-1, and 9646-2 (!995) and ITU-T Standards X.290 and X.291, for conformance specification of base station and subscriber stations based upon the WirelessMAN-SC (10-66 GHz) air interface specified in IEEE Std. 802.16*

IEEE 802.16/Conformance03-2004, Standard for Conformance to IEEE Standard 802.16 - Part 3: Radio Conformance Tests (RCT) for 10-66 GHz WirelessMAN-SC™ Air Interface

*Represents the Radio Conformance Test (RCT) specification for base stations and subscriber stations based upon the WirelessMAN-SC (10-66 GHz) air interface specified in IEEE Std. 802.16.*

IEEE 802.16/Conformance04-2006, Standard for Conformance to IEEE 802.16 - Part 4: Protocol Implementation Conformance Statement (PICS) Proforma for Frequencies below 11 GHz

*To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a telecommunications specification. Such a statement is called a Protocol Implementation Conformance Statement (PICS). Represents the PICS Proforma, per ISO/IEC Standard 9646-7 (1995) and ITU-T X.296, for conformance specification of base stations and subscriber stations based upon the air interface specified in IEEE 802.16-2004.*

IEEE 802.16a-2003, Local and Metropolitan Area Networks - Part 16: Air Interface for Fixed Broadband Wireless Access Systems - Medium Access Control Modifications and Additional Physical Layer Specifications for 2-11 GHz

*Amends the 802.16 standard by enhancing the medium access control layer and providing additional physical layer specifications in support of broadband wireless access at frequencies from 2-11 GHz.*

IEEE 802.16e-2005, Standard for Local and Metropolitan Area Networks - Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems - Amendment for Physical and Medium Access Control Layers for Combined Fixed and Mobile Operation in Licensed Bands

*Updates and expands IEEE 802.16-2004 to allow for mobile subscriber stations.*

IEEE 802.16f-2005, Amendment to IEEE Standard for Local and Metropolitan Area Networks - Part 16: Air Interface for Fixed Broadband Wireless Access Systems - Management Information Base

*Provides enhancements to IEEE Std. 802.16-2004 to define a management information base (MIB) for the MAC and PHY and associated management procedures.*

IEEE 802.17-2004, Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 17: Resilient Packet Ring (RPR) Access Method & Physical Layer Specifications

*Defines a resilient packet ring access protocol for use in local, metropolitan, and wide area networks, along with appropriate physical layer specifications for transfer of data packets at rates scalable to multiple gigabits per second.*

IEEE 802.17a-2004, Standard for Local and Metropolitan Area Networks: Media Access Control (MAC) Bridges - Amendment 3: Bridging of 802.17

*Amends the 802.1D transparent bridge standard in recognition of the 802.17 Media Access Control (MAC).*

IEEE 802.1AB-2005, Standard for Local and Metropolitan Area Networks: Station and Media Access Control Connectivity Discovery.

*To define a protocol and management elements, suitable for advertising information to stations attached to the same LAN/MAN, for the purpose of populating physical topology and device discovery management information databases. The protocol will facilitate the identification of stations connected by IEEE 802 LANs/MANs, their points of interconnection and their access points for management protocols.*

IEEE 802.1ad-2005, Standard for Local and Metropolitan Area Networks - Virtual Bridged Local Area Networks - Amendment 4: Provider Bridges

*Develops an architecture and bridge protocols, compatible and interoperable with existing Bridged Local Area Network protocols and equipment, to provide separate instances of the MAC service to multiple independent users of a Bridged Local Area Network in a manner that does not require cooperation among the users, and requires a minimum of cooperation between the users and the provider of the MAC service, and to define basic management of users' MAC services.*

IEEE 802.1AE-2006, Standard for Local and Metropolitan Area Networks: Media Access Control (MAC) Security

*Specifies how all or part of a network can be secured transparently to peer protocol entities that use the MAC Service provided by IEEE 802 LANs to communicate. MAC security (MACsec) provides connectionless user data confidentiality, frame data integrity, and data origin authenticity.*

IEEE 802.1c-1998, Information Technology - Telecommunications and Information Exchange Between Systems - Local Area Networks - Media Access Control (MAC) Bridges - Supplement for Support by IEEE 802.11

*Provides the required 802.11 specific information to ISO 10038 (802.1D) standard. It adds a subclause under 2.5, Support of the Internal Sublayer Service by specific MAC Procedures, to cover bridge operation with IEEE 802.11 MACs.*

IEEE 802.1d-2004, Information Technology – Telecommunications and Information Exchange between Systems – Local Area Networks – Media Access Control (MAC) Bridges (includes ANSI/IEEE 802.1i and 802.5M) (includes 802.5m-1993 (Appendix C))

*For the prupose of compatible interconnection of data processing equipment using the IEEE 802 MAC Service supported by interconnected IEEE 802 LANs using different or identical Media Access Control methods, it specifies a general method for the operation of MAC Bridges.*

IEEE 802.1f-1994 (R2004), Standard for Common Definitions and Procedures for IEEE 802 Management Information

*Identifies management information and procedures applicable across the entire family of IEEE 802 LAN/MAN standards within the architectural framework for LAN/MAN Management specified in IEEE Std. 802. It specifies common management information, such as attributes to represent MAC addresses and managed objects to represent configurable gauges.*

IEEE 802.1g-1996, Remote MAC Bridging

*Extends ISO/IEC 10038, which specifies the operation of Local MAC Bridges.*

IEEE 802.1h-1995 (R2001), Recommended Practice for Media Access Control (MAC) Bridging of Ethernet Version 2.0 in 802 Local Area Networks

*For the purpose of facilitating the interoperability of ISO/IEC 10038 MAC Bridges and end stations in bridged LANs comprising CSMA/CD networks containing a mixture of ISO/IEC 8802-3 and Ethernet end stations and other types of LANs, this document specifies extensions to the behavior of MAC Bridges.*

IEEE 802.1Q-2005, Standard for Local and Metropolitan Area Networks - Virtual Bridged Local Area Networks

*Specifies how the MAC Service is supported by Virtual Bridged Local Area Networks, the principles of operation of those networks, and the operation of VLAN-aware Bridges including management, protocols, and algorithms.*

IEEE 802.1w-2001, Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Common Specifications - Part 3: Media Access Control (MAC) Bridges: Amendment 2 - Rapid Reconfiguration

*Presents a specification of enhancements to the auto-configuring mechanisms and management controls in 802.1D that constrain user data frames to all or part of a loop free topology. Where redundant alternate bridges and/or connecting LANs are available, these enhancements will provide faster reconfiguration and restoration of the MAC service if the LAN component failure occurs.*

IEEE 802.1X-2004, Port Based Network Access Control

*Specifies a general method for the provision of port-based network access control for the purpose of providing compatible authentication and authorization mechansims for devices interconnected by IEEE 802 LANs.*

IEEE 802.2-1990 (R2003), Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 2: Logical Link Control

*Describes the functions, features, protocol, and services of the Logical Link Control (LLC) sublayer in the ISO/IEC 8802 LAN Protocol*

IEEE 802.2h-1998, Information Technology - Telecommunications and Information Exchange between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 2: Logical Link Control - Supplement 7: Optional Toleration of Duplicate Information

IEEE 802.3-2005, Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements, Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method

*Is a comprehensive international standard for Local Area Networks (LANs) employing CSMA/CD as the access method. Intended to encompass several media types and techniques.*

IEEE 802.3-2006/Cor1-2006, Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements Part 3: Carrier Sense Multiple Access with Collision Detection

*Clarifies and corrects isolation text including harmonization for both powered and unpowered Media Dependent Interfaces.*

IEEE 802.3an-2006, Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements Part 3: Carrier Sense Multiple Access with Collision Detection

*Specifies a new Physical Coding Sublayer interface and a new Physical Medium Attachment sublayer interface for 10 Gb/s Ethernet. 10GBASE-T specifies a LAN interconnect for up to 100 m of balanced twisted-pair structured cabling systems.*

IEEE 802.3aq-2006, Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method

*Specifies a new PDM, 10GBASE-LRM, for serial, 10 Gb/s operation over up to 220 m of 62.5 micro m multimode fiber, installed, FDDI grade multimode fiber.*

IEEE 802.3as-2006, Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method

*Extends the IEEE 802.3 basic frame format with the addition of an envelope frame to accommodate additional prefixes and suffixes required by higher layer encapsulation protocols such as those defined by IEEE 802.1 (e.g., Provider Bridges, MAC Security), ITU-T, or IETF (e.g., MPLS).*

IEEE 802.5-1998 (R2003), Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 5: Token Ring Access Method and Physical Layer

*In this part of the ISO/IEC 8802 LAN Protocol, compatible interconnection of data processing equipment via a local area network (LAN) using token ring access method is described*

IEEE 802.5c-1991 (R1997), Standards for Local and Metropolitan Area Networks: Supplement to Token Ring Access Method and Physical Layer Specifications: Recommended Practice for Dual Ring Operation with Wrapback Reconfiguration

*Defines extensions to American National Standard for Information Processing Systems – Local and Metropolitan Area Networks – Part 5: Token Ring Access Method and Physical Layer Specificationsm ANSI/IEEE 802.5-1995, which implements a Dual Ring LAN topology having the following features: (1) Full interoperability between stations conforming to ANSI/IEEE 802.5, including coexistence on the same ring and (2) Recovery from all single media failures with full capability restored.*

IEEE 802a-2003, Local and Metropolitan Area Networks - Overview and Architecture - Amendment 1: Ethertypes for Prototype and Vendor-Specific Protocol Development

*Provides a small number of Ethernet type values for prototype and experimental use. Provides a mechanism for vendor assignment of protocol identifiers for use with rproprietary protocols.*

IEEE 802b-2004, Local and Metropolitan Area Networks - Overview and Architecture - Amendment 2: Registration of Object Identifiers

*Defines an Object Identifier hierarchy used within IEEE 802 for uniform allocation of Object Identifiers used in 802 standards.*

IEEE 810-1994 (R2001), Standard for Hydraulic Turbine and Generator Integrally Forged Shaft Couplings and Shaft Tolerances

*Applies to the dimensions of integrally forged shaft couplings and to the shaft runout tolerances. Shafts and couplings included in this standard are used for both horizontal and vertical connections between generators and turbines in hydroelectric installations.*

IEEE 813-1988 (R2005), Specification Format Guide and Test Procedure for Two-Degree-of-Freedom Dynamically Tuned Gyros

*Defines the requirements for a two-degree-of-freedom dynamically tuned gyro to be used as a sensor in a [strapdown, gimballed] [inertial navigation system, attitude reference unit, __] for use in [an aircraft, a missile, a spacecraft, __] application.*

IEEE 82-2002, Standard Test Procedure for Impulse Voltage Tests on Insulated Conductors

*Applies to both switching impulse and lightning impulse tests on cables or cable systems incorporating laminated or extruded insulations. The term laminated cable, as used in this procedure, includes: high-pressure pipe cable, low-pressure gas-filled cable, self-contained liquid-filled cable, solid-paper cable, and other taped cable designs. A cable system is a cable with one or more accessories attached.*

IEEE 820-2005, Telephone Loop Performance Characteristics

*Provides common denominators for subscriber line performance, independent of facility types, construction processes or equipment, and circuit provisioning methods.*

IEEE 824-2004, Standard for Series Capacitors in Power Systems

*Applies to outdoor series capacitor banks and to the major components of a bank that are required to form a complete system for the insertion of capacitors in series with a transmission line.*

IEEE 828-2005, Standard for Software Configuration Management Plans

*Establishes the minimum required contents of a Software Configuration Management (SCM) Plan. Applies to the entire life cycle of critical software; e.g., where failure would impact safety or cause large financial or social losses.*

IEEE 833-2005, Recommended Practices for the Protection of Electric Equipment in Nuclear Power Generating Stations from Water Hazards

*Provides guidance regarding protection of electrical equipment from sources of water directed onto or around electrical equipment.*

IEEE 835-1994 (R2006), Standard Power Cable Ampacity Tables

*Over 3000 ampacity tables for extruded dielectric power cables rated through 138 kV and laminar dielectric power cables rated through 500 kV are provided.*

IEEE 836-2001, Precision Centrifuge Testing of Linear Accelerometers, Recommended Practice for

*Describes the conduct and analysis of precision tests that are to be performed on linear accelerometers using centrifuge techniques*

IEEE 837-2002, Qualifying Permanent Connections Used in Substation Grounding

*Provides direction and methods for qualifying permanent connections used for substation grounding. Particulary addresses the connection used within the grid system, the connection used to join ground leads to the grid system, and the connection used to join the ground leads to equipment and structures.*

IEEE 841-2001, Chemical Industry – Severe Duty Totally Enclosed Fan-Cooled (TEFC) Squirrel Cage Induction Motors – Up to and Including 500 hp

*Covers mechanical and electrical design, electrical insulation systems, corrosion protection, and electrical and mechanical testing for severe-duty squirrel-cage polyphase induction motors for chemical industry applictions. Applies to high-efficiency, totally enclosed fan-cooled (TEFC), horizontal and vertical, single-speed, squirrel-cage polyphase induction motors, up to and including 370 kW (500 hp), in NEMA frame sizes 143T and larger, for petroleum, chemical, and other severe duty applications (commonly referred to as severe duty motors).*

IEEE 844-2000 (R2006), Electrical Impedance, Induction, and Skin Effect Heating of Pipelines and Vessels, Recommended Practice for

*Provides recommended practices for the design, installation, testing, operation, and maintenance of the following types of electrical heating systems on pipes and vessels for use in general industry: impedance heating systems, induction heating systems, induction susceptor heating furnaces within a vessel, and skin-effect heating systems.*

IEEE 845-1999 (R2005), Guide to Evaluation of Man – Machine Performance in Nuclear Power Generating Stations, Control Rooms, and Other Peripheries

*Provides guidance for evaluating human-system performance related to systems, equipment, and facilities in nuclear power generating stations.*

IEEE 848-1996 (R2003), Standard Procedure for the Determination of the Ampacity Derating of Fire Protected Cables

*Provides a test procedure for use in establishing the ampacity or ampacity derating factor for cables installed in fire-protected conduits, trays, or free-air drops, cable-penetration fire stops, or electrical separation wrap systems.*

IEEE 857-1996 (R2004), Recommended Practice for Test Procedures for High Voltage Direct Current Thyristor Valves

*Contains information and recommendations for the type testing of thyristor valves for high-voltage direct-current (HVDC) power transmission systems.*

IEEE 859-2002, Terms for Reporting and Analyzing Outage Occurrences and Outage States of Electrical Transmission Facilities

*Defines terminology and indices for reporting and analyzing outage occurrences of transmission facilities. Outage definitions and indices are given for two general types of facilities - units and components. Units are functional facilities that transfer power between designated points, while components are specific pieces of equipment.*

IEEE 930-2005, Electrical Insulation Voltage Endurance Data, Guide for the Statistical Analysis of

*Defines statistical methods to analyze times to breakdown and breakdown voltage data obtained from electrical testing of solid insulating materials, for purposes including characterization of the system, comparison with another insulator system, and prediction of the probability of breakdown at given times or voltages.*

IEEE 933-1999 (R2004), Guide for the Definition of Reliability Program Plans for Nuclear Power Generating Stations

*Provides guidance for the definition of a reliability program at nuclear power generating stations. Emphasizes reliability programs during the operating phase of such stations; however, the general approach applies to all phases of the nuclear power generating station life cycle (e.g., design, construction, start-up, operating, and decommissioning).*

IEEE 935-1995 (R2006), Guide on Terminology for Tools and Equipment to Be Used in Live Line Working

*.^.pplies to terminology for tools and equipment used in live line working.*

IEEE 937-2000, Installation and Maintenance of Lead-Acid Batteries for Photovoltaic (PV) Systems, Practice for

*Provides design considerations and procedures for storage, location, mounting, ventilation, assembly, and maintaining of lead-acid storage batteries for photovoltaic power systems.*

IEEE 945-1984 (R2002), Preferred Metric Units for Use in Electrical and Electronics Science and Technology

*Aids in the selection of metric units so as to promote uniformity in the use of metric units and to limit the number of different metric units that will be used in electrical and electronics science and technology.*

IEEE 95-2002, Insulation Testing of Large AC Rotating Machinery with High Direct Voltage, Recommended Practice for

*Provides uniform methods for testing insulation with high direct voltage. It applies to stator (armature) windings of ac electric machines rated 2300 V or higher. It covers acceptance testing of new equipment in the factory or in the field after installation, and routine maintenance testing of machines that have been in service.*

IEEE 951-1996, Guide to the Assembly and Erection of Metal Transmission Structures

*Presents various approaches of good practice that will improve the ability to assemble and erect self-supporting and guyed steel or aluminum lattice and tubular steel structures.*

IEEE 952-1997 (R2003), Standard Specification Format Guide and Test Procedure for Single-Axis Interferometric Fiber Optic Gyros

*Defines requirements for a single-axis interferometric fiber optic gyro (IFOG), including any necessary electronics, to be used in [an attitude control system, an angular displacement measuring system, an angular rate measuring system, etc.].*

IEEE 957-2005, Guide for Cleaning Insulators

*Documents the procedures used for cleaning contaminated electrical insulators (excluding nuclear, toxic and hazardous chemical contaminants) using varied equipment and techniques.*

IEEE 958-2003, Guide for Application of AC Adjustable-Speed Drives on 2,400 to 13,800 Volt Auxiliary Systems in Electric Power Generating Stations

*Intends to cover the application of drive systems for use in electric power generation stations designed for connection to medium voltage electric service rated between 2400 V and 13800 V. Includes ASD terminology, theory of operation, and a discussion of the factors that can influence equipment selection.*

IEEE 960-1993 (R2006), FASTBUS Modular High-Speed Data Acquisition and Control System and FASTBUS Standard Routines (includes ANSI/IEEE 1177-1994)

*Defines a modular data-bus system for data acquisition and control. Mechanical, signal, electrical, and protocol specifications are given that are sufficient to assure compatibility between units from different sources of design and production. The standard applies to systems consisting of modular electronic instrument units that process of transfer data or signals, normally in association with computers or other automatic data processors. To provide standard routines that have the same meaning to all users so as to minimize duplication of software effort, and maximize interchangeability of FASTBUS systems, subsystems and software.*

IEEE 977-1991 (R1997), Installataion of Foundations for Transmission Line Structures, Guide for

*Presents various approaches to good practice that could improve the installation of transmission line structure foundations.*

IEEE 979-1994 (R2004), Fire Protection, Guide for Substation

*Identifies substation fire protection practices that generally have been accepted by industry. Gives design guidance in the area of fire protection to substation engineers.*

IEEE 98-2002, Thermal Evaluation of Solid Electrical Insulating Materials, Preparation of Test Procedures for the

*Gives principles for the development of test procedures to evaluate the thermal endurance of solid electrical insulating materials in air.*

IEEE 980-1994 (R2001), Guide for Containment and Control of Oil Spills in Substations

*Applies to insulating oil containing less than ppm of PCB, which is considered to be non-PCB oil only. Discusses the significance of oil-spillage regulations and their applicability to electric supply substations; identifies the sources of oil spills; discusses typical designs and methods for dealing with oil containment and control of oil spills; and provides guidelines for preparation of a typical Spill Prevention Control and Countermeasure (SPCC) plan.*

IEEE 982.1-2005, Standard Dictionary of Measures of the Software Aspects of Dependability

*Specifies and classifies measures of the software aspects of dependability. Includes the following aspects of dependability - reliability, availability, and maintainability of software. Provides measures that are applicable for continual self-assessment and improvement of the software aspects of dependability.*

IEEE 987-2001, Guide for Application of Composite Insulators

*Covers the application of composite insulators to overhead transmission and distribution lines. It is based on utility field experiences, results of research laboratory tests, and manufacturers' recommendations.*

IEEE 99-1980 (R2000), Thermal Evaluation of Insulation Systems for Electric Equipment, Preparation of Test Procedures for the

*Provides a general form for the preparation of test procedures and to suggest the points to be considered by technical committees in the preparation of specific instructions for the thermal evaluation of insulation systems for equipment.*

IEEE 998-1996 (R2002), Guide for Direct Lightning Stroke Shielding of Substations

*Identifies and discusses design procedures to provide direct stroke shielding of outdoor distribution, transmission, and generating plant substations.*

IEEE C135.1-1999, Standard for Zinc-Coated Steel Bolts and Nuts for Overhead Line Construction

*Covers requirements for the carriage bolts, machine bolts, double-arming bolts, double end bolts and nuts used in overhead line construction.*

IEEE C135.2-1999, Standard for Threaded Zinc-Coated Ferrous Strand-Eye Anchor Rods and Nuts for Overhead Line Construction

*Covers the dimensional and performance requirements for threaded zinc-coated ferrous strand-eye anchor rods and nuts commonly used for overhead line construction.*

IEEE C135.63-1998, Shoulder Live Line Extension Links for Overhead Line Construction

*Covers the dimensional and strength requirements for shoulder live line extension links used for overhead line construction.*

IEEE C2 NESC-2006, National Electrical Safety Code

*These rules cover supply and communication lines, equipment, and associated work practices employed by a public or private electric supply, communications, railway, or similar utility in the exercise of its function as a utility. They cover similar systems under the control of qualified persons, such as those associated with an industrial complex or utility interactive system.*

IEEE C37.010-1999 (R2005), Application Guide for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis

*Covers the application of indoor and outdoor high-voltage circuit breakers rated above 1000 V for use in commercial, industrial, and utility installations.*

IEEE C37.011-2005, Application Guide for Transient Recovery Voltage for AC High-Voltage Circuit Breakers

*Covers procedures and calculations necessary to apply the standard transient recovery voltage (TRV) ratings for ac high-voltage circuit breakers rated above 1000 V and on a symmetrical current basis.*

IEEE C37.012-2005, Application Guide for Capacitance Current Switching for AC High-Voltage Circuit Breakers

*Guidance for the application of ac high-voltage circuit breakers for capacitance current switching is provided. Addresses the general theory of capacitance current switching, the notion of restrike, reignition, NSDD, and voltage factors.*

IEEE C37.015-1993 (R2006), Application Guide for Shunt Reactor Switching

*Guidance for the application of ac high voltage circuit breakers for shunt reactor switching is provided. Overvoltage generation for the three cases of directly grounded, ungrounded, and neutral reactor grounded shunt reactors is addressed in terms of derivation and limitation methods.*

IEEE C37.04-1999, Rating Structure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis

*Describes all indoor and outdoor types of AC high-voltage circuit breakers rated above 1000V and rated on a symmetrical current basis.*

IEEE C37.081a-1998, Guide for Synthetic Fault Testing of AC High Voltage Circuit Breakers Rated on a Symmetrical Current Basis

*Provides information on how to determine the Transient Recovery Voltage wave shapes for asymmetric terminal faults. The basis of rating is given and the factors to be applied for various fault conditions, i.e., degree of asymmetry and time of interruption.*

IEEE C37.082-1982 (R2006), Standard Methods for the Measurement of Sound Pressure Levels for AC Power Circuit Breakers

*Establishes uniform guidelines for measurement and reporting of sound produced by ac power circuit breakers. Intended for use in measurement of the sound produced by outdoor circuit breakers in a free-field environment. Methods may be used indoors or in restricted field, provided that precautions are observed in measurement and interpretation of results. Three types of tests are decribed: design tests, conformance tests, and field tests.*

IEEE C37.083-1999, Guide for Synthetic Capacitive Switching Tests of AC High-Voltage Circuit Breakers

*Develops a guide to be used when conducting capacitive current switching. This will cover requirements, test circuits, test parameters, test procedures, etc. when using synthetic circuits.*

IEEE C37.09-1999, Test Procedure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis

*All indoor and outdoor types of AC high-voltage circuit breakers rated above 1000V and rated on a symmetrical current basis.*

IEEE C37.09a-2005, Standard Test Procedure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis - Amendment 1: Capacitance Current Switching

*Incorporates IEC 62271-100 capacitance current switching treatment into the circuit breaker test code. Applies to circuit breakers above 1000 V ac.*

IEEE C37.10-1996 (R2002), Guide for Diagnostic and Failure Investigation of Power Circuit Breakers

*Recommends procedures to be used to perform failure investigations of power circuit breakers.*

IEEE C37.10.1-2000 (R2006), Guide for the Selection of Monitoring for Circuit Breakers

*Direction is provided for the selection of monitoring and for diagnostic parameters to be used with high-voltage circuit breakers (i.e., above 100 V). Guidance on appropriate parameters to be considered for monitoring applied to various circuit breaker technologies is also provided.*

IEEE C37.100-1992 (R2001), Definitions for Power Switchgear

*Presents terms and definitions intended to encompass the products within the scope of the C37 project and include power switchgear for switching, interrupting, metering, protection, and regulating purposes as used primarily in connection with generation, transmission, distribution, and conversion of electric power.*

IEEE C37.101-2006, Guide for Generator Ground Protection

*Intended to assist protection engineers in applying and relaying schemes for protection against stator ground faults on various generator grounding schemes.*

IEEE C37.102-1996 (R2001), Guide for AC Generator Protection

*Presents a review of the generally accepted forms of protection for the generator and its excitation system. Summarizes the use of relays and devices, and serves as a guide for the selection of equipment to obtain adequate protection.*

IEEE C37.103-2003, Guide for Differential and Polarizing Relay Circuit Testing

*Covers the tests required to ensure correct connection of differential relays and polarizing circuits of phase and ground relays.*

IEEE C37.104-2002, Guide for Automatic Reclosing of Line Circuit Breakers for AC Distribution and Transmission Lines

*Describes current automatic reclosing practices for AC distribution and transmission lines.*

IEEE C37.105-1987 (R1999), Qualifying Class 1E Protective Relays and Auxiliaries for Nuclear Power Generating Stations

*Describes the basic principles, requirements, and methods for qualifying Class 1E protective relays and auxiliaries such as test and control switches, terminal blocks, and indicating lamps for applications in nuclear power generating stations.*

IEEE C37.106-2003, Abnormal-Frequency Protection for Power Generating Plants, Guide for

*Assists the protection engineer in applying relays for the protection of generating plant equipment from damage caused by operation at abnormal frequencies including overexcitation*

IEEE C37.108-2002, Guide for the Protection of Network Transformers

*Intended to aid those engineers who have re-evaluated problems associated with faults within network vaults, particularly for those network vaults located within or near high-rise buildings. Also identifies currently available devices that are being used in network transformer protection schemes.*

IEEE C37.109-1988 (R1999), Guide for the Protection of Shunt Reactors

*Covers protection of shunt reactors used typically to compensate for capacitive shunt reactance of transmission lines.*

IEEE C37.11-1997 (R2003), Standard Requirements for Electrical Control for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis

*Applies to all types of electrically controlled ac high-voltage circuit breakers rated above 1000 V. Establishes basic requirements for ac high-voltage power circuit breaker control schemes so that users and manufacturers can effect engineering and production economies by reducing the multiplicity of special control schemes that are specified in the absence of standards*

IEEE C37.111-1999 (R2004), Common Format for Transient Data Exchange (COMTRADE) for Power Systems

*A common format for data files and exchange medium used for the interchange of various types of fault, test, or simulation data for electrical power systems is defined.*

IEEE C37.112-1996 (R2001), Standard Inverse-Time Characteristic for Overcurrent Relays

*Includes review of various existing analytic techniques used to represent relay operating characteristic curve shapes and proposes analytical (formula) representation of typical operating characteristic curve shapes to foster some standardization of available inverse-time relay characteristics provided in microprocessor or computer relay applications.*

IEEE C37.113-1999 (R2004), Guide for Protective Relay Application to Transmission Lines

*Describes accepted transmission line protection schemes and the different electrical system parameters and situations that affect their application.*

IEEE C37.115-2003, Standard Test Method for Use in the Evaluation of Message Communications Between Intelligent Electronic Devices in an Integrated Substation Protection, Control and Data Acquisition System

*Defines standard communication modeling, terminology, evaluation criteria and performance measures for communication test scenarios, which specify messages to be exchanged between electrical power substation intelligent electronic devices (IEDs). These scenarios define message transactions between applications within the substation, and between substation IEDs and remotely located applications*

IEEE C37.118-2005, Standard for Synchrophasors for Power Systems

*Defines synchronized phasor measurements used in power system applications. Provides a method to quantify the measurement, tests to be sure the measurement conforms to the definition, and error limits for the test. Also defines a data communication protocol including message formats for communicating this data in a real-time system.*

IEEE C37.119-2005, Guide for Breaker Failure Protection of Power Circuit Breakers

*Compiles information on the application considerations for breaker failure protection. The reasons for local back up protection are described. Breaker failure schemes are discussed. Issues relating to the settings of current detectors and timers are discussed for various applications.*

IEEE C37.122-2002, Standard for Gas-Insulated Substations

*Establishes ratings and requirements for planning, design, testing, installation, and operation of gas-insulated substations for ac applications for voltages from 72.5 to 800 kV.*

IEEE C37.122.1-2002, Guide for Gas-Insulated Substations

*Provides information of special relevance to the planning, desing, testing, installation, operation, and maintenance of gas-insulated substations and equipment.*

IEEE C37.123-1997 (R2002), Gas-Insulated Substation Equipment, Guide to Specifications for

*Covers the technical requirements for the design, fabrication, testing, installation, and in-service performance of a gas-insulated substation.*

IEEE C37.13.1-2006, Standard for Definite Purpose Switching Devices for Use in Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear

*Covers definite purpose switching devices for use in metal-enclosed low-voltage power circuit breaker switchgear. The switching devices shall be fused, drawout type, three-pole construction, with one or more rated maximum ac voltages of 600 V, 508 V, and 254 V for application on systems having nominal ac voltages of 600 V, 480 V, and 240 V. Addresses service conditions, ratings, functional components, temperature limitations and classifications of insulating materials, insulation (dielectric) withstand voltage requirements, test procedures, and application.*

IEEE C37.14-2002, Low-Voltage DC Power Circuit Breakers Used in Enclosures

*Covers the following types of enclosed low-voltage dc power circuit breakers: a) stationary or drawout type of one- or two-pole construction; b) having one or more rated maximum voltages of 3200 V, 1600 V, 1200 V, 1000 V, 800 V, 325 V, or 300V for applications on systems having nominal voltages of 3000V, 1500 V, 1000 V, 850 V, 750 V, 275 V, or 250V; c) manually-operated or power-operated; and d) with or without overcurrent trip devices.*

IEEE C37.18-1991 (R2003), Standard Enclosed Field Discharge Circuit Breakers for Rotating Electric Machinery

*Applies to all low-voltage power-circuit breakers that are intended for use in field circuits of apparatus such as generators, motors, synchronous condensers, or exciters and embodying contacts for establishing field discharge circuits.*

IEEE C37.2-1996 (R2001), Electrical Power System Device Function Numbers and Contact Designations

*Applies to the definition and application of function numbers for devices used in electrical substations and generating plants and in installations of power utilization and conversion apparatus.*

IEEE C37.20.1-2002, Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear

*Covers metal-enclosed low-voltage power circuit breaker switchgear assemblies containing such devices as low-voltage power circuit breakers (fused or unfused); other interrupting devices; switches, control, instrumentation, and metering; and protecti*

IEEE C37.20.1a-2005, Standard for Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear - Amendment 1: Short-Time and Short-Circuit Withstand Current Tests; Minimum Areas for Multiple Cable Connections

*Corrects errors in the base document with respect to dummy elements and metrication of Table 10.*

IEEE C37.20.2-1999 (R2005), Metal-Clad and Station-Type Cubicle Switchgear

*Covers metal-clad (MC) medium-voltage switchgear that contains drawout electrically operated circuit breakers.*

IEEE C37.20.3-2001, Metal-Enclosed Interrupter Switchgear

*Covers metal-enclosed interrupter switchgear assemblies containing, but not limited to, such devices as interrupter switches, selector switches, power fuses, control, instrumentation and metering, and protective equipment. It includes, but is not specifically limited to, equipment for the control and protection of apparatus used for distribution of electrical power. It is concerned with enclosed, rather than open, indoor and outdoor switchgear assemblies rated above 1000 V.This standard was listed for public review in the 3/29/1996 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

IEEE C37.20.4-2001, Standard for Indoor AC Switches (1 kV - 38 kV) for Use in Metal-Enclosed Switchgear

*Covers indoor ac switches rated above 1 kV through 38 kV for use in metal-enclosed switchgear as follows: (1) stationary or drawout, (2) manual or power operation, and (3) fused or unfused. The term "indoor" is intended to indicate that the enclosure (a) provides a degree of protection to the switch; (b) may be suitable for indoor, outdoor, or other service conditions; and (c) complies with the requirements of switchgear assemblies defined by American National Standard for Metal-Clad and Station-Type Cubicle Switchgear, ANSI/IEEE C37.20.2-1999, or American National Standard for Metal-Enclosed Interrupter Switchgear, ANSI/IEEE C37.20.3-1987 (R1993)..*

IEEE C37.20.6-2003, Standard for 4.76 kV to 38 kV Rated Grounding and Testing Devices Used in Enclosures

*Covers drawout type, indoor medium-voltage grounding and testing (G&T) devices for use in drawout metal-clad switchgear rated above 4.76 kV through 38 kV as described in IEEE Std. C37.30.2.*

IEEE C37.20.7-2001, Guide for Testing Medium-Voltage Metal-Enclosed Switchgear for Internal Arcing Faults

*Establishes a method by which metal-enclosed switchgear, as defined by IEEE Stds. C37.20.2 and C37.20.3, may be tested for resistance to the effects of arcing due to an internal fault. It applies only to equipment utilizing air as the primary insulating medium and rated above 1000 VAC. It applies to both indoor and outdoor equipment.*

IEEE C37.21-2005, Standard for Control Switchboards

*Covers ratings, construction, and testing of dead-front control switchboards containing but not limited to devices such as switches, control devices, instrumentation, metering, monitoring,*

*protective and auxiliary relays, and regulating devices and accessories. It includes, but is not specifally limited to, switchboards for the control and protection of apparatus used for or associated with power generation, conversion, transmission, and distribution.*

IEEE C37.23-2003, Standard for Metal-Enclosed Bus

*Covers assemblies of metal-enclosed conductors along with associated interconnections, enclosures, and supporting structures.*

IEEE C37.24-2003, Guide for Evaluating the Effect of Solar Radiation on Outdoor Metal-Clad Switchgear

*Intended to assist in evaluating the effect of solar radiation on outdoor metal-enclosed switchgear and is applicable to outdoor metal-enclosed power switchgear, control switchboards and metal-enclosed bus.*

IEEE C37.26-2003, Methods of Power-Factor-Measurement for Low-Voltage Inductive Test Circuits

*Describes three methods used in the measurement of the power factor of inductive low-voltage (1000 V and less) test circuits. These methods are: 1) Radio method, 2) dc decrement method, and 3) Phase relationship method.*

IEEE C37.30-1997, Switches, Insulators and Bus Supports, Definitions and Requirements for High-Voltage Air

*Applies to all high-voltage enclosed indoor or outdoor, and nonenclosed indoor or outdoor switches rated in excess of 1000 V.*

IEEE C37.36b-1990 (R1996), Guide to Current Interruption with Horn Gap Air Switches

*Provides air switch users with a means for determining the magnitude of excitation.*

IEEE C37.37-1996, Loading Guide for AC High-Voltage Air Switches

*Applies to AC High Voltage Air Switches in excess of 1000 volts.*

IEEE C37.40-2003, High-Voltage Fuses, Distribution Enclosed Single-Pole Air Switches, Fuse Disconnecting Switches, and Accessories, Service Conditions and Definitions for

*Applies to high-voltage (above 1000 V) fuses and equipment. This includes distribution class and power class fuses, distribution class enclosed single-pole air switches, distribution class and power class fuse disconnecting switches, and associated accessories that are intended for use on ac distribution systems.*

IEEE C37.40b-1996, Standard Service Conditions and Definitions for External Fuses for Shunt Capacitors

*Covers fuses that are to be used for overcurrent protection of shunt capacitor banks.*

IEEE C37.41-2000, Design for High-Voltage Fuses, Distribution Enclosed Single-Pole Air Switches, Fuse Disconnecting Switches, and Accessories

*Applies to design test requirements for high-voltage (above 1000 V) fuses, distribution enclosed single-pole air switches, fuse disconnecting switches, and accessories for use on alternating-current distribution systems.*

IEEE C37.48-1998, Application, Operation, and Maintenance of High-Voltage Fuses, Distribution Enclosed Single-Pole Air Switches, Fuse Disconnecting Switches, and Accessories, Guide for

*Presents information on application, operation and maintenance of high-voltage fuses (above 1000 V), distribution enclosed single-pole air switches, fuse disconnecting switches, and accessories for use on alternating-current distribution systems.*

IEEE C37.48-2004, Guide for the Application, Operation, and Maintenance of High-Voltage Fuses, Distribution Enclosed Single-Pole Air Switches, Fuse Disconnecting Switches, and Accessories

*Presents information on the application, operation, and maintenance of high-voltage fuses (above 1000 V), distribution enclosed single-pole air switches, fuse disconnecting switches, and accessories for use on ac distribution systems.*

IEEE C37.48.1-2002, Guide for the Operation, Classification, Application, and Coordination of Current-Limiting Fuses with Rated Voltages 1-38 kV

*Provides information that supplements IEEE Std. C37.48-1997 on the application, operation, and maintenance of high-voltage (above 1000 V) fuses, fuse disconnection switches, and accessories for use on alternating current distribution systems.*

IEEE C37.59-2002, Requirements for Conversion of Power Switchgear Equipment

*Covers power switchgear equipment that is converted from a qualified design. It provides direction and guidance in those conversions and specifies required design verification in accordance with applicable ANSI, NEMA, UL, or IEEE standards.*

IEEE C37.60-2003, Automatic Circuit Reclosers and Fault Interrupters for Alternating Current Systems, Requirements for Overhead, Pad-Mounted, Dry Vault, and Submersible

*Applies to all overhead, pad mounted, dry vault and submersible single or multi-pole alternating current automatic circuit reclosers and fault interrupters for rated maximum voltages above 1000 V and up to 38 kV.*

IEEE C37.60-2003/Cor1-2004, Standard Requirements for Overhead Pad-Mounted, Dry Vault, and Submersible Automatic Circuit Reclosers and Fault Interrupters for Alternating Current Systems Up to 38 kV – Corrigendum 1

*Corrects editorial and technical errors that have been identified.*

IEEE C37.63-2005, Line Sectionalizers for Alternating-Current Systems, Requirements for Overhead, Pad-Mounted, Dry Vault and Submersible Automatic

*Descibes the requirements for sectionalizers for overhead, pad-mounted, dry-vault, and submersible single-pole or multipole ac automatic lines for rated maximum voltages from 1000 V to 38000 V.*

IEEE C37.66-2005, Standard Requirements for Capacitor Switches for Alternating-Current Systems (1 to 38 kV)

*Required definitions, ratings, and procedures for performing design tests, production tests, and construction requirements for Capacitor Switches for Alternating-Current Systems from 1000 V to 38 kV.*

IEEE C37.71-2001, Three Phase, Manually Operated Subsurface Load Interrupting Switches for Alternating-Current Systems, Requirements for

*Applies to three-phase, group operated, 60-Hz, subsurface, load-interrupting switches with maximum ratings of 600 amperes and 38 kV and utilizing separable insulated connectors.*

IEEE C37.72-1999, Standard for Manually-Operated Dead-Front Padmounted Switchgear with Load/Interrupting Switches and Separable Connectors for Alternating-Current Systems

*This standard applies to assemblies of three-phase, group-operated, and single-phase, load-interrupting switches with separable connectors, in an enclosure with maximum ratings of 600 amperes and 38 kV, 60 Hz.*

IEEE C37.74-2003, Standard Requirements for Subsurface, Vault, and Padmounted Load-Interrupter Switchgear and Fused Load-Interrupter Switchgear for Alternating Current Systems up to 38 kV

*Applies to enclosed assemblies of single-phase and three-phase, dead-front and live-front, subsurface, vault, and padmounted, load-interrupter switches with or without protective devices such as fuses or fault interrupters, up to 38 kV Rated Maximum Voltage.*

IEEE C37.81-1989 (R2005), Guide for Seismic Qualification of Class 1E Metal-Enclosed Power Switchgear Assemblies

*Provides requirements and guidance for the seismic qualification of metal-enclosed power switchgear assemblies including switching, interrupting, control, instrumentation, metering, and protective and regulating devices mounted therein.*

IEEE C37.82-1987 (R2004), Switchgear Assemblies for Class 1E Applications in Nuclear Power Generating Stations, Qualification of

*Describes the methods and requirements for qualifying switchgear assemblies for indoor areas outside of the containment in nuclear power generating stations.*

IEEE C37.90.1-2002, Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

*Specifies design tests for relays and relay systems that relate to the immunity of this equipment to repetitive electrical transients. The oscillatory and fast transient SWC tests are defined as distinct tests.*

IEEE C37.90.2-2004, Standard for Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

*Defines a required withstand level and establishes a test method to evaluate the susceptibility of protective relays to single-frequency electromagnetic fields in the radio frequency domain, such as those generated by portable or mobile radio transceivers and wireless communication devices.*

IEEE C37.90.3-2001, Electrostatic Discharge Tests for Protective Relays

*Specifies design tests for ESD, electrostatic discharge, tests of protective relays and relay systems.*

IEEE C37.91-2000, Protective Relay Applications to Power Transformers, Guide for

*Covers practical applications, general philosophy, and economic considerations involved in power transformer protection.*

IEEE C37.92-2005, Standard for Analog Inputs to Protective Relays From Electronic Voltage and Current Transducers

*Defines the interface between voltage or current tranducer systems or sensing systems with analog electronic outputs, and suitably designed protective relays or other substation measuring equipment.*

IEEE C37.93-2004, Guide for Power System Protective Relay Applications of Audio Tones over Telephone Channels

*Contains information and recommendations for applying audio tones over voice grade channels for power system relaying.*

IEEE C37.94-2002, N times 64 kilobit per second Optical Fiber Interfaces Between Teleprotection and Multiplexer Equipment

*Describes the interconnection details for N, where N = 1, 2….12, times 64 kilobit per second connections of teleprotection equipment to digital multiplexers using optical fiber.*

IEEE C37.95-2002, Protective Relaying of Utility-Consumer Interconnections, Guide for

*Contains information on a number of different protective relaying practices for the utility-consumer interconnection. It is intended to cover applications involving service to a consumer that normally requires a transformation between the utility's supply voltage and the consumer's utilization voltage.*

IEEE C37.96-2000, Guide for AC Motor Protection

*Presents generally accepted methods of protection for AC motors. It identifies and summarizes the functions necessary for adequate protection of motors based on type, size, and application.*

IEEE C37.98-1987 (R1999), Seismic Testing of Relays

*Specifies the procedures to be used in the seismic testing of relays used in power system facilities. The standard is concerned with the determination of the seismic fragility level of relays and also gives recommendations for proof testing.*

IEEE C37.99-2000 (R2006), Guide for the Protection of Shunt Capacitor Banks

*The protection of shunt power capacitor and filter banks are covered. Guidelines for reliable applications of protection methods intended for use in many shunt capacitor applications and designs are included.*

IEEE C50.12-2005, Standard for Salient-Pole 50 and 60 Hz Synchronous Generators and Generator/Motors for Hydraulic Turbine Applications Rated 5 MVA and Above

*Contains requirements for all types of 50 and 60 Hz salient-pole synchronous generators and generator/motors rated 5000 kVA and above to be used for hydraulic turbine or hydraulic pump/turbine applications.*

IEEE C50.13-2005, Standard for Cylindrical-Rotor 50 and 60 Hz, Synchronous Generators Rated 10 MVA and Above

*Contains requirements for all types of 50 and 60 Hz cylinderical rotor synchronous generators rated 10 MVA and above.*

IEEE C57.100-1999, Distribution Transformers, Test Procedure for Thermal Evaluation of Oil-Immersed

*The procedure is intended to provide a direct evaluation of the composite insulation system for either a power or distribution, liquid immersed transformer.*

IEEE C57.105-1992 (R1999), Application of Transformer Connections in Three-Phase Distribution Systems

*Concerns transformer connections in 3-phase distribution systems. Distribution systems are characterized by primary voltages up to and including 34.5 kV, usually have a preponderance of connected transformers with low-voltage windings below 1000 V and furnish electric service to consumers. The characteristics of the various transformer connections and possible operating problems under normal or abnormal conditions are treated.*

IEEE C57.106-2002, Guide for Acceptance and Maintenance of Insulating Oil in Equipment

*Applies to mineral oil used in transformers, load tap changers, voltage regulators, reactors, and circuit breakers.*

IEEE C57.109-1993 (R2000), Guide for Liquid-Immersed Transformer Through-Fault Current Duration

*Applies to transformers referenced in American National Standard General Requirements for Liquid-Immersed Distribution, Power and Regulating Transformers, ANSI/IEEE C57.12.00-1993 as Categories I, II, III, and IV.*

IEEE C57.110-2004, Recommended Practice for Establishing Transformer Capability When Supplying Nonsinusoidal Load Currents

*Establishes uniform methods for determining the capability of transformers to supply nonsinusoidal load currents of known characteristics.*

IEEE C57.111-1995 (R2003), Guide for Acceptance of Silicone Insulating Fluid and Its Maintenance in Transformers

*Recommends standard tests and evaluation procedures for silicone transformer fluid*

IEEE C57.113-2002, Guide for Partial Discharge Measurement in Liquid-Filled Power Transformers and Shunt Reactors

*Applies to the detection and measurement by the wide-band apparent charge method of partial discharges occurring in liquid-filled power transformers and shunt reactors during dielectric tests, where applicable.*

IEEE C57.116-1990 (R2005), Guide for Transformers Directly Connected to Generators

*Describes selection and application considerations for the unit transformer and unit auxiliaries transformer.*

IEEE C57.117-1986 (R2005), Guide for Reporting Failure Data for Power Transformers and Shunt Reactors on Electric Utility Power Systems

*Addresses the reporting and statistical analysis of reliability of power transformers and shunt reactors used on electric utility power systems.*

IEEE C57.119-2002, Recommended Practice for Performing Temperature Rise Tests on Oil Immersed Power Transformers at Loads Beyond Nameplate Ratings

*Covers temperature rise test procedures for determining those thermal characteristics of power transformers needed to appraise the transformer's load carrying capabilities at specific loading conditions other than rated load.*

IEEE C57.12.00-2006, Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers

*This standard is a basis for the establishment of performance, limited electrical and mechanical interchangeability, and safety requirements of equipment described. Describes electrical, mechanical, and safety requirements of liquid-immersed distribution and power transformers, and autotransformers and regulating transformers, single-phase and polyphase, with voltages of 601 V or higher in*

*the highest voltage winding.*

IEEE C57.12.01-2005, Standard General Requirements for Dry-Type Distribution and Power Transformers Including Those with Solid-Cast and/or Resin Encapsulated Windings

*Electrical, mechanical, and safety requirements of ventilated, non-ventilated, and sealed dry-type distribution and power transformers or autotransformers (single and polyphase, with a voltage of 601 V or higher in the highest voltage winding) are described.*

IEEE C57.12.20-2005, Standard for Overhead Type Distribution Transformers, 500 kVA and Smaller: High Voltage, 34 500 Volts and Below; Low Voltage, 7970/13 800Y Volts and Below

*Covers certain electrical, dimensional, and mechanical characteristics and safety features of single and three phase, 60 Hz, mineral oil immersed, self-cooled, overhead type distribution transformers 500 kVA and smaller, High Voltages 34 500 volts and below and Low Voltages 7970/13 800 Y volts and below. Is intended for use as a basis for determining the performance, interchangeability, and safety of overhead type distribution transformers and to assist in the proper selection of this equipment.*

IEEE C57.12.23-2002, Transformers - Underground-Type, Self-Cooled, Single-Phase Distribution Transformers with Separable, Insulated, High-Voltage Connectors; High Voltage (24 940 GrdY/14 400 V and Below) and Low Voltage (240/120 V, 167 kVA and

*Intended for use as a basis for determining performance, interchangeability, and safety of the equipment covered, and to assist in the proper selection of such equipment. Covers certain electrical, dimensional, and mechanical characteristics and takes*

IEEE C57.12.28-2005, Standard for Pad-Mounted Equipment - Enclosure Integrity

*Covers conformance tests and requirements for the integrity of above grade pad-mounted enclosures containing apparatus energized in excess of 600 volts that may be exposed to the public including, but not limited to, the following types of equipment enclosures: pad-mounted capacitors or inductors, pad-mounted distribution transformers, pad-mounted junction enclosures, pad-mounted metering equipment, pad-mounted switchgear.*

IEEE C57.12.29-2005, Standard for Pad-Mounted Equipment - Enclosure Integrity for Coastal Environments

*Covers conformance tests and requirements for the integrity of above grade pad-mounted enclosures intended for installation in coastal environments containing apparatus energized in excess of 600 volts that may be exposed to the public including, but not limited to, the following types of equipment enclosures: pad-mounted capacitors or inductors, pad-mounted distribution transformers, pad-mounted junction enclosures, pad-mounted metering equipment, pad-mounted switchgear.*

IEEE C57.12.31-2002, Pole Mounted Equipment – Enclosure Integrity

*Covers conformance tests and requirements for the coating integrity of carbon steel pole mounted enclosures containing apparatus energized in excess of 600 volts, typically located out of reach of the general public.*

IEEE C57.12.32-2002, Submersible Equipment – Enclosure Integrity

*Covers conformance tests and requirements for the integrity of carbon steel and copper bearing steel submersible electrical enclosures intended for installation in submerged environments.*

IEEE C57.12.34-2004, Standard Requirements for Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers, 2500 kVA and Smaller: High-Voltage, 34 500 GrdY/19 920 Volts and Below; Low Voltage, 480 Volts and Below

*Intended for use as a basis for determining performance, interchangeability, and safety of the equipment covered, and to assist in the proper selection of such equipment.*

IEEE C57.12.35-1996 (R2004), Standard Bar Coding for Distribution Transformers

*Sets forth bar code label requirements for overhead, padmounted, and underground-type distribution transformers. Includes requirements for data content, symbology, label layout, print quality, and label life expectancy.*

IEEE C57.12.37-2006, Standard for the Electronic Reporting of Distribution Transformer Test Data

*Provides a basis for the electronic reporting of transformer test data on liquid immersed distribution transformers.*

IEEE C57.12.40-2006, Standard Requirements for Secondary Network Transformers, Subway and Vault Types (Liquid-Immersed)

*Covers certain electrical, dimensional, and mechanical characteristics and takes into consideration certain safety features of three-phase, 60 Hz, liquid-immersed, secondary network transformers with a three position grounding switch, subway and vault types, rated 2500 kVA and smaller; primary 34 400 volts and below; secondary 216Y/125 volts and 480Y/277 volts.*

IEEE C57.12.44-2005, Requirements for Secondary Network Protectors

*The performance, electrical, and mechanical interchangeability, and the safety of the equipment are covered.*

IEEE C57.12.56-1994 (R1998), Test Procedure for Thermal Evaluation of Insulation Systems for Ventilated Dry-Type Power and Distribution Transformers (reinstatement of administratively withdrawn standard)

*Establishes a uniform method for determining the temperature classification of ventilated dry-type power and distribution transformer insulation systems by test rather than by chemical composition.*

IEEE C57.12.58-1991 (R2002), Guide for Conducting a Transient Voltage Analysis of a Dry Type Transformer Coil

*Covers general recommendations for measuring voltage transients in dry-type distribution and power transformers.*

IEEE C57.12.59-2002, Guide for Dry-Type Transformer Through-Fault Current Duration

*Sets forth recommendations believed essential for the application of overcurrent protective devices applied to limit the exposure time of dry-type transformers to short-circuit currents.*

IEEE C57.12.60-1998, Guide for Test Procedures for Thermal Evaluation of Insulation Systems for Solid Cast and Resin-Encapsulated Power and Distribution Transformers

*Modifies an existing standard to a Guide and expands its scope for improved application of the procedures for thermal evaluation of resin cast transformers.*

IEEE C57.12.70-2000 (R2006), Standard

Terminal Markings and Connections for Distribution and Power Transformers

*Standard terminal markings and connections are described for single-phase and three-phase distribution, power, and regulating transformers.*

IEEE C57.12.80-2002, Terminology for Power and Distribution Transformers

*Is a compilation of terminology and definitions primarily related to electric power and distribution transformers and associated apparatus. Also includes similar data relating to power systems and insulation that is commonly involved in transformer technology.*

IEEE C57.12.90-2006, Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers

*Describes methods for performing tests specified in IEEE C57.12.00 and other standards applicable to liquid-immersed distribution, power, and regulating transformers. It is intended for use as a basis for performance, safety, and proper testing of such transformers.*

IEEE C57.120-1991 (R2006), Loss Evaluation Guide for Power Transformers and Reactors

*A method for establishing the dollar value of the electric power needed to supply the losses of a transformer or reactor is provided.*

IEEE C57.123-2002, Guide for Transformer Loss Measurement

*Provides bakcground information and general recommendations of instrumentation, circuitry, calibration and measurement techniques of no-load losses (excluding auxiliary losses), excitation current, annd load losses of power and distribution transformers*

IEEE C57.124-1991 (R1996), Detection of Partial Discharges and the Measurement of Apparent Charge in Dry Type Transformers

*Applies to the detection of partial discharges occurring in the insulation of dry-type transformers or their components, and to the measurement of the associated charge at the terminals when an alternating test voltage is applied.*

IEEE C57.125-2005, Guide for Failure Investigation, Documentation, and Analysis for Power Transformers and Shunt Reactors

*Recommends a procedure to be used to perform a failure analysis. Provides a methodology by which the most probable cause of any particular transformer failure may be determined.*

IEEE C57.13-2003, Standard Requirements for Instrument Transformers

*Electrical, dimensional, and mechanical characteristics are covered, taking into consideration certain safety features, for current and inductively coupled voltage transformers of types generally used in the measurement of electricity and the control of equipment associated with the generation, transmission, and distribution of alternating current. The aim is to provide a basis for performance, interchangeability, and safety of equipment covered, and to assist in the proper selection of such equipment. Accuracy classes for metering service are provided. The test code covers measurement and calculation of ratio and phase angle, demagnetization, impedance and excitation measurements, polarity determination, resistance measurements, short-time characteristics, temperature-rise tests, dielectric tests, and measurement of open-circuit voltage of current*

IEEE C57.13.1-1981 (R1999), Field Testing of Relaying Current Transformers

*Describe field test methods that will assure that the current transformers are connected properly, are of marked ratio and polarity, and are in condition to perform as designed both initially and after a period of service.*

IEEE C57.13.2-2005, Standard Conformance Test Procedure for Instrument Transformers

*Describes the tests and documentary requirements for conducting a conformance test on instrument transformers. Covers test requirements and control functions on 60 Hz primary systems with voltages from 600 volts through 38 kV.*

IEEE C57.13.3-2005, Guide for Grounding of Instrument Transformer Secondary Circuits and Cases

*Provides information on the grounding of: secondary circuits of electromagnetic current transformer (CT) and voltage transformer (VT) circuits; cases of relays, CTs and VTs; secondary circuits of opto-electronic CTs and VTs. The primary emphases of this guide are personnel safety and proper performance of relays at electric power frequencies.*

IEEE C57.13.6-2005, Standard for High Accuracy Instrument Transformers

*Defines one new 0.15 voltage transformer accuracy class, two new 0.15 current transformer accuracy classes, two new current transformer burdens, and two new current ıansformer routine accuracy test methods.*

IEEE C57.134-2000 (R2006), Guide for Determination of Hottest Spot Temperature in Dry Type Transformers

*Methodologies for determination of the steady-state winding hottest-spot temperature in dry-type distribution and power transformers with ventilated, sealed, solid cast, and encapsulated windings built in accordance with IEEE Std C57.12.01 and IEC 60276 are described in this guide.*

IEEE C57.135-2001, Guide for the Application, Specification and Testing of Phase-Shifting Transformers

*Covers the application, specification, theory of operation, and factory and field testing of single-phase and three-phase oil-immersed phase-shifting transformers (PST).*

IEEE C57.136-2000 (R2005), Guide for Sound Level Abatement and Determination for Liquid-Immersed Power Transformers and Shunt Reactors Rated Over 500 kVA

*Guidelines are provided for the selection of suitable sound reduction methods in oil-immersed power transformers and shunt reactors over 500 kVA.*

IEEE C57.138-1998 (R200x), Recommended Practice for Routine Impulse Test for Distribution Transformers

*General test procedures for performing routine quality control test that is suitable for high-volume production line testing. Transformer connections, test methods, circuit configurations, and failure detection methods are addressed. Covers liquid-immersed, single- and three-phase distribution transformers.*

IEEE C57.144-2004, Guide for Metric Conversion of Transformer Standards

*This guide assists IEEE Power Engineering Society/Transformer Committee Working Groups in the interpretation of IEEE/ASTM SI 10-2002 and other appropriate standards as they convert their document to the use of SI units.*

IEEE C57.146-2005, Guide for the Interpretation of Gases Generated in Silicone-Immersed Transformers

*Assists the transformer operator in evaluating Dissolved Gas Analysis (DGA) data obtained for silicone-filled transformers.*

IEEE C57.15-1999, Regulators, Requirements, Terminology, and Test Code for Step-Voltage and Induction-Voltage

*Serves as a basis for the establishment of performance, limited electrical and mechanical interchangeability, and safety requirements of equipment described; and for assistance in the proper selection of such equipment.*

IEEE C57.16-1996 (R2001), Standard Requirements, Terminology and Test Code for Dry-Type Air-Core Series Connected Reactors

*Applies to series-connected dry-type air-core single-phase and three-phase outdoor or indoor reactors of distribution and transmission voltage class that are connected in the power system to control power flow under steady-state conditions and/or limit fault current under short-circuit conditions.*

IEEE C57.18.10-1998 (R2003), Standard Practices and Requirements for Semiconductor Power Rectifier Transformers

*Includes practices and requirements for semiconductor power rectifier transformers for dedicated loads rated single-phase 300 kW and above and three-phase 500 kW and above*

IEEE C57.19.00-2004, Standard General Requirements and Test Procedure for Power Apparatus Bushings

*Applies to power apparatus bushings that have basic impulse insulation levels of 110 kV and above for use as components of oil-filled transformers and oil-filled reactors. Defines the special terms used, service conditions, rating, general requirements, and test procedure for apparatus bushings.*

IEEE C57.19.01-2000 (R2005), Standard Performance Characteristics and Dimensions for Outdoor Apparatus Bushings

*Electrical, dimensional, and related requirements for outdoor power apparatus bushings that have basic impulse insultion levels (BILs) of 200 kV and above are covered.*

IEEE C57.19.03-1996 (R2002), Standard Requirements, Terminology and Test Code for Bushings for DC Applications

*Applies to outdoor and indoor power apparatus dc bushings of condenser type that have basic impulse insulation levels of 110 kV and above for use as components of oil-filled converter transformers and smoothing reactors, as well as air-to-air dc bushings.*

IEEE C57.19.03-1996/Cor 1-2005, Standard Requirements, Terminology, and Test Code for Bushings for DC Applications - Corrigendum 1

*Corrects errors in the base standard.*

IEEE C57.19.100-1995 (R2003), Guide for Application of Power Apparatus Bushings

*Presents general information and recommendations for the application of power apparatus bushings when incorporated as part of power transformers, power circuit breakers, and isolated-phase bus*

IEEE C57.21-1991 (R2004), Requirements, Terminology, and Test Code for Shunt Reactors Rated Over 500 kVA

*All oil-immersed or dry-type, single-phase or three-phase, outoddr or indoor shunt reactors rated over 500 kVA are covered. Terminology and general requirements are stated, and the basis for rating shunt reactors is set forth.*

IEEE C57.91-2004, Guide for Loading Mineral-Oil-Immersed Transformers

*General recommendations for loading 65 degree C rise mineral-oil-immersed distribution and power transformers are covered.*

IEEE C57.93-1995 (R2001), Guide for Installation of Liquid Immersed Power Transformers

*Applies to the shipping, handling, inspection, installation, and maintenance of liquid-immersed power transformers rated 501 kVA and above with secondary voltages of 1000 V and above.*

IEEE C57.94-2000, Recommended Practice for Installation, Application, Operation, and Maintenance of Dry-Type General-Purpose Distribution and Power Transformers

*Covers general recommendations for the application, installation, operation, and maintenance of single and polyphase dry-type general purpose, distribution, power, and auto-transformers of the following types: (1) Ventilated, indoor and outdoor, self-cooled or forced-air cooled; (2) Nonventilated, indoor and outdoor, self-cooled or forced-air cooled; (3) Sealed, indoor and outdoor, self-cooled.*

IEEE C57.96-1999 (R2004), Distribution and Power Transformers, Guide for Loading Dry-Type (appendix to ANSI C57.12 standards)

*General recommendations for the loading of dry-type distribution and power transformers that have 80 C, 115 C, and 150 C average winding rises and insulation systems limited to 150 C, 180 C, and 220 C maximum hottest-spot operating temperatures, respectively, are covered in this guide.*

IEEE C57.98-1993 (R1999), Impulse Tests, Guide for Transformer (appendix to ANSI/IEEE C57.12.90)

*Adds background information that will aid in the interpretation and application of standards for impulse tests for power transformers, distribution transformers, and instrument transformers.*

IEEE C62.11-1999, Metal-Oxide Surge Arresters for Alternating Current Power Circuits

*This standard applies to metal-oxide surge arresters designed to repeatedly limit the voltage surges on 48 Hz to 62 Hz power circuits (>1000V) by passing surge discharge current and automatically limiting the flow of system power current. This standard applies to devices for separate mounting and to those supplied integrally with other equipment.*

IEEE C62.11-2005, Standard for Metal-Oxide Surge Arresters for AC Power Circuits (> 1 kV)

*Applies to metal-oxide surge arresters designed to repeatedly limit the voltage surges on 48 Hz to 62 Hz power circuits (>1000 V) by passing surge discharge current and automatcially limiting the flow of system power current. Applies to devices for separate mounting and to those supplied integrally with other equipment.*

IEEE C62.21-2003, Guide for the Application of Surge Voltage Protective Equipment on AC Rotating Machinery 1000 Volts and Greater

*Part 1 covers the insulation surge withstand strength of motors and generators with windings having form-wound multi-turn coils and the application of surge protection to form-wound multi-turn coils. Part 2 covers application of surge protection to generators with form-wound multi-turn coils, plus insulation surge withstand strength and surge protection of single-turn coil generators and motors*

IEEE C62.23-2001, Application Guide for Surge Protection of Electric Generating Plants

*Consolidates most electric utility power industry practices, accepted theories, existing standards/guides, definitions, and technical references as they specifically pertain to surge protection of electric power generating plants.*

IEEE C62.31-2006, Standard Test Methods for Low-Voltage Gas-Tube Surge-Protective Device Components

*Applies to gas-tube surge-protective device components for application on systems with voltages less than or equal to 1000 V rms or 1200 V dc. Contains a series of standard test criteria for determining the electrical characteristics of gas-tube surge-protective devices.*

IEEE C62.32-2004, Air Gap Surge-Protective Devices (Excluding Valve and Expulsion-Type Devices), Test Specifications for the Low-Voltage

*Applies to air gaps for over-voltage protection applications on systems with operating voltages equal to or less than 600 Vrms. These protective devices are designed for limiting the voltages on balanced or unbalanced communication and signaling circuits. Contains a series of standard tests for determining the electrical characteristics of these air gap devices.*

IEEE C62.33-1982 (R2000), Varistor Surge-Protective Devices, Test Specifications for

*Applies to varistors for surge protective applications on systems with dc to 420 Hz frequency and voltages equal to or less than 1000 Vrms, or 1200 Vdc.*

IEEE C62.34-1996 (R2002), Performance of Low-Voltage Surge Protective Devices (Secondary Arresters)

*Applies to surge-protective devices designed for application on the low-voltage ac supply mains (1000 V rms and less, frequency between 48 Hz and 62 Hz).*

IEEE C62.35-1987 (R2000), Standard Test Specifications for Avalanche Junction Semiconductor Surge-Portective Devices

*Applies to a two-terminal avalanche junction surge suppressor for surge protective application on systems with dc to 420 Hz frequency and voltages equal to or less than 1000 V rms or 1200 V dc.*

IEEE C62.36-2000 (R2006), Surge Protectors Used in Low Voltage Data Communications and Signaling Circuits, Standard Test Methods

*Methods for testing and measuring the characteristics of surge protectors used in low-voltage data, communications, and signaling circuits with voltages less than or equal to 1000 V rms or 1200 V dc are established.*

IEEE C62.37-1996 (R2002), Standard Test Specification for Thyristor Diode Surge Protective Devices

*Applies to two or three terminal, four or five layer, thyristor surge protection devices (SPDs) for application on systems with voltages equal to or less than 1000 V rms or 1200 V dc.*

IEEE C62.37.1-2000, Guide for the Application of Thyristor Surge Protective Devices

*Applies to thyristor Surge Protective Devices (thyristor SPD) components used in systems with voltages up to 1000 Vrms or 1200 Vdc. These components are designed to limit overvoltages and divert surge currents by voltage clamping and crowbarring (switching to a low impedance) actions.*

IEEE C62.41.1-2002, Guide on the Surge Environment in Low-Voltage (1000 V and Less) AC Power Circuits

*Describes the surge voltage, surge current, and temporary overvoltage environment in low-voltage (up to 1000 V rms) ac power circuits.*

IEEE C62.41.2-2002, Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and Less) AC Power Circuits

*Characterizes the surge environment at locations on ac power cicuits described in Std C62.41.1 by means of standardized waveforms and other stress parameters.*

IEEE C62.42-2005, Guide for the Application of Component

Surge-Protective Devices for Use in Low-Voltage (Equal to or Less Than 1000 Vrms or 1200 Vdc) Circuits

*Assistance in selecting the most appropriate type of low-voltage component surge-ptrotective device (gas tube, air gap, metal-oxide varistor, or avalanche junction semiconductor) for a particular application is provided.*

IEEE C62.43-2005, Guide for the Application of Surge Protectors Used in Low-Voltage (Equal to or Less Than 1000 Vrms or 1200 Vdc) Data, Communications and Signaling Circuits

*Provides assistance in selecting the most appropriate type of surge protector for a particular data, communication, and/or signaling circuit application.*

IEEE C62.45-2002, Equipment Connected to Low-Voltage AC Power Circuits, Guide on Surge Testing for

*Performance of surge testing on electrical and electronic equipment connected to low-voltage ac power circuits, specifically using the recommended test waveforms defined in Std C62.41.2*

IEEE C62.48-2000, Guide on Interactions Between Power System Disturbances and Surge-Protective Devices

*Describes the effects of surge protective devices on power system disturbances occurring in low voltage [50 or 60 Hz ac power circuits rated at 100-1000 V rms] ac power circuits.*

IEEE C62.48-2005, Guide on Interactions Between Power System Disturbances and Surge Protective Devices

*Information is provided to users and manufacturers of surge-protective devices (SPDs) about the interactions that can occur between SPDs and power system disturbances. Applies to SPDs manufactured to be connected to 50 or 60 Hz ac power circuits rated at 100-1000 V rms.*

IEEE C62.62-2000, Test Specifications for Surge-Protective Devices for Low Voltage AC Power Circuits

*Establishes performance characteristics for surge protective devices connected to low-voltage AC power circuits. Develops and recommends standard methods for testing and rating surge protective devices.*

IEEE C62.64-1996, Standard Specifications for Surge Protectors used in Low-Voltage Data, Communications, and Signalling Circuits

*Applies to surge protectors for application on muticonductor and coaxial, balanced or unbalanced, data, communications and signaling circuits with voltages equal to or less than 1000 V rms, or 1200 V dc.*

IEEE C62.92.1-2000 (R2005), Guide for the Application of Neutral Grounding in Electrical Utility Systems, Part 1 - Introduction

*This guide is the introduction to a series of five IEEE guides on neutral grounding in three-phase electrical utility systems. It provides system grounding definitions and considerations that are general to all types of electrical systems.*

IEEE C62.92.2-1989 (R2005), Guide for the Application of Neutral Grounding in Electrical Utility Systems, Part II - Grounding of Synchronous Generator Systems

*This section summarizes the general considerations in grounding synchronous generator systems and discusses the factors to be considered in the selection of a grounding class and the application of grounding methods. The guidelines apply to both the large and small generators found in electric utility systems.*

IEEE C62.92.3-1993 (R2005), Guide for the Application of Neutral Grounding in Electrical Utility Systems, Part III - Generator Auxiliary Systems

*Basic factors and general considerations in selecting the class and means of neutral grounding for electrical generating plant auxiliary power systems are given in this guide.*

IEEE C62.92.4-1991 (R2002), Application Guide for Neutral Grounding of Distribution Systems – Part 4

*Concerned with the neutral grounding of single- and three-phase alternating current (ac) electric utility primary distribution systems with nominal voltages in the range of 2.4 kV to 34.5 kV.*

IEEE C62.92.5-1992 (R2001), Guide for the Application of Neutral Grounding in Electric Utility Systems, Part V – Transmission Systems and Subtransmission Systems

*Gives the basic factors and general considerations in selecting the class and means of neutral grounding for a particular ac transmission or subtransmission system, and the suggested method and apparatus to be used to achieve the desired grounding.*

IEEE C63.011-2000, Limits and Methods of Measurement of Radio Disturbance Characteristics of Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment

*Republishes CISPR 11 as an American National Standard, ANSI C63.011, to make it easily available to US manufacturers, and to take a first step towards achieving commonality between ASC C63 standards and international standards. The ISM equipment contained in the CISPR 11 document is designed to generate and to locally use radio-frequency energy to heat material or accomplish some other physical change. A similar specification is enforced in the US as FCC Part 18.*

IEEE C63.17-2006, Method of Measurements of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices

*This standard sets forth uniform methods of measurement of the electromagnetic and operational compatibility of Unlicensed Personal Communications Services (UPCS) devices. This standard does not cover licensed Personal Communications Services (PCS) devices. The recommended methods are applicable to the radio transmitter and monitoring devices contained in the UPCS device. These methods apply to the measurement of individual UPCS devices. Additional methods may be added to this standard to fulfill future requirements.*

IEEE C63.18-1997, Recommended Practice for an On-Site, Ad-Hoc Test Method for Estimating Radiated Electromagnetic Immunity of Medical Devices to Specific Radio Frequency Transmitters

*Serves as a guide for health-care organizations in evaluating the radiated radio-frequency (RF) electromagnetic immunity of their existing inventories of medical devices to their existing inventories of RF transmitters, as well as transmitters that are commonly available.*

IEEE C63.22-2004, Guide for Automated EMC Measurements

*Provides a guide for automation of conducted and radiated EMI compliance measurements. This document does not include mandatory specifications for automation tools (i.e., application software, automated test equipment, computers and peripherals). Where possible, the guidance provided herein is harmonized with other national and international standards used for similar purposes.*

IEEE C95.1-2006, Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz

*Provides recommendations to protect against harmful effects in human beings exposed to electromagnetic fields in the frequency range from 3 kHz to 300 GHz. Intended to apply in controlled environments and for general population exposure.*

IEEE C95.2-1999, Standard for Radio Frequency Energy and Current Flow Symbols

*Provides a description of warning symbols for radio frequency radiation and radio frequency induced and contact currents in the frequency range of 3 kHz to 300 GHz.*

IEEE C95.2-2005, Standard for Radio-Frequency Energy and Current-Flow Symbols

*Symbols to inform people about the presence of potentially hazardous levels of radio-frequency energy or the presence of contact current hazards in the frequency range of 3 kHz to 300 GHz are specified. Guidance is given about how these symbols should be used on warning signs and labels.*

IEEE C95.3-2002, Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave

*Revises and develops specifications for preferred methods for measuring and computing external radiofrequency electromagnetic fields to which persons may be exposed.*

IEEE C95.4-2002, Recommended Practice for Determining Safe Distances from Radio Frequency Transmitting Antennas When Using Electric Blasting Caps During Explosive Operations

*Provides recommended practices for the prediction and practical determination of safe distances from radio and radar transmitting antennas when using electric balsting caps (initiators) to remotely detonate an explosive charge.*

IEEE C95.7-2005, Recommended Practice for Radio Frequency Safety Programs, 3 kHz to 300 GHz

*Describes the elements of a radio frequency (RF) exposure safety program that can prevent or control potential risks associated with exposure to the electromagnetic fields for RF sources that operate in the frequency range of 3kHz to 300 GHz.*

## IESNA (Illuminating Engineering Society of North America)

ANSI/IESNA DG-3-2000, Design Guide for Application of Luminaire Symbols on Lighting Design Drawings

*Offers a set of symbols and modifiers that are standardized for use by the lighting design community in describing luminaries for lighting applications and design work. The intent is not to prescribe, but rather to describe a basic symbol set and establish guidelines that the lighting industry can use to make a printed and computer aided design (CAD) application easier and more understandable for the user.*

ANSI/IESNA LM-63-2002, File Format for the Electronic Transfer of Photometric Data and Related Information

*Addresses photometric data file formats specifically designed for lighting data transfer. It is often used for data storage and retrieval. It describes how to build a file with such data as number of lamps, candela values for vertical and horizontal angles, orientation of the lamp within the luminaire, and photometric angles.*

ANSI/IESNA LM-73-2004, IESNA Approved Method for Photometric Testing of Entertainment Lighting Luminaires Using Incandescent Filament Lamp or High Intensity Discharge Lamps

*Describes a standard procedure by which entertainment lighting luminaires, specifically designed for use in the theater or TV environments, can be measured.*

ANSI/IESNA RP-1-2004, Recommended Practice on Office Lighting

*Provides useful, practical information on office lighting, not only on the technical issues, but also on design elements that can produce a productive and pleasant environment. Both visibility values (quality and quantity of light) and aesthetic values (worker perception and mood) must coalesce for successful office lighting.*

ANSI/IESNA RP-11-1995, Design Criteria for Lighting Interior Living Spaces

*Guide for designing lighting for residential living spaces and other spaces with a residential atmosphere, such as waiting rooms, reception areas, eating areas, executive suites and lounges.*

ANSI/IESNA RP-16-2005, Nomenclature and Definitions for Illuminating Engineering

*The standard reflects advances in lighting technology and new lighting terminology and updates terms and definitions for illuminating engineering.*

ANSI/IESNA RP-22-2005, Recommended Practice for Tunnel Lighting

*Information to assist engineers in determining lighting needs, recommending solutions, and evaluating resulting visibility at vehicular tunnel approaches and interiors. Also for use by administrators in providing a safe visual environment within a tunnel day and night.*

ANSI/IESNA RP-26-95, Lighting Casino and Gaming Facilities

ANSI/IESNA RP-27.1-2005, Recommended Practice for Photobiological Safety for Lamps and Lamp Systems – General Requirements

*The evaluation and control of optical radiation hazards from electrically powered light sources (that emit in wavelength range of 200 nm - 3,000 nm) except for LEDs and lasers.*

ANSI/IESNA RP-27.2-2000, Recommended Practice on Photobiological Safety for Lamps and Lamp Systems – Measurement Techniques

*Measures sources for the purpose of hazard evaluation for photobiological safety of lamps and lamp systems. The standard is to be used by the radiometrist for guidance regarding special problems related to photobiological hazard measurements. Additionally, specific recommendations are included to provide consistency and to reduce test design time and effort.*

ANSI/IESNA RP-27.3-1996, Recommended Practice for Photobiological Safety for Lamps - Risk Group Classification and Labeling

*Provides information about potential radiation hazards that may be associated with various lamps and lamp systems, and provides guidance, advice, and standard methods for evaluating and informing the user.*

ANSI/IESNA RP-28-2001, Recommended Practice on Lighting and the Visual Environment for Senior Living

*Discusses how lighting can be used both to enhance the physical characteristics of a visual task and to tune an individual's visual system to make it maximally sensitive to the task at hand. This practice is necessary because elderly persons often require special lighting considerations as they need unusually large amounts of light to optimize visual performance or, paradoxically, because normal amounts of light are debilitating to them.*

ANSI/IESNA RP-29-2006, Lighting for Hospitals and Health Care Facilities

*Lighting concepts and design solutions for various health care facilities with focus on patient sensibilities and comfort needs.*

ANSI/IESNA RP-3 -2006, Recommended Practice on Lighting for Educational Facilities: High School and College

*This recommended practice explains the principles of good lighting for learning and study activities for all levels of education. It explains the role of lighting in supporting the learning process and how the design of lighting systems must be closely related to the various types of instructional media used.*

ANSI/IESNA RP-30-1996, Recommended Practice on Museum and Art Gallery Lighting

*Enhances the decision-making process by providing specific standards for sastisfying the special reqirements of museums and art galleries; offers guidance on decisions that must balance exhibition and conservation needs and enrich the museum experience for visitors.*

ANSI/IESNA RP-8-2000 (R2005), Practice for Roadway Lighting

*Recommendations on the design of new, continuous fixed lighting systems for roadways, adjacent bikeways and pedestrian areas using one or a combination of methods; illuminance, luminane, and small target visibility.*

ANSI/IESNA RP7-2001, Practice for Industrial Lighting

*Provides a successful lighting design for a modern industrial facility is a complex task. Designing an efficient, reliable and easily maintainable lighting system requires experience and planning. RP-7 covers quality factors for consideration, required quantity of light for various tasks, key lighting equipment considerations, supplementary lighting needs, and special effects and techniques.*

## IESO (Indoor Environmental Standards Organization)

## IEST (Institute of Environmental Sciences and Technology)

ANSI/IEST/ISO 14644-1-1999, Cleanrooms and associated controlled environments--Part 1: Classification of air cleanliness

*This part of ISO 14644 covers the classification of air cleanliness in cleanrooms and associated controlled environments exclusively in terms of concentration of airborne particles. Only particle populations having cumulative distributions based on threshold (lower limit) sizes ranging from 0,1 µm to 5 µm are considered for classification purposes. This part of ISO 14644 does not provide for classification of particle populations that are outside of the specified particle size range, 0,1 µm to 5 µm. Concentrations of ultrafine particles (particles smaller than 0,1 µm) and macroparticles (particles larger than 5 µm) may be used to quantify these populations in terms of U descriptors and M descriptors, respectively. This part of ISO 14644 cannot be used to characterize the physical, chemical, radiological, or viable nature of airborne particles. Note: The actual distribution of*

ANSI/IEST/ISO 14644-2-2000, Cleanrooms and associated controlled environments--Part 2: Specifications for testing and monitoring to prove continued compliance with IEST/ISO 14644-1:1999

*This part of ISO 14644 specifies requirements for periodic testing of a cleanroom or clean zone to prove its continued compliance with ISO 14644-1 for the designated classification of airborne particulate cleanliness. These requirements invoke the test described in ISO 14644-1 for classification of a cleanroom or clean zone. Additional tests are also specified, to be carried out in accordance with the requirements of this part of ISO 14644. Optional tests, to be applied at the user's discretion, are also identified. This part of ISO 14644 also specifies requirements for monitoring of a cleanroom or clean zone (hereafter referred to as an installation) to provide evidence of its continued compliance with ISO 14644-1 for the designated classification of airborne particulate cleanliness.*

ANSI/IEST/ISO 14644-3-2005, Cleanrooms and associated controlled environments - Part 3: Test methods

*This part of ISO 14644 specifies test methods for designated classification of airborne particulate cleanliness and for characterizing the performance of cleanrooms and clean zones. Performance tests are specified for two types of cleanrooms and clean zones: those with unidirectional flow and those with non-unidirectional flow, in three possible occupancy states: as-built, at-rest and operational. The test methods recommend test apparatus and test procedures for determining performance parameters.*

ANSI/IEST/ISO 14644-4-2001, Cleanrooms and associated controlled environments-Part 4: Design, construction and start-up

*This part of ISO 14644 specifies requirements for the design and construction of cleanroom installations but does not prescribe specific technological or contractual means to meet these requirements. It is intended for use by purchasers, suppliers and designers of cleanroom installations and provides a checklist of important parameters of performance. Construction guidance is provided, including requirements for start-up and qualification. Basic elements of design and construction needed to ensure continued satisfactory operation are identified through the consideration of relevant aspects of operation and maintenance. Note: Further guidance in respect of the above requirements is given in annexes A to H. Other parts of ISO 14644 may provide complementary information. Application of this part of ISO 14644 is restricted in the following: user requirements are represented*

ANSI/IEST/ISO 14644-5-2004, Cleanrooms and associated controlled environments-Part 5: Operations

*This part of ISO 14644 specifies basic requirements for cleanroom operations. It is intended for those planning to use and operate a cleanroom. Aspects of safety that have no direct bearing on contamination control are not considered in this part of ISO 14644 and national and local safety regulations must be observed. This document considers all classes of cleanrooms used to produce all types of products. Therefore, it is broad in application and does not address specific requirements for individual industries. Methods and programmes for routine monitoring within cleanrooms are not covered in detail in this part of ISO 14644 but reference is made to ISO 14644-2 and ISO 14644-3 for monitoring particles and ISO 14698-1 and ISO 14698-2 for monitoring micro-organisms.*

ANSI/IEST/ISO 14644-7-2004, Cleanrooms and associated controlled environments-Part 7: Separative devices (clean air hoods, gloveboxes, isolators and minienvironments

*This part of ISO 14644 specifies the minimum requirements for the design, construction, installation, test and approval of separative devices, in those respects where they differ from cleanrooms as described in ISO 14644-4 and 14644-5. The application of this part of ISO 14644 takes into account the following limitations: user requirements are as agreed by customer and supplier; application-specific requirements are not addressed; specific processes to be accommodated in the separative-device installation are not specified; fire, safety and other regulatory matters are not considered specifically; where appropriate, national and local regulations apply. This part of ISO 14644 is not applicable to full-suits.*

ANSI/IEST/ISO 14644-8-2006, Cleanrooms and associated controlled environments - Part 8: Classification of airborne molecular contamination

*This part of ISO 14644 covers the classification of airborne molecular contamination (AMC)in cleanrooms and associated controlled environments, in terms of airborne concentrations of specific chemical substances (individual, group or category) and provides a protocol to include test methods, analysis and time weighted factors within the specification for classification. (Full scope as presented in Standard includes additional limitations.*

## IIAR (International Institute of Ammonia Refrigeration)

ANSI/IIAR 2-1999, Addendum a-2005, Equipment, Design, and Installation of Ammonia Mechanical Refrigerating Systems

*Revisions and additions to First Public Review Draft of proposed Addendum a to ANSI/IIAR 2-1999. Revisions and additions pertain to the following sections of the First Public Review Draft: proposed change #2 (affecting Section 7.3.4), proposed change #3 (affecting new Informative Appendix F); and addition of proposed change #9 (affecting Informative Appendix A). ANSI/IIAR 2-1999 is an American National Standard for the design, fabrication, manufacture, installation and use of ammonia mechanical refrigerating systems.*

ANSI/IIAR 2-1999, Equipment, Design, and Installation of Ammonia Mechanical Refrigerating Systems

*Provides a guide to the design, manufacture, installation, and use of ammonia mechanical refrigerating systems in industrial occupancies. It is not intended to supplant existing safety codes. This is the second public review for this standard. It was originally listed in the March 28, 1997 issue of Standards Action. It is being resubmitted due to substantive changes in the text.*

ANSI/IIAR 3-2005, Ammonia Refrigeration Valves

*Specifies criteria for materials, design parameters, marking and testing for valves and strainers. The proposed standard is intended to apply to shut-off valves, control valves, and strainers designed and manufactured for use in closed circuit refrigerating systems where ammonia is used as the refrigerant. Public Review Draft #2 concerns a modification made to one section of the new proposed standard.*

## IICRC (Institute of Inspection, Cleaning and Restoration

ANSI/IICRC S500-2006, IICRC S500 Standard and Reference Guide for Professional Water Damage Restoration

*This Standard describes the procedures to be followed and the precautions to be taken when performing water damage restoration in residential, commercial and institutional buildings, and the systems and personal property contents of those structures. This Standard assumes that the determination and correction of the underlying source or cause of the water intrusion leading to the water damage is the responsibility of the property owner and not the restorer, although the property owner may contract with the restorer or other specialized experts to perform these services.*

## IIE (Institute of Industrial Engineers)

ANSI Z94.1-1998, Analytical Techniques and Operations Research

*Provides definitions of analytical techniques and operations research terms.*

ANSI Z94.10-1998, Management

*Defines Management terms.*

ANSI Z94.11-1998, Manufacturing Systems

*Provides definitions of manufacturing systems*

ANSI Z94.12-1998, Materials Processing

*Defines Materials Processing terms.*

ANSI Z94.13-1998, Occupational Health and Safety

*Defines Occupational Health and Safety terms.*

ANSI Z94.14-1998, Operations and Inventory Planning and Control

*Defines Operations and Inventory Planning and Control terms.*

ANSI Z94.15-1998, Organization Planning and Theory

*Defines Organization Planning and Theory terms.*

ANSI Z94.16-1998, Quality Reassurance and Reliability

*Defines Quality Reassurance and Reliability*

ANSI Z94.17-1998, Work Design and Measurement

*Defines Work Design and Measurement terms.*

ANSI Z94.2-1998, Anthropometry and Biomechanics

*Defines Anthropometry and Biomechanics terms.*

ANSI Z94.3-1998, Computer and Information Systems

*Defines Computer and Information Systems*

ANSI Z94.4-1998, Cost Engineering and Project Management

*Defines Cost Engineering and Project Management terms.*

ANSI Z94.5-1998, Distribution and Marketing

*Defines Distribution and Marketing terms.*

ANSI Z94.6-1998, Employee and Industrial Relations

*Defines Employee and Industrial Relations terms.*

ANSI Z94.7 -1998, Engineering Economy

*Defines Engineering Economy terms.*

ANSI Z94.8-1998, Facility Planning and Design

*Defines Facility Planning and Design terms.*

ANSI Z94.9-1998, Human Factors (Ergonomics) Engineering

*Defines Human Factors (Ergonomics) terms.*

## INELA (Institute for National Environmental Laboratory

## INMM (Institute of Nuclear Materials Management)

ANSI N14.1 Addendum 1-2001, Uranium Hexafluoride - Packaging for Transport

*Defines the material used in the construction of the valve protector. The material description has been changed to include UNS designations.*

ANSI N14.1-2001 Addendum 2-2004, Uranium Hexafluoride - Packaging for Transport

*Add an additional design for the Type 30B cylinder. This cylinder design will be an available option to current cylinder designs. Retro-fitting existing 30B cylinders with a water-tight valve cover/protector will also be approved. Addendum 2 will also be used to approve the addition of new adapters, valves, and cleaning fluxes for the Type 1S and 2S cylinders*

ANSI N14.1-2001, Addendum 3-2005, Packaging of Uranium Hexafluoride for Transport

*Standard for the packaging and transportation of fissile and radioactive material but not including movement or handling during processing and manufacturing operations. This is Addendum #3 to the 2001 edition of ANSI N14.1. This addendum will allow the use of a flush mounted cylinder plug instead of the Hex Head plug currently being used.*

ANSI N14.1-2001, Nuclear Materials – Uranium Hexafluoride – Packaging for Transport

*Provides criteria for packaging of uranium hexafluoride (UF6) for transport. This standard also defines the requirements for in-service inspections, cleanliness, and maintenance for packagings in service. Also included are cylinder loadings shipping details, and requirements for valves and valve protectors.*

ANSI N14.27-200x, Carrier and Shipper Responsibilities and Emergency Response Procedures for Highway Transportation Accidents

*Encompasses the preparation and execution by carriers and shippers of their emergency response program. [It does not include the responsibilities of the "first-on-the-scene" response personnel, the actions of governmental authorities, or the specific responsibilities of the carrier or shipper during recovery operations.]*

ANSI N14.33-2005, Storage and Transport of Damaged Spent Nuclear Fuel

*This standard defines terms related to dry storage and transport of damaged spent nuclear fuel. It establishes procedures for identifying, categorizing, and managing damaged fuel. The standard provides methods for identifying and classifying damaged spent nuclear fuel; preparation and handling requirements for damaged spent nuclear fuel for dry storage and transport; and requirements for record keeping and quality assurance.*

ANSI N14.5-1997, Radioactive Materials – Leakage Tests on Packages for Shipment

*Presents information leakage tests on packages for shipment.*

ANSI N15.51-1990 (R2006), Measurement Control Program - Nuclear Materials Analytical Chemistry Laboratory

*This standard provides the principal elements of a measurement control program for an analytical chemistry laboratory supporting nuclear fuel cycle activities. The ability to safely manage and to maintain accounts of these materials requires measurement of the materials as they are produced, used, shipped, stored, and inventoried. A comprehensive measurement control program demonstrates the reliability of the measurement data, quantifies the performance of the measurement system, assures that the measurements used in the nuclear industry are suitable for their intended use, and provides for detection and correction of adverse changes.*

## IPC (IPC - Association Connecting Electronics Industries)

ANSI J-STD-005, Amendment 1-1997, Requirements for Soldering Paste

ANSI/IPC 0040-2003, Optoelectronic Assembly and Packaging Technology

*Addresses the implementation of optical and optoelectronic packaging technologies. The areas discussed include: technology choices, design considerations, material properties, component mounting and interconnecting structures, assembly processes, testing, application, rework, and reliability of completed optoelectronic products. Optoelectronic packaging technologies include active and passive components and discrete fiber cable, their characteristics, and the manner that these parts will become an integral part of the functioning module, board or sub-assembly.*

ANSI/IPC 1066-2004, Marking, Symbols and Labels for Identification of Lead Free and Other Reportable Materials in Lead Free Assemblies, Components and Devices

*Establishes the requirements for a distinctive symbol and labels to be used to identify materials that are lead-free (Pb-free) and are capable of providing Pb-free 2nd level interconnects, and for indicating certain types of Pb-free materials and the maximum allowable soldering temperature. It also establishes the requirements for labeling a bare board if the base resin is halogen free and the type of conformal coating used after assembly.*

ANSI/IPC 1730A-2000, Laminator Qualification Profile (LQP)

*Provides the Laminator Qualification Profile (LQP), which is not intended to satisfy all of the customer's requirements. However, conscientious maintenance of this document and/or registration to ISO 9000 requirements should satisfy the major concerns. Thus, audits should be simpler, required less frequently, and facilitate less paperwork, as vendors and suppliers work closer to meeting each other's needs. Order From: ansirequests@ipc.org*

ANSI/IPC 1731-2000, Strategic Raw Materials Supplier Qualification Profile (SRMSQP)

*Provides information not intended to satisfy all of the customer's requirements, however conscientious maintenance of this document and/or registration to ISO 9000 requirements should satisfy the major concerns. Thus, audits should be simpler, required less frequently, and facilitate less paperwork, as vendors and suppliers work closer to meeting each other's needs. To obtain an electronic draft: ansirequests@ipc.org*

ANSI/IPC 2221-1998, Design Standard for Rigid Printed Boards and Rigid Printed Board Assemblies

*Establishes the generic requirements for the design of organic printed boards and other forms of component mounting or interconnecting structures.*

ANSI/IPC 2223-1999, Sectional Design Standard for Flexible Printed Boards

*Establishes the specific requirements for the design of flexible printed wiring applications and its forms of component mounting and interconnecting structures. The flexible materials used in the structures comprise insulating films, reinforced and/or non-reinforced, dielectric in combination with metallic materials. These interconnecting boards may contain single, double, multilayer, or multiple conductive layers and can be composed wholly of flex or a combination of both flex and rigid.*

ANSI/IPC 2225-1999, Sectional Design Standard for Organic Multichip Modules (MCM-L) and MCM-L Assemblies

*Establishes the specific requirements and other considerations (thermal, electrical, electromechanical, and mechanical) for the design of organic mounting structure used to interconnect chip components, which in combination form the completed functional Single Chip Module (SCM-L), MCM, or MCM-L assemblies.*

ANSI/IPC 2501-2003, Definition for Web-Based Exchange of XML Data

*IPC-2501 establishes the governing semantics and an XML based syntax for shop floor communication between electronic assembly equipment and associated software applications. This standard outlines the communication architecture and supporting XML messages. The required programmatic actions that define the choreography between sender and receiver have also been defined.*

ANSI/IPC 2511B-2002, Generic Requirements for Implementation of Product Manufacturing Description Data and Transfer Methodology

*This standard specifies the XML schema that represents the data file format used to describe printed board and printed board assembly products with details sufficient for tooling, manufacturing, assembly, inspection and testing requirements. This format may be used for transmitting information between a printed board designer and a manufacturing or assembly facility. The data is most useful when the manufacturing cycle includes computer-aided processes and numerical control machines.*

ANSI/IPC 2541-2001, Generic Requirements for Electronics Manufacturing Shop Floor Equipment Communication (CAMX)

*Defines an XML encoding schema to facilitate plug-and-play characteristics in a factory's shop-floor information system. This standard describes the generic event message content, and should be used together with the IPC-2540 series sectional documents, which define the set of messages and key attributes of specific classes of equipment used in the electronics manufacturing area.*

ANSI/IPC 2546 Amendment 1-2003, Sectional Requirements for Specific Printed Circuit Board Assembly Equipment

*This amendment covers the screen printing section of IPC-2546 and includes editorial changes to the core document. IPC-2546 establishes requirements and other considerations for the interchange of information between shop floor electronic assembly equipment and factory information systems. Information may consist of attribute and parametric data, product data, process recipes, equipment monitoring and control, resource utilization, and material consumption.*

ANSI/IPC 2546-2001, Sectional Requirements for Specific Printed Circuit Board Assembly Equipment

*Defines an XML encoding scheme, which enables a detailed definition of electronics assembly equipment messages to be encoded at a level appropriate to facilitate the plug-and-play characteristics in the factory/shop-floor integration process.*

ANSI/IPC 2547-2002, Sectional Requirements for Shop-Floor Equipment Communication Messages (CAMX) for Printed Circuit Board Test, Inspection and Rework

*This standard establishes requirements and other considerations for the interchange of information between shop floor electronic inspection and test equipment and factory information systems. Information may consist of attribute and parametric data, product data, fixture files, test vectors, equipment monitoring and control, resource utilization, image data, test and inspection program sets, test event data..Keywords: Test vehicles, test fixtures, ATE, test probes, AOI, AXI,MDA, PDU, SML, web enabled, HTTP, supervisory control.*

ANSI/IPC 2571-2001, Generic Requirements for Electronics Manufacturing Supply Chain Communication - Product Data eXchange (PDX)

*Defines an XML encoding scheme that enables a total product definition to be described at a level appropriate to facilitate supply chain interactions. The scheme is defined for bill of materials (BOM), approved manufacturer list (AML), changes (Engineering, Manufacturing, Product) and references to documents describing geometric and other definition characteristics.*

ANSI/IPC 2576-2001, Sectional Requirements for Electronics Manufacturing Supply Chain Communication of As-Built Product Data - Product Data eXchange (PDX)

*Covers the sectional requirements for product genealogy, or as-built manufacturing information. The standard facilitates the exchange of manufacturing information between supply chain partners to support warranty tracking, product excursion containment, and product quality functions.*

ANSI/IPC 2578-2001, Sectional Requirements for Supply Chain Communication of Bill of Material and Product Design Configuration Data - Product Data eXchange

*Covers the sectional requirements for the exchange of Bills of Material (BOM), Approved Manufacturer Lists (AML), Approved Supplier Lists (ASL), as well as the description of the components involved on the Bill of Material. Component data includes electrical, mechanical and package type. This standard also contains change history for Engineering Change Orders (ECO), and can capture Multiple Change Order (MCO) information.*

ANSI/IPC 2578-2001, Sectional Requirements for Supply Chain Communication of Bill of Material and Product Design Configuration Data - Product Data eXchange

*Covers the sectional requirements for the exchange of Bills of Material (BOM), Approved Manufacturer Lists (AML), Approved Supplier Lists (ASL), as well as the description of the components involved on the Bill of Material. Component data includes electrical, mechanical and package type. This standard also contains change history for Engineering Change Orders (ECO), and can capture Multiple Change Order (MCO) information.*

ANSI/IPC 2581-2004, Generic Requirements for Printed Board Assembly Products Manufacturing Description Data and Transfer Methodology

*This standard specifies the XML schema that represents the data file format used to describe printed board and printed board assembly products with details sufficient for tooling, manufacturing, assembly, and inspection requirements. This format may be used for transmitting information between a printed board designer and a manufacturing or assembly facility. The data is most useful when the manufacturing cycle includes computer-aided processes and numerical control machines.*

ANSI/IPC 4101A-2002, Specification for Base Materials for Rigid and Multilayer Printed Boards

*This specification covers the requirements for base materials herein referred to as laminate or prepreg, to be used primarily for rigid or multilayer printed boards for low frequency electrical and electronic circuits.*
*Revision, Redesignation and Consolidation of ANSI/IPC-108-1990, ANSI/IPC-109-1992, ANSI/IPC-112-1992 & ANSI/IPC-115-1990.*

ANSI/IPC 4101A-Amendment 1-2002, Specification for Base Materials for Rigid and Multi-layer Printed Boards

*To correct the values of the Permittivity and Los Tangent properties for Specification Sheet IPC-4101/26.*

ANSI/IPC 4103-2002, Specification for Base Materials for High Speed/High Frequency Applications

*Covers the requirements for high speed/high frequency performance base materials, herein referred to as laminate or bonding films, to be used primarily for the fabrication of rigid or multilayer printed boards for high speed/high frequency electrical and electronic circuits. This specification applies to material thickness defined in the specification sheets as measured over the dielectric only.*

ANSI/IPC 4110-1998, Specification and Characterization Methods for Nonwoven Cellulose Based Paper for Printed Boards

*Covers paper made from cellulose fibers intended as a reinforcing material in laminated.*

ANSI/IPC 4121-1999, Guidelines for Selecting Core Constructions for Multilayer Printed Wiring Boards

*Defines guidelines for selecting core constructions in terms of fiberglass fabric style and configuration for use in multilayer PWB applications. Each core construction is given a registration number for ordering purposes. Every effort shall be made to periodically review the construction guideline and include or exclude constructions based on current data. This standard was redesignated from BSR/IPC CC-110A to BSR/IPC 4121. This is the third public review for this standard. It was originally listed in the September 17, 1993 and the July 31, 1998 issues of Standards Action. It is being resubmitted due to Substantive changes to the text.*

ANSI/IPC 4130-1998, Specification and Characterization Methods for Nonwoven "E" Glass Mat

*Covers material made from nonwoven "E" glass fibers intended as a reinforcing material in laminated plastics for electrical and electronic use.*

ANSI/IPC 4202-2002, Flexible Bare Dielectrics for Use in Flexible Printed Wiring

*This standard establishes the classification system, the qualification and quality conformance requirements for flexible metal-clad dielectric materials to be used for the fabrication of flexible printed wiring and flexible flat cable.*
*This specification supersedes IPC-FC-241C and the requirements herein meet or exceed the requirements for Class 3 in this superseded document. Note that conformance to Class 3 met or exceeded conformance to Classes 1 and 2. IPC-4204 no longer utilizes the 3-class system. This standard supersedes IPC FC-231C.*

ANSI/IPC 4203-2002, Adhesive coated Dielectric Films for Use as Cover Sheets for Flexible Printed Wiring and Flexible Adhesive Bonding Films

*This Standard establishes the classification system, the qualification and quality conformance requirements for dielectric films coated with an adhesive on one side, which are to be used as cover sheets for flexible printed wiring, dielectric films coated on one side or twosides with adhesive and unsupported adhesive films to be used in the fabrication of flexible printed wiring. This standard supersedes IPC FC-232C and FC-233A.*

ANSI/IPC 4204-2002, Flexible Metal-Clad Dielectrics for Use in Fabrication of Flexible Printed Wiring

*This standard establishes the classification system, the qualification and quality conformance requirements for flexible metal-clad dielectric materials to be used for the fabrication of flexible printed wiring and flexible flat cable.*
*This specification supersedes IPC-FC-241C and the requirements herein meet or exceed the requirements for Class 3 in this superseded document. Note that conformance to Class 3 met or exceeded conformance to Classes 1 and 2. IPC-4204 no longer utilizes the 3-class system.*

ANSI/IPC 4411-1999, Specification and Characterization Methods for Nonwoven Para-Aramid Reinforcement

*Covers reinforcement made from nonwoven para-aramid fibers intended as a material for use in laminated plastics for electrical and electronic applications.This standard was first listed in the July 3, 1998 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/IPC 4412-2002, Specification for Finished Fabric Woven from “E” Glass for Printed Boards

*Covers finished fabrics woven from "E" glass electrical grade glass fiber yarns that are intended as a reinforcing material in laminated plastics for electrical and electronic use. All fabrics covered by this specification are plain weave.*

ANSI/IPC 4552-2002, Specification for Electroless Nickel/Immersion Gold (EMIG) Plating for Printed Circuit Boards

*This specification sts the requirements for the use of Electroless Nickel/Immersion Gold (EMIG) as a surface finish for printed circuit boards. This specification is intended to set requirements for ENIG deposit thicknesses based on performance criteria. It is intended for use by supplier, printed circuit manufacturer, electronics manufacturing Services (EMS) and original equipment manufacturers (OEM)*

ANSI/IPC 4553-2005, Specification for Immersion Silver Plating for Printed Circuit Boards

*This specification covers the use of immersion silver plating as a final finish for printed circuits for applications such as SMT component pads, conductors, membrane switch contacts and ZIF edge board connectors.*

### ANSI/IPC 4562-2000, Metal Foil for Printed Wiring Applications

*Covers metal foils supported by carrier films and unsupported foils suitable for subsequent use in printed boards. Unless otherwise agreed upon between user and supplier, metal foils shall be considered acceptable, so long as the requirements in this specification are met. This standard was listed for public review in the February 11, 2000, March 24, 2000, and May 5, 2000 issues of Standards Action. It is being resubmitted due to substantive changes to the text. Electronic document can be obtained at ansirequests@ipc.org*

### ANSI/IPC 6013 Amd-1-2000, Qualification and Performance Specification for Flexible Printed Boards

*Covers performance of flexible printed wiring. The flexible printed wiring may be single-sided, double-sided with or without stiffeners, multilayer with or without stiffeners and rigid-flex multilayer. This standard was originally listed for public review in the February 11, 2000 issue of Standard Action. It is being resubmitted due to substantive changes to the text.To obtain an electronic draft: ansirequests@ipc.org.*

### ANSI/IPC 6013-1999, Qualification and Performance Specification for Flexible Printed Wiring

*This specification covers performance of flexible printed wiring. The flexible printed wiring may be single-sided, double-sided with or without stiffeners, multilayer with or without stiffeners and rigid-flex multilayer.*

### ANSI/IPC 6016-1999, Qualification and Performance Specification for High Density Interconnect (HDI) Layers or Boards

*Establishes the specific requirements for the organic High-Density Interconnect (HDI) structures with Microvia Technology, and the quality and reliability assurance requirements that must be met for their acquisition.*

### ANSI/IPC 6018A-2002, Microwave End Product Board Inspection and Test

*Covers end product inspection and test of high frequency (microwave) printed boards for microstrip, stripline, hybrid and multilayer stripline applications.This specification covers end product inspection and test of high frequency (microwave) printed boards for microstrip, stripline, hybrid and multilayer stripline applications.*

### ANSI/IPC 7095A-2006, Design and Assembly Process Implementation for BGAs

*Describes the design and assembly challenges for implementing Ball Grid Array (BGA) and fine pitch BGA (FBGA) technology. The effect of BGA and FBGA on current technology and component types is also addressed. This document focuses on critical inspection, repair, and reliability issues associated with BGAs.*

### ANSI/IPC 7525-2000, Stencil Design Guidelines

*Provides guides for the design and fabrication of stencils for solder paste and surface-mount adhesive. Topics addressed include stencil data specification, aperture design, stencil fabrication, stencil mounting and stencil purchasing. To obtain an electronic draft: ansirequests@ipc.org.*

### ANSI/IPC 7912A-2004, End-Item DPMO for Printed Circuit Board Assemblies

*Intended to define standard methods for the categorization of defects related to electronic printed board assemblies (PBAs). This document will provide consistent methodologies for calculating the following benchmark indices: Defects Per Million Opportunities Index (DPMO Index), Component DPMO, Placement DPMO, Termination DPMO, Overall Manufacturing Index (OMI). Both DPMO and OMI imply a measurement taken on completed product.*

### ANSI/IPC 9191-1999, General Requirements for Implementation of Statistical Process Control

*Describes the general requirements for implementation of statistical process control, and is intended for use by individuals in electronics or other industries involved in planning, implementation, and evaluation of an SPC system. Outlines SPC philosophy, implementation strategies, tools and techniques. These may be applied in different sequences depending on the specific company, operation or variable under consideration. These tools are also used for relating process control and capability to end-product requirements. This is the second public review for this standard. It was originally listed in the June 4, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text. Order from ansirequests@ipc.org.*

### ANSI/IPC 9252-2001, Guidelines and Requirements for Electrical Testing of Unpopulated Printed Boards

*Assists in selecting the test analyzer, test parameters, test data, and fixturing required to perform electrical test(s) on all unpopulated printed boards without embedded components (i.e., resistors, capacitors, etc.).*

### ANSI/IPC 9261-2002, In-Process DPMO and Estimated Yield for PWAs

*Defines standard methodologies for calculating defects per million opportunities (DPMO) metrics related to electronic printed board assembly processes. It is intended for use in measuring in-process assembly steps rather than end product determination. Calculation of completed item DPMO is addressed in IPC-7912.*

### ANSI/IPC 9504-1998, Assembly Process Simulation for Evaluation of Non-IC Components

*Describes manufacturing process simulations for use with applicable component specifications to ensure that electronic components can meet expected reliability requirements after exposure to assembly factory processes.*

ANSI/IPC 9701-2002, Qualification and Performance Test Methods for Surface Mount Solder Attachments

*This specification establishes specific test methods to evaluate the performance and reliability of surface mount solder attachments of electronic assemblies. It further establishes different levels of performance and reliability of the solder attachments of surface mount devices to rigid, flexible and rigid-flex circuit structures. In addition, it provides an approximate means of relating the results from these performance tests to the reliability of solder attachments for the use environments and conditions of electronic assemblies.*

ANSI/IPC 9850-2002, Surface Mount Equipment Characterization

*This standard establishes the procedures to characterize machine placement capability of surface mount assembly equipment in specification documents as well as in documentation used to verify a specific machine's placement capability conformance to the specification, while maintaining a placement accuracy to placement speed relationship.*

ANSI/IPC A-600-F-1999, Acceptability of Printed Boards

*This document describes the preferred, acceptable, and non-conforming conditions that are either externally or internally observable on printed boards. It represents the visual interpretation of minimum requirements set forth in various printed board specifications, i.e.: IPC-6010, IPC-FC-250, MIL-P-55110, MIL-P-50884, ANSI/J-STD-003, etc.*

ANSI/IPC A-610D-2005, Acceptability of Printed Board Assemblies

*This document presents acceptance requirements for the manufacture of electrical and electronic assemblies. Historically, electronic assembly (soldering) standards contained a more comprehensive tutorial addressing principles and techniques. For a more complete understanding of this document's recommendations and requirement, one may use this document in conjunction with IPC-HDBK-001, and IPC/EIA J-STD-001.*

ANSI/IPC CC-830A AMD 1-1999, Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies

*Comprises the industry standard for qualifying conformal coatings. Amendment 1 addresses its position in relation to MIL-I-46058. To obtain an electronic draft: ansirequest@ipc.org*

ANSI/IPC CF-148A-1998, Resin-Coated Metal for Printed Boards

*Establishes the requirements for metal foils coated with a resin or composite of resins on one side that are to be used for the fabrication of printed boards. Unless otherwise agreed to between user and supplier. Resin coated metal foils shall be considered acceptable if the requirements in this document are met..*

ANSI/IPC CH-65A-1999, Guidelines for Cleaning of Printed Boards

*Serves as an updated, user-friendly road map for fabrication and assembly cleaning, which covers both current and emerging technologies. The document shows the relationship of contaminants, processes, equipment, and cleaning methods. To obtain an electronic draft: ansirequest@ipc.org.*

ANSI/IPC HDBK-610-2002, Handbook and Guide to IPC-A-610 (Includes IPC-A-610B and C Comparison)

*The intent of this handbook is to explain the technical rationale for selected Acceptability, Process Indicator and Defect criteria and to present beneficial information regarding assembly technology. In addition, other supporting information is provided to give a broader understanding of the process considerations needed for the production of acceptable hardware. The target reader of this handbook is a inspection supervisor, inspector, process or manufacturing engineer. Will include a cross reference/change analysis between IPC-A-610B and C.*

ANSI/IPC J-STD-001D-2005, Requirements for Soldered Electrical and Electronic Assemblies

*Prescribes practices and requirements for the manufacture of soldered electrical assemblies. Historically, electronic assembly (soldering) standards contained a more comprehensive tutorial addressing principles and techniques. For a more complete understanding of this document's recommendations and requirement, one may use this document in conjunction with IPC-HDBK-001, IPC-A-610 and IPC-HDBK-610.*

ANSI/IPC J-STD-004A-2004, Requirements for Soldering Fluxes

*Propose to revise and incorporate Amendment 1 and add new data.*

ANSI/IPC SC-60A-1999, Post Solder Solvent Cleaning Handbook

*Addresses solvent cleaning of electrical/electronic assemblies, parts and application tools after soldering. It is intended to serve as a guide for the selection and improvement of solvent cleaning processes.*

ANSI/IPC SM-840C Amendment 1-2000, Qualification and Performance of Permanent Solder Mask

*Prescribes qualification and performance requirements of permanent solder mask. Amendment 1 addresses Telcordia Technologies' (formerly Bellcore's) position towards this standard. It calls out newly revised test methods and updated requirements for formulation change. To obtain an electronic draft: ansirequests@ipc.org*

ANSI/IPC WHMA-A-620-2002, Requirements and Acceptance for Cable and Wire Harness Asssemblies

*Describes acceptability criteria for producing crimped, mechanically secured, or soldered interconnections and the associated lacing/restraining criteria associated with cable and harness assemblies.*

ANSI/IPC-CC-830B-2002, Electrical Insulating Compound for Printing Board Assemblies, Qualifications and Performance of

*Establishes qualification and conformance requirements for electrical insulating compound (conformal coating). This standard covers the qualification and qualification retention of the conformal coating material, as well as the quality conformance of conformal coating material properties.*

ANSI/IPC/EIA J-STD-002B-2003, Solderability Tests for Component Leads, Terminations, Lugs, Terminals, and Wires

*Prescribes test methods, defect definitions, acceptance criteria, and illustrations for assessing the solderability of electronic components, leads, terminations, solid wire, stranded wire, lugs, and tabs. This standard is intended for use by both vender and user.*

ANSI/IPC/EIA J-STD-006A-2002, Requirements for Electronic Grade Solder Alloys and Fluxed and Non-Fluxed Solid Solders for Electronic Soldering Applications

*Prescribes the nomenclature, requirements and test methdos for electronic grade solder alloys; for fluxed and non-fluxed bar, ribbon, and powder solders, for electronic soldering applications; and for "special" electronic grade solders.*

ANSI/IPC/JEDEC J-STD-020B-2002, Telecommunications - Classification of Moisture Sensitive Components

*Identifies the classification level of non-hermetic solid-state surface mount devices*

*that are sensitive to moisture-induced stress. These devices can be properly packaged, stored, and handled to avoid subsequent thermal/mechanical damage during solder reflow attachment and/or repair operations. This standard is used to determine what classification level should be used for initial reliability qualifications. Joint Standard with EIA/JEDEC.*

ANSI/IPC/JEDEC J-STD-033A-2002, Handling, Packing, Shipping and Use of Moisture/Reflow Sensitive Surface Mount Devices

*Provides surface mount devices manufacturers and users with standardized methods for handling, packing, shipping, and use of moisture/reflow sensitive SMDs These methods help avoid damage from moisture absorption and exposure to solder reflow temperatures that can result in yield and reliability degradation. Joint Standard with EIA/JEDC.*

ANSI/IPC/JPCA 4104-1999, Specification for High Density Interconnect (HDI) and Mcrovia Materials

*Describes various materials that can be used for the fabrication of HDI structures and microvias. It provides information on general classifications and associated characteristics of materials. The document shall be used as qualification and conformance standard for designers and users when designing or constructing HDI structures and microvias.*

## ISA

ANSI/ISA 12.00.01-2002, Electrical Apparatus for Use in Class I, Zones 0, 1 & 2 Hazardous (Classified) Locations: General Requirements

*Specifies the general requirements for construction, testing and marking of electrical apparatus, Ex cable entries and Ex components, intended for use in potentially explosive atmospheres of gas, vapor and mist defined as class I, Zone 0, 1 or 2 by the National Electrical Code, NFPA 70.*

ANSI/ISA 12.00.01-2005(IEC 60079-0 Ed 4 Mod), Electrical Apparatus for Use in Class I, Zones 0 & 1 Hazardous (Classified) Locations - General Requirements

*This standard specifies the general requirements for construction, testing, and marking of electrical apparatus and Ex components intended for use in Class I, Zone 0, 1, or 2 hazardous (classified) locations as defined by the National Electrical Code, ANSI/NFPA 70.*

ANSI/ISA 12.02.01-2002 (IEC 60079-11 Mod), Electrical Apparatus for Use in Class I, Zones 0, 1, & 2 Hazardous (Classified) Locations - Intrinsic Safety "i"

*Specifies the construction and testing of intrinsically safe apparatus, intended for use in potentially explosive atmospheres and for associated apparatus, which is intended for connection to intrinsically safe circuits which enter such atmospheres.*

ANSI/ISA 12.04.01 (IEC 60079-2 Mod)-2004, Electrical Apparatus for Explosive Gas Atmospheres - Part 2: Pressurized Enclosures "p"

*Specifies requirements for pressurized enclosures, type of protection "p" containing a limited release of a flammable substance, and is intended for use in hazardous (classified) locations defined as Class I, Zone 1 or Zone 2 by the National Electrical Code, NFPA 70.The requirements contained in this standard are supplementary to those in ANSI/ISA-12.00.01 (IEC 60079-0 Mod). This standard does not contain the requirements for pressurized enclosures where the containment system may release: air with an oxygen content greater than normal, or oxygen in combination with inert gas in a proportion greater than 21%.*

ANSI/ISA 12.10.02 IEC 61241-0-2006, Electrical Apparatus for Use in Zone 20, Zone 21 and Zone 22 Hazardous (Classified) Locations - General Requirements

*This standard specifies the general requirements for design, construction, testing and marking, which is applicable to electrical apparatus protected by any recognized protection technique for use in areas where combustible dust may be present in quantities that could lead to a fire or explosion hazard.*

ANSI/ISA 12.10.05 (IEC 61241-10 Mod)-2004, Electrical Apparatus for Use in Zone 20, Zone 21 and Zone 22 Hazardous (Classified) Locations - Classification of Zone 20, Zone 21 and Zone 22 Hazardous (Classified) Locations (IEC 61241-10 Mod)

*This standard is concerned with the classification of areas where explosive dust/air mixtures and combustible dust layers are present, in order to permit proper selection of equipment for use in such areas.*

ANSI/ISA 12.12.01-2001, Nonincendive Electrical Equipment for Use in Class I and II, Division 2, and Class III, Divisions 1 and 2, Hazardous (Classified) Locations

*Provides minimum requirements for the design, construction, and marking of electrical equipment or parts of such equipment for use in Class I and Class II, Division 2 and Class III, Divisions 1 and 2 hazardous (classified) locations.*

ANSI/ISA 12.12.02-2003 (IEC 60079-15-1987) , Electrical Apparatus for Use in Class I Zone 2 Hazardous (Classified) Locations - Type of Protection "n"

*Specifies requirements for the construction, assessment and testing of electrical apparatus with type of protection "n" which, when operating normally within its rated duty, is unlikely to be capable of igniting a surrounding explosive gas atmosphere. Specifies the features of apparatus which shall be assessed to achieve a satisfactory level of safety for electrical apparatus for use in Zone 2. Applies only to Group II electrical apparatus intended for use in locations with explosive gas atmospheres other than in mines subject to firedamp.*

ANSI/ISA 12.13.01-2002 (IEC 61779-1 through 5 Mod), Performance Requirements, Combustible Gas Detectors

*Specifies general requirements for construction and testing and describes the test methods that apply to portable, transportable and fixed apparatus for the detection and measurement of flammable gas or vapor concentrations with air. The apparatus, or parts thereof, are intended for use in potentially explosive atmospheres. Supplemented by the performance requirements for group II (non-mining) apparatus indicating up to a volume fraction of 100% lower explosive limit, and of 100% gas.*

ANSI/ISA 12.27.01-2002, Requirements for Process Sealing Between Electrical Systems and Flammable or Combustible Process Fluids

*Provides specific requirements for process sealing between electrical systems and flammable or combustible process fluids where a failure could allow the migration of process fluids directly into the electrical system. Examples of this type of seal include diaphragm seals, thermowells, and pump seals. The requirements of this document are not meant to apply to electrical conduit and cable seals as addressed in ANSI/NFPA 70 : 2002 Section 501.5 (C) and 505.16 (D).*

ANSI/ISA 50.00.01-1975 (R2002), Compatibility of Analog Signals for Electronic Industrial Process Instruments

*Applies to analog dc signals used in process control and monitoring systems to transmit information between subsystems or separated elements of systems.*

ANSI/ISA 60079-1 (12.22.01)-2005, Electrical Apparatus for Use in Class I, Zone 1 Hazardous (Classified) Locations: Type of Protection - Flameproof "d"

*This standard contains specific requirements for the construction and testing of electrical apparatus with type of protection flameproof enclosure "d", intended for use in Class I, Zone 1 explosive gas atmospheres.*

ANSI/ISA 60079-18 2005 (12.23.01), Electrical Apparatus for Use in Class I, Zone 1 Hazardous (Classified) Locations: Type of Protection - Encapsulation ‘m’

*This standard gives the specific requirements for the construction, testing, and marking of electrical apparatus, parts of electrical apparatus, and Ex components with the type of protection encapsulation "m".*

ANSI/ISA 60079-27 (12.02.04)-2007, Fieldbus intrinsically safe concept (FISCO) and Fieldbus non-incendive concept (FNICO)

*This standard contains the details of apparatus, systems and installation practice for use with the Fieldbus Intrinsically Safe Concept (FISCO) for installation and use in Class I, Zones 0 and 1 and the Fieldbus Non-Incendive Concept (FNICO) for installation and use in Class I, Zone 2. It is based on the concepts of Manchester encoded, bus powered systems designed in accordance with IEC 61158-2 which is the physical layer standard for Fieldbus installations.*

ANSI/ISA 60079-7 (12.16.01)-2002 , Electrical Apparatus for Use in Class I, Zone 1 Hazardous (Classified) Locations: Type of Protection - Increased Safety "e"

*This part of ISA-12.16.01 (IEC 60079-7 Mod) specifies the requirements for the design, construction, testing and marking of electrical apparatus with type of protection increased safety "e" intended for use in Class I, Zone 1, Groups IIA, IIB, and IIC hazardous (classified) locations. This standard applies to electrical apparatus with a rated value of supply voltage not exceeding 11 kV r.m.s. a.c. or d.c. Additional measures are applied to ensure that the apparatus does not produce arcs, sparks, or excessive temperatures in normal operation or under specified abnormal conditions. These specific requirements are additional to the general requirements in ISA-12.00.01 (IEC 60079-0 Mod) that apply to protection increased safety "e" unless specifically excluded.*

ANSI/ISA 61010-1 (82.02.01) 2004, Annex DV US, Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements

*This standard specifies general safety requirements for electrical equipment intended for professional, industrial process, and educational use, any of which may incorporate computing devices, as defined within the standard, when used under the environmental conditions defined within the standard.*

ANSI/ISA 61010-1 (82.02.01), CSA-C22.2, No. 1010-1, UL-61010-1-2004, Electric and Electronic Test, Measuring, Controlling, and Related Equipment: General Requirements

*This part of IEC 61010 specifies general safety requirements for electrical equipment intended for professional, industrial process, and educational use, any of which may incorporate computing devices, as defined in a) to d) below, when used under the environmental conditions of 1.4*
*a)Electrical test and measurement equipment*
*b)Electrical control equipment*
*c)Electrical laboratory equipment*
*d)Accessories intended for use with the above (for example, sample handling equipment)*

ANSI/ISA 61010-1 (82.02.01), CSA-C22.2, No. 1010-1, UL-61010-1-2004, Safety Requirements For Electrical Equipment For Measurement, Control, And Laboratory Use -Part 1: General Requirements

*This part of IEC 61010 specifies general safety requirements for electrical equipment intended for professional, industrial process, and educational use, any of which may incorporate computing devices, as defined in a) to d) below, when used under the environmental conditions of 1.4*
*a)Electrical test and measurement equipment*
*b)Electrical control equipment*
*c)Electrical laboratory equipment*
*d)Accessories intended for use with the above (for example, sample handling equipment.*

ANSI/ISA 61241-1 (12.10.03)-2007, Electrical Apparatus for Use in Zone 20, Zone 21 and Zone 22 Hazardous (Classified) Locations - Protection by Enclosures "tD"

*This standard is applicable to electrical apparatus protected by enclosures and surface temperature limitation for use in explosive dust atmospheres classified as zone 21 or zone 22 hazardous locations in accordance with Article 506 of the NEC®. It specifies requirements for design, construction and testing of electrical apparatus.*

ANSI/ISA 61241-11 (12.10.04)-2007, Electrical Apparatus for Use in Zone 20, Zone 21 and Zone 22 Hazardous (Classified) Locations - Protection by Intrinsic Safety "iD"

*This standard specifies requirements for the construction and testing of intrinsically safe apparatus intended for use in an explosive dust atmosphere and for associated apparatus that is intended for connection to intrinsically safe circuits which enter such atmospheres.*

ANSI/ISA 61241-18 (12.10.07)-2007, Electrical Apparatus for Use in Zone 20, Zone 21 and Zone 22 Hazardous (Classified) Locations - Protection by Encapsulation "mD"

*This standard is applicable to electrical apparatus protected by encapsulation type of protection "mD" and surface temperature limitation for use in areas where combustible dust may be present in quantities which could lead to a fire or explosion hazard. It specifies requirements for design, construction and testing of electrical apparatus, parts of electrical apparatus and Ex components where the rated voltage does not exceed 10 kV.*

ANSI/ISA 61241-2 (12.10.06)-2007, Electrical Apparatus for Use in Zone 21 and Zone 22 Hazardous (Classified) Locations - Protection by Pressurization "pD"

*This standard gives requirements on the design, construction, testing and marking of electrical apparatus for use in combustible dust atmospheres in which a protective gas (air or inert gas), maintained at a pressure above that of the external atmosphere, is used to prevent the entry of dust which might otherwise lead to the formation of a combustible mixture within enclosures which do not contain a source of combustible dust.*

ANSI/ISA 67.04.01-2006, Setpoints for Nuclear Safety-Related Instrumentation

*This standard defines the requirements for assessing, establishing, and maintaining nuclear safety-related and other important instrument setpoints associated with nuclear power plants or nuclear reactor facilities. The scope includes instrumentation-based setpoints that assure compliance to one or more design limits.*

ANSI/ISA 67.06.01-2002, Performance Monitoring for Nuclear Safety-Related Instrument Channels in Nuclear Power Plants

*Provides the nuclear power industry methods for assuring that nuclear safety-related instrument channels satisfy acceptable calibration, response time, and other factors affecting the performance of the instrument channel. This standard applies only to those instrument channels whose primary sensors measure pressure, differential pressure, temperature, or neutron flux. Primary flow elements are addressed by other standards.*

ANSI/ISA 75.01.01-2002, Flow Equations for Sizing Control Valves

*The international adoption of IEC 60534-2-1 revises the current standard, ANSI/ISA S75.01-1985. Covers the equations for predicting the flow coefficient of compressible and incompressible fluids through control valve.*

ANSI/ISA 75.02-1996, Control Valve Capacity Test Procedures

*Provides a procedure for testing control valve capacity and related flow coefficients for both compressible and incompressible fluids. This standard also provides a procedure to evaluate the major data.*

ANSI/ISA 75.05.01-2001 (R2005), Control Valve Terminology

*Provides a glossary of definitions commonly used in the control valve industry.*

ANSI/ISA 75.08-1999, Installed Face-to-Face Dimensions for Flanged Clamp or Pinch Valves

*Applies to valves, sizes 1 through 8 inches, of the clamp or pinch valve design, incorporating clamp or pinch elements.*

ANSI/ISA 75.08.01-2002, Face-to-Face Dimensions for Integral Flanged Globe-Style Control Valve Bodies (Classes 125, 150, 250, 300, and 600)

*Applies to integral flanged globe-style control valves, sizes 15 mm (1/2 inch) through 400 mm (16 inches), having top, top and bottom, port, or cage guiding.*

ANSI/ISA 75.08.02-2003, Face-to-Face Dimensions for Flangeless Control Valves (Classes 150, 300, and 600)

*Applies to flanged and flangeless rotary control valves using a full ball or a segment of a ball and other rotary-stem control valves, sizes 3/4 inch (20 mm) through 24 inches (600 mm) for Classes 150 through 600.*

ANSI/ISA 75.08.03-2001, Face-to-Face Dimensions for Socket Weld-End and Screwed-End Globe-Style Control Valves (ANSI Classes 150, 300, 600, 900, 1500, and 2500)

*Provides socket weld-end globe-stlye control valve dimentsions for Classes 150 through 2500 control valves.*

ANSI/ISA 75.08.04-2001, Face-to-Face Dimensions for Buttweld-End Globe-Style Control Valves

*Provides Class 4500 buttweld-end control valve dimensions.*

ANSI/ISA 75.08.05-2002, Face-to-Face Dimensions for Buttweld-End Globe-Style Control Valves (Classes 150, 300, 600, 900, 1500, and 2500)

*Applies to buttweld-end globe-style controls valves, sizes 15 mm (1/2 inch) through 450 mm (18 inches) for Classes 150 through 2500, having top, top and bottom, port, or cage guiding.*

ANSI/ISA 75.08.06-2002, Face-to-Face Dimensions for Flanged Globe-Style Control Valve Bodies (Classes 900, 1500, and 2500)

*Applies to flanged globe-style control valves, sizes 15 mm (1/2 inch) through 450 mm (18 inches), having top, top and bottom, port, or cage guiding.*

ANSI/ISA 75.08.07-2001, Face-to-Face Dimensions for Separable Flanged Globe-Style Control Valves (Classes 150, 300, and 600)

*Provides Class 150, 300, and 600 raised face separable flanged control valve dimensions.*

ANSI/ISA 75.08.09-2005, Face-to-Face Dimensions for Sliding Stem Flangeless Control Valves (Classes 150, 300, and 600)

*Applies to sliding stem flangeless control valves, sizes 20 mm (3/4 inch) through 600 mm (24 inches) for Classes 150 through 600.*

ANSI/ISA 75.11.01-1985 (R2002), Control Valves, Inherent Flow Characteristic and Rangeability of

*Define the statement of typical control valve inherent flowcharacteristics and inherent rangeabilities, and to establish criteria for adherence to manufacturer-specified flow characteristics.*

ANSI/ISA 75.19.01-2007, Hydrostatic Testing of Control Valves

*This standard establishes requirements and definitions for standard hydrostatic shell testing of control valves by the valve manufacturer to prove the structural integrity and leak tightness of the valves' pressure retaining parts, including any closure parts such as the valve body to bonnet joint, but excluding packings, bellows or other moving seals, and packing leakoff/purge/vent port connections. Bellows or similar moving stem seals may be pressure tested after assembly at a pressure to be agreed upon by the valve manufacturer and the purchaser.*

ANSI/ISA 75.22-1999, Face-to-Centering Dimensions for Flanged Globe-Style Angle Control Valve Bodies

*Applies to raised-face, flanged, globe-style, angle control valves, 1 inch through 8 inches.*

ANSI/ISA 75.25.01-2001, Test Procedures for Control Valve Response Measurement from Step Inputs

*Defines the testing and the reporting of step response of control valves that are in throttling closed loop control applications. Defines methods and criteria for performing response tests and evaluating test results for three alternative environments -- bench testing, laboratory testing and in-process testing.*

ANSI/ISA 75.26.01-2006, Control Valve Diagnostic Data Acquisition and Reporting

*This document applies to all pneumatically operated, automated rotary or reciprocating, on/off or modulating valves. It also includes automation components (i.e. positioners, transducers, and solenoids) as applicable. It provides a methodology for standardizing on the acquisition and reporting of data used in assessing valve condition. The document includes the type of data to be acquired, the number of measurements to be recorded and their resolution, units of measure, nomenclature, computer file storage format, graphical presentation, and other reporting formats. It does not address interpretation of data or diagnosis of valve condition.*

ANSI/ISA 76.00.02-2002, Modular Component Interfaces for Surface-Mount Fluid Distribution Components--Part 1: Elastomeric Seals

*Establishes properties and physical dimensions that define the interface for surface-mount fluid distribution components with elastomeric sealing devices used within process analyzers and their sample-handling systems. The interface controls the dimensions and location of the sealing surfaces to allow change of just one element of the system without modification of the entire system. This makes the system design and maintenance modular.*

ANSI/ISA 77.13.01-1999, Fossil Fuel Power Plant Steam Turbine Bypass System

*Establishes the applicable code requirements and boundaries for the design and installation of instrument-sensing lines interconnecting nuclear safety-related power plant processes with both nuclear safety-related and non-nuclear safety-related instrumentation. Covers design, protection, and installation of nuclear safety-related instrument sensing lines for light water-cooled nuclear power plants and covers the pressure boundary requirements for sensing lines up to and including 1-inch (25.4-mm) outside diameter or three-quater-inch nominal pipe.*

ANSI/ISA 77.41.01-2005, Fossil Fuel Power Plant Boiler Combustion Controls

*The scope of this standard is to address the major combustion control subsystems in boilers with steaming capabilities of 200,000 lb/hr (25 kg/s) or greater. These subsystems include, but are not limited to, furnace pressure control (balanced draft), air flow control, and fuel flow control when firing coal, oil, gas, or combinations thereof. Specifically excluded from consideration are development of boiler energy demand, all burner control, interface logic systems, and associated safety systems, as well as all controls associated with fluidized bed and stoker-fired combustion units.*

ANSI/ISA 77.42.01-1999 (R2006), Fossil Fuel Plant Feedwater Control System - Drum Type

*The standard is intended to assist in the development of design specifications covering the measurement and control of feedwater systems in boilers with steaming capacities of 200,000 lb/h (25 kg/s) or greater. The safe physical containment of the feedwater shall be in accordance with applicable piping codes and standards and is beyond the scope of this standard.*

ANSI/ISA 77.44.01-2000, Fossil Fuel Plant Steam Temperature Control System – Drum Type

*Addresses the major steam temperature control subsystems in boilers with steaming capacities of 200,000 lb/hr (25 kg/s) or greater. These subsystems include, but are not limited to, superheat temperature control and reheat temperature control. Specifically excluded from consideration are turbine bypass control, motor control logic, combustion control, sootblower control, and controls associated with fluidized bed- and stoker-fired furnace combustion units.*

ANSI/ISA 77.70-2005, Fossil Fuel Power Plant Instrument Piping Installation

*This standard covers the mechanical design, engineering, fabrication, installation, testing, and protection of fossil power plant instrumentation sensing and control lines. The boundaries of this standard span the process tap root valve to the instrument connection. This standard applies to all fluid media (liquid, gas, or vapor.*

ANSI/ISA 84.00.01, Part 1 (IEC 61511-1 Mod)-2004, Functional safety - Safety instrumented systems for the process industry sector - Part 1: Framework, definitions, system, hardware and software requirements.

*Places requirements on the specification, design, installation, operation, and maintenance of a safety instrumented system, so that it can be confidently entrusted to place and/or maintain the process in a safe state. Developed as a process sector implementation of IEC 61508, "Functional safety of electrical/electronic/programmable electronic safety related systems."*

ANSI/ISA 84.00.01, Part 2 (IEC 61511-2 Mod)-2004, Functional safety - Safety instrumented systems for the process industry sector - Part 2: Guidelines for the application - Informative

*The objective of this standard is to provide guidance on how to comply with IEC 61511-1, which was developed as a process sector implementation of IEC 61508, "Functional safety of electrical/electronic/programmable electronic safety related systems."*

ANSI/ISA 84.00.01, Part 3 (IEC 61511-3 Mod)-2004, Functional safety - Safety instrumented systems for the process industry sector - Part 3: Guidance for the determination of the required safety integrity levels - informative

*Provides information on the underlying concepts of risk, the relationship of risk to safety integrity, the determination of tolerable risk, and a number of different methods that enable the safety integrity levels for Safety Instrumented Functions to be determined. Like Parts 1 and 2, this standard was developed as a process sector implementation of IEC 61508, "Functional safety of electrical/electronic/programmable electronic safety related systems."*

ANSI/ISA 88.00.02-2001, Batch Control - Part 2: Data Structures and Guidelines for Languages

*Defines data models that describe batch control as applied in the process industries, data structures for facilitating communications within and between batch control implementations, and language guidelines for representing recipes. This standard was listed for public review in the 8/27/1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/ISA 88.00.03-2003, Batch Control - Part 3: General and Site Recipe Models and Representation

*This Part 3 ISA standard on Batch Control defines a model for general and site recipes, the activities that describe their use within a company and across companies, a representation of general and site recipes, and a data model of general and site recipes*

ANSI/ISA 88.00.04-2006, Batch Control Part 4: Batch Production Records

*This standard will be the fourth in the ISA-88 Series of standards on batch control in industrial manufacturing and processing. This Part 4 focuses on batch production records.*

ANSI/ISA 91.00.01-1995 (R2001), Identification of Emergency Shutdown Systems and Controls that are Critical to Maintaining Safety in Process Industries

*Establishes a procedure to identify the emergency shutdown systems and safety critical controls that are key to maintaining safety in the process industries as defined in the Mechanical Integrity and Maintenance sections of Process Safety Management regulations such as Occupational Safety and Health Administration (OSHA) Federal Regulation 29 CFR 1910.119 (reference 5.1), and Risk Management Program (RMP) regulations such as the (proposed) U.S. Environmental Protection Agency Regulation 40 CFR Part 68 (reference 5.2).*

ANSI/ISA 95.00.01-2000, Enterprise-Control System Integration, Part 1: Models and Terminology

*This standard provides standard models and terminology for defining the interfaces between an enterprise's business systems and its manufacturing control systems. The models and terminology so defined emphasize good integration practices of control systems with enterprise systems during the entire life cycle of the systems; can be used to imporve existing integration capability of manufacturing control systems with enterprise systems; and can be applied regardless of the degree of automation.*

ANSI/ISA 95.00.02-2001, Enterprise-Control System Integration - Part 2: Object Model Attributes

*Defines the interface content between manufacturing control functions and other enterprise functions. This standard was listed for public review in the 2/9/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/ISA 95.00.03-2005, Enterprise-Control System Integration Part 3: Activity Models of Manufacturing Operations Management

*This Part 3 standard defines activity models of manufacturing operations management that enable enterprise systems to control system integration. The activities defined in this standard are consistent with the data models definitions in ANSI/ISA-95.00.01-2000, Enterprise-Control System Integration Part 1: Models and Terminology.*

ANSI/ISA 95.00.05-2007, Enterprise-Control System Integration Part 5: Business-to-Manufacturing Transactions

*This standard defines business-to-manufacturing transactions that may be used on the objects defined in the object models of ANSI/ISA- 95.00.01-2000 and ANSI/ISA-95.00.02-2001. The transactions of required and actual manufacturing activities bind and organize the manufacturing objects and activities defined in those earlier standards.*

ANSI/ISA 98.00.01-2002, Qualifications and Certification of Control System Technicians

*Provides industry with basis for certifying the qualifications of control systems technicians who work on facility equipment that is important to safe and efficient operations, in order to help reduce the possibility that unqualified personnel could perform improper maintenance on such equipment. It is intended solely as a recommendation for functional organization, and offers a structured basis for certification of control system technicians in each specific facility where they may be used.*

ANSI/ISA RP12.06.01-2003, Wiring Practices for Hazardous (Classified) Locations – Instrumentation – Part I: Intrinsic Safety

*This recommended practice is intended to promote the uniform installation of intrinsically safe systems for hazardous (classified) locations. Information is provided to clarify and explain the requirements of Articles 504 and 505 of the National Electrical Code ® (NEC ®) ANSI/NFPA 70. This recommended practice applies to the installation of intrinsically safe systems for use in hazardous (classified) locations.*

ANSI/ISA RP12.13.02 (IEC 61779-6 Mod)-2002, Recommended Practice for the Installation, Operation, and Maintenance of Combustible Gas Detection Instruments

*Provides guidance on the selection, installation, use, and maintenance of electrically operated group II apparatus for the detection and measurement of flammable gases.*

ANSI/ISA RP77.60.02-2006, Fossil Fuel Power Plant Human-Machine Interface Alarms

*This recommended practice is provided for the benefit of design engineers and, ultimately, plant operators.*
*Use of this recommended practice will result in a more coherent and useful application of plant alarms for operations personnel. The goal of this recommended practice is to reduce alarm discrepancies, clutter, excessive noise levels, and information overload. This recommended practice pertains to alarms displayed using lights or light-boxes, but not software based alarms (e.g., CRT-based alarms) and is intended to supplement the information provided by ISA-18.1-1979 (R2004), Annunciator Sequences and Specifications.*

ANSI/ISA S12.01.01-1999, Definitions and Information Pertaining to Electrical Apparatus in Hazardous (Classified) Locations

*Provides definitions and information pertaining to protection techniques, terminology, and the installation of electrical instruments in hazardous (classified) locations. Provides general guidance for the safe design, installation, and maintenance of electrical instrument systems using appropriate means to prevent ignition of flammable gases and vapors, flammable liquids, combustible dusts, or ignitable fibers or flyings.*

ANSI/ISA S12.25.01-1998, Electrical Apparatus for Use in Class I, Zone 1 Hazardous (Classified) Locations: Type of Protection - Powder Filling "q"

*Contains specific requirements for construction testing, and marking of electrical apparatus, parts of electrical apparatus, and Ex components in the type of protection powder filling 'q,' intended for use in potentially explosive atmospheres of gas, vapor, and mist. Harmonization of IEC 79-5, with national deviations.*

ANSI/ISA S12.26.01-1998, Electrical Apparatus for Use in Class I, Zone 1 Hazardous (Classified) Locations: Type of Protection - Oil Immersion "o"

*Specifies requirements for construction and testing of oil-immersed electrical apparatus, oil-immersed parts of electrical apparatus, and Ex components in type of protection 'o', intended for use in potentially explosive atmospheres of gas, vapor, and mist. Harmonizes IEC 79-6, with national deviations.*

ANSI/ISA S50.02, Part 3-1997, Fieldbus Standard for Use in Industrial Control Systems, Part 3: Data Link Service Definition

*This Standard defines the service provided to the Fieldbus Application Layer at the boundary between the Application and Data Link Layers of the Fieldbus Reference Model, and to the OSI Network Layer at the boundary between the Network and Data Link Layers of the OSI Basic Reference Model.*

ANSI/ISA S50.02, Part 4-1997, Fieldbus Standard for use in Industrial Control Systems Part 4: Data Link Protocol Specification

*This Standard specifies procedures for a single protocol for the timely transfer of data and control information form one data link user entity to a peer user entity, and among the data link entities forming the distributed data link service provider, and the structure of the Filedbus Data Link (DL) Protocol Data Units used for the transfer of data control information, and their representation as Physical Interface Data Units.*

ANSI/ISA S50.02, Part 5-1998, Fieldbus Standard for Use in Industrial Control Systems - Part 5: Application Layer Service Definition

*Provides user programs with a means to access the Fieldbus communication environment. In this respect, the Fieldbus Application Layer (FAL) can be viewed as a "window between corresponding applications programs". The FAL is an Applications Layer Communication Standard designed to support conveyance of time-critical and non-time-critical applications requests and responses among devices in an automation environment. The term, time-critical, is used to represent the presence of an application time-window, within which one or more specified actions are required to be completed with some defined level of certainty. This part, the FAL Service Definition, specifies inteeractions beteween remote applications in terms of: (a) An abstract model for defining application resources (objects) capable of being manipulated by users via the use of FAL Services; (b) The*

ANSI/ISA S50.02, Part 6-1998, Fieldbus Standard for Use in Industrial Control Systems - Part 6: Application Layer Protocol Specification

*Is an Application Layer communication standard designed to support the conveyance of time-critial application requests and responses among devices in an automation environment. Contains the encoding rules that are applied to the Applications Layer Protocol Data Units (APDUs); the formal Abstract Syntax definitions of such APDUs; the protocol state machine descriptions that handle APDUs and primitives correct sequences; and the mapping of APDUs to and from the Data Link layer services defined in Part-3 of this standard. The Fieldbus Application Layer encoding rules are designed assuming that both the encoder (sender) and the decoder (receiver) have the common knowledge of the abstract syntax. Whenever possible, data types indentifers are not encoded and transferred over the network.*

ANSI/ISA S67.02.01-1999, Nuclear-Safety-Related Instrument Sensing Line Piping and Tubing Standard for Use in Nuclear Power Plants

*This standard covers design, protection, and installation of nuclear safety-related instrument-sensing lines and sampling lines for nuclear power plants. The standard covers the pressure boundary requirements for sensing lines up to and including one inch (25.4 mm) outside diameter or three-quarter inch nominal pipe (19.05mm). The boundaries of this standard for instrument-sensing lines span from the root valve/piping class change, up to but not including, the manufacturer-supplied instrument connection. The boundaries of this standard for sampling lines span from the process tap to the upstream side of the sample panel, bulkhead fitting, or analyzer shutoff valve, and include in-line sample probes.*

ANSI/ISA S67.14.01-1994 (R2000), Qualifications and Certification of Instrumentation and Control Technicians in Nuclear Facilities

*Identifies the criteria for certification of instrumentation and control technicians in nuclear power plants. These criteria address qualifications based on education, experience, training and job performance. Many nuclear facilities maintain formally accredited training qualification programs, as described in 10 CFR 50.120 (Training and qualification of Nuclear power Plant Personnel). Facilities maintaining such programs may be considered to fully meet the provisions of this standard.*

ANSI/ISA S77.43.01-1994 (R2002), Fossil Fuel Power Plant: Unit/Plant Demand Development (Drum Type)

*Addresses the unit/plant demand development subsystem for boilers with steaming capacities of 200,000 lbs/hr (25 kg/s) or greater. This subsystem includes firing rate demand development, throttle/header pressure control, and unit megawatt/steam flow control as applicable. Addresses: (a) a single boiler supplying a single turbine, typical of an electric utility power plant and (b) a single or multiple boiler supplying a common distribution header, typical of an industrial power plant. Specifically excluded are: dispatch control; turbine/generator control (other than turbine demand); combustion controls (covered by ISA S77.41); steam distribution control systems; economic loading of boilers; and fluidized bed boilers.*

ANSI/ISA S92.02.01, Part 1-1998, Performance Requirements for Chlorine Monoxide Detection Instruments (50-1000 ppm Full Scale)

*Covers details of construction, performance, and testing of portable, mobile, and stationary electrical instruments used to monitor the presence of carbon monoxide gas concentrations in air.*

ANSI/ISA S93.00.01-1999, Standard Method for the Evaluation of External Leakage of Manual and Automated On-Off Valves

*Applies to the classification of a valve design and provides the methods for the testing valve stem(s) and body seal(s). This standard is not intended for production testing and excludes control valves.*

ANSI/ISA TR75.25.02-2000, Control Valve Response Measurement from Step Inputs

*Applies to throttling control valves in closed loop control applications. The concept has some application to open loop control applications. It does not address control valves used in on-off control service. This technical report describes the characteristic response of a control valve to step input signal changes. It considers the factors that affect this response, the impact of the response on the quality of process control, and the appropriate control valve specifications. In this document, a control valve is the complete control valve body, with actuator and any accessories required for normal operation assembled and ready for use. This document supports American National Standard Test Procedure for Control Valve Response Measurement from Step Inputs, ANSI/ISA 75.25.01-2001.*

## ISA (International Society of Arboriculture)

ANSI Z133.1-2006, Arboricultural Operations - Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush - Safety Requirements

*Arboricultural safety requirements for pruning, repairing, maintaining, and removing trees and for cutting brush and for the equipment used in such operations. Note: this document contains only the changes made as a result of a prior public review period, as approved by the ASC Z133 Committee in October 2005.*

## ISANTA (International Staple, Nail and Tool Association)

ANSI SNT 101-2002, Power Tools – Portable, Compressed Air Actuated, Fastener Driving Tools – Safety Requirements for

*Comprises safety standard for design, construction, installation, maintenance of portable, hand-held compressed-air powered fastener driving tools.Safety standard for design, construction, installation, maintenance of portable, hand-held compressed-air powered fastener driving tools. This standard was listed for public review in the 7/28/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

## ISEA (International Safety Equipment Association)

ANSI Z308.1-2003, Minimum Requirements for Workplace First Aid Kits

*This standard establishes minimum performance requirements for first aid kits and their contents that are intended for use in various work environments.*

ANSI Z358.1-2004, Emergency Eyewash and Shower Equipment

*Establishes minimum performance and use requirements for eyewash and shower equipment for the emergency treatment of the eyes or body of a person who has been exposed to injurious materials. It covers the following types of equipment: emergency shower, eyewash equipment, eye/face wash equipment, and combination shower and eyewash units. This standard also includes performance and use requirements for personal washes and drench hoses, which are considered supplemental to emergency eyewash and shower equipment.*

ANSI Z87.1-2003, Practice for Occupational and Educational Eye and Face Protection

*Sets forth criteria related to the description, general requirements, testing, marking, selection, care, and use of protectors to minimize or prevent injuries, from such hazards as impact, non-ionizing radiation and chemical type injuries, in occupational and educational environments including, but not limited to, machinery operations, material welding and cutting, chemical handling, and assembly operations.*

ANSI Z89.1-2003, Industrial Head Protection

*Establishes minimum performance requirements for protective helmets that reduce the forces of impact and penetration and that may provide protection from electric shock. The standard describes Types and Classes, testing and performance requirements for protective helmets. These include recommended safety requirements for authorities considering the establishment of regulations or codes concerning the use of protective helmets.*

ANSI/ISEA 101-1996 (R2002), Limited-Use and Disposable Coveralls – Size and Labeling Requirements

*Establishes size and wear test requirements for limited-use and disposable coveralls. This standard includes a sizing chart to assist the wearer in the selection of the correct garment size. It also establishes minimum labeling and packaging requirements for these garments.*

ANSI/ISEA 102-1990 (R2003), Gas Detector Tube Units – Short-Term Type for Toxic Gases and Vapors in Working Environments

*This standard sets forth the minimum performance requirements for gas detector tube units and components, which are used to determine the concentration of toxic gases and vapors in working environments.*

ANSI/ISEA 104-1998 (R2003), Air Sampling Devices - Diffusive Type for Gases and Vapors in Working Environments

*This standard sets forth the test methods, performance parameters, and reporting requirements for diffusion type sampling devices used to determine the concentrations of gases and vapors in working environments. The information provided by manufacturers in compliance with this standard is necessary for the proper selection and use of these devices for measuring workplace exposures, including determining compliance with Occupational Exposure Limit Value (ELV), e.g., Threshold Limit Value (TLV), Permissible Exposure Limit (PEL), Short Term Exposure Limit (STEL).*

ANSI/ISEA 105-2005, Hand Protection Selection Criteria

*This standard addresses the classification and testing of hand protection for specific performance properties related to chemical and industrial applications. Hand protection includes gloves, mittens, partial gloves, or other item covering the hand or a portion of the hand that is intended to provide protection against or resistance to a specific hazard. The standard does not address protection from electric shock, ionizing or non-ionizing radiation, thermal burns, harmful temperature extremes, welding applications or fire fighter applications.*

ANSI/ISEA 107-2004, High Visibility Safety Apparel

*This standard specifies performance requirements for high visibility safety apparel and headwear PPE. Performance requirements are included for color, retroreflection, and minimum areas, as well as the recommended configuration of the materials. Performance requirements are also provided for the physical properties of background materials used in the construction of high-visibility safety apparel and headwear. Test methods are provided in the standard to help ensure that a minimum level of visibility is maintained when items are subjected to ongoing care procedures.*

ANSI/ISEA 110-2003, Air-Purifying Respiratory Protective Escape Devices

*Specifies the minimum requirements for the design, performance, testing and certification of air-purifying respiratory smoke escape devices (RPED) for the evacuation of civilians from fire to a place of safe refuge. The standard applies to RPED with a 15-minute service life based on the maximum anticipated insults that the human body can endure without hinderance to escape.This standard does not address the requirements for the provision, installation or use of RPED.*

ANSI/ISEA 207-2006, High-Visibility Public Safety Vests

*This standard specifies performance requirements for background and retroreflective materials used in the construction of high-visibility vests for use by public safety workers. High visibility public safety vests are intended to provide conspicuity to the user in hazardous situations under any light conditions by day and under illumination by vehicle headlights in the dark.*

## ITI (InterNational Committee for Information Technology Standards)

ANSI INCITS 100-1989 (R2005), Information Systems – Interface between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for Operation with Packet-Switched Data Communications Networks (PSDN), or between Two DTEs

*Conforms to the requirements of CCITT Recommendation X.25, ISO 7776:1986, and ISO 8208:1987, and covers both the DTE/DCE and DTE/DTE interfaces.*

ANSI INCITS 100a-1991 (R2005), Information Systems – Interface between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for Operation with Packet-Switched Data Communications Networks (PSDN), or between Two DTEs

*Specifies extensions that were considered important to have available in the U.S., prior to publication of the next full revision of the national standard. It addresses extensions related to the Network User Identification (NUI) Selection facility. Implementations conforming to this supplement must conform to X3.100:1989 and the 1988 version of CCITT Recommendation X.25. Supplement to ANSI X3.100-1989.*

ANSI INCITS 103-1983 (R2006), Unrecorded Magnetic Tape Mini-Cassette for Information Interchange, Coplanar 3.81 mm (0.150 in)

*This standard is for an unrecorded minicassette containing 3.81-mm (0.15-in) magnetic tape represents the minimum requirements for mechanical and magnetic interchangeability of the minicassette between information processing systems, communications systems, and associated equipment, using ASCII, ANSI X3.4-1977. This standard refers solely to the magnetic tape minicassettes for digital recording. It will support American National Standards for recorded minicassettes.*

ANSI INCITS 11-1990 (R2002), General Purpose Paper Cards for Information Processing

*This standard specifies the quality of paper, dimensions and quality of general purpose cards, and test methods for general pubpose cards of 7 3/8 inch length. This standard is intended to apply to general purpose cards in which the primary method of recording information is by punched holes. This standard is not intended to exclude the use of such cards in other applications.*

ANSI INCITS 111-1986 (R2002), Information Systems - Optical Character Recognition (OCR) - Matrix Character Sets for OCR-M

*Describes the matrix of dot placement and size limits for OCR-MA alphanumeric characters and symbols for optical character recognition (OCR) systems.*

ANSI INCITS 112-1984 (R2002), 14-inch (356-mm) Diameter and Low Surface Friction Magnetic Storage Disk

*Provides the mechanical, phycsical and magnetic properties of a magnetic disk with a 14-inch (356-mm) diameter and low surface friction intended for mounting in data strorage devices opearting at 160 oo flux transitions per tarck and at typical track density of 480 tracks per inch (tpi).*

ANSI INCITS 113-1987 (R2003), Information Systems – Programming Language – Full BASIC

*Promotes the interchangeability of BASIC programs among a variety of automatic data processing systems.*

ANSI INCITS 113a-1989 (R2003), Information Systems - Programming Languages – Modules and Individual Character Input for Full BASIC

*Establishes the syntax of BASIC programs written using individual character input, or modules, or both; the semantic rules for interpreting the meaning of a BASIC program that uses individual character input, or modules, or both; the errors and exceptional circumstances that shall be detected; and also the manner in which such errors and exceptional circumstances shall be handled.*

ANSI INCITS 115-1984 (R2002), Unformatted 80 Megabyte Trident Pack for Use at 370 TPI and 6000 BPI – Physical, Mechanical and Magnetic Characteristics

*Specifies the general, physical and magnetic requirements for interchangeability of the five*

*disk pack, as required to achieve unrecorded pack interchange between disk storages and associated information processing systems.*

ANSI INCITS 116-1986 (R2002), Recorded Magnetic Tape Cartridge for Information Interchange 4-Track, Serial 0.250 in (6.30 mm) 6400 BPI (252 BPMM) Inverted Modified Frequency Modulation Encoded

*Intended to provide a format and recording standard for a 0.250-inch (6.30-mm) wide, 4-track magnetic tape in a cartridge to be used for information interchange between information processing systems, communications systems, and associated equipment utilizing a standard code for information interchange, as agreed upon by the interchange parties. This standard refers solely to recording on 0.250-inch (6.30 mm) magnetic tape cartridge and complements American National Standard, ANSI X3.127.*

ANSI INCITS 117-1984 (R2002), Printable/Image Areas for Text and Facsimile Communication Equipment

*This standard defines the sizes and location of the printable/image areas common to both the ISO A4 and North American paper sizes for international communication on text and facsimile equipment.*

ANSI INCITS 118-1998 (R2003), Personal Identification Number – PIN Pad

*Provides identifies the fixed arrangements of the alphanumeric characters and keys of a PIN pad. The PIN pad is used by a customer to enter a Personal Identification Number (PIN) when requested as part of a transaction.*

ANSI INCITS 119-1984 (R2002), Contact Start/Stop Storage Disk, 158361 Flux Transitions per Track, 8.268 Inch (210 mm) Outer Diameter and 3.937 Inch (100 mm) Inner Diameter

*Provides the mechanical, physical and magnetic properties of a magnetic disk with an 8.268 in (210 mm) diameter and low surface friction intended for mounting in data storage devices. A typical recording density is 480 tpi with 8464 flux transitions per inch (ftpi) at a radius of 2.978 in (78,64 mm).*

ANSI INCITS 120-1984 (R2002), Contact Start/Stop Storage Disk, 95840 Flux Transitions per Track, 7.874 Inch (200 mm) Outer Diameter and 2.500 Inch (63.5 mm) Inner Diameter

*Provides the mechanical, physical and magnetic properties of a magnetic disk with an 7.874-in (200-mm) diameter and low surface friction intended for mounting in data storage devices. A typical recording density is 480 tpi with 6858 fluxtransitions per inch (ftpi) at a radius of 2.224 in (56,49 mm).*

ANSI INCITS 121-1984 (R2006), Two-Sided Unformatted 8-Inch (200-mm) Double Density Flexible Disk Cartridge, General, Physical, and Magnetic Requirements (for 13,262 FTPR Two-Headed Application)

*This standard specifies the general, physical, and magnetic requirements for interchangeability of the two-sided, 8-in (200-mm) (nominal), 48-tracksper- inch (tpi), flexible disk cartridge (for 13 262 flux transitions per radian (ftpr) use) as required to achieve unformatted disk cartridge interchange among disk drives using 77 tracks per side and associated information processing systems. The two-sided flexible disk cartridge enclosed in a protective envelope and having two recording surfaces is of the type intended specifically for use with digital recording and reproducing equipment employing access mechanisms capable of positioning to these data tracks.*

ANSI INCITS 124-1985 (R2002), Graphical Kernel System (GKS) Functional Description (includes ANSI X3.124.1-1985)

*Specifies a set of functions for computer graphics programming (GKS).*

ANSI INCITS 124.1-1985 (R2006), Computer Graphics - Graphical Kernel System (GKS) FORTRAN Binding

*The Graphical Kernel System (GKS) ANS X3.124-1985 specifies a language independent nucleus of a graphics system. For integration into a programming language, GKS is embedded in a language dependent layer obeying the particular conventions of that language. This document specifies such a language dependent layer for the FORTRAN language.*

ANSI INCITS 124.2-1988 (R2004), Information Systems Computer Graphics – Graphical Kernel System (GKS) Pascal Binding

*The Graphical Kernel System (GKS), as described in ANSI X3.124-1985, specifies a language-independent nucleus of a graphics system. For integration into a programming language, GKS is embed- ded in a language-dependent layer obeying the particular conventions of that language. This part of ANSI X3.124 specifies such a language-dependent layer for the Pascal language.*

ANSI INCITS 124.3-1989 (R2005), Computer Graphics – Graphical Kernel System (GKS), Ada Binding

*The Graphical Kernel System (GKS), as described in ANSI X3.124-1985, specifies a language-independent nucleus of a graphics system. For integration into a programming language, GKS, is embedded in a language-independent layer obeying the particular conventions of that language. This document specifies such a language-dependent layer for the Ada language.*

ANSI INCITS 125-1985 (R2006), Two-Sided Double Density Unformatted 5.25 Inch (130 mm) 48 Tracks per Inch (1.9 Tracks per mm) Flexible Disk Cartridge, General, Physical, and Magnetic Requirements (for 7958 BPR use)

*This standard specifies the general, physical, and magnetic requirements for the interchangeability of the two-sided, 5.25-inch (130-mm) (nominal), 48-tracks-per-inch (tpi) 1,9-tracks-per-millimeter (tpmm) flexible disk cartridge (for 7958 bits-per-radian (bpr)use) as required to achieve unformatted disk cartridge interchange among disk drives using 40 tracks per side and associated information processing systems. The twosided flexible disk cartridge in a protective envelope having two recording surfaces is of the type intended specifically for digital recording and reproducing equipment employing access mechanisms capable of positioning to these data tracks.*

ANSI INCITS 126-1986 (R2002), One- and Two-Sided Double Density Unformatted 5.25 Inch (130 mm) 96 Tracks per Inch (3.8 Tracks per mm) Flexible Disk Cartridge – General, Physical, and Magnetic Requirements for 7958 BPR Use

*Specifies the general, physical, and magnetic requirements for interchangeability of the one - or two-sided, 5.25-Inch (130-mm) (nominal), 96-tracks-per-inch (tpi) (3,8-tracks-per-millimeter(tpmm)) flexible disk cartridge (for 7958-bits-per-radian(bpr) use) as required to achieve unformatted disk cartridge interchange among disk drives using 80 tracks per side and associated information processing systems. The two-sided flexible disk cartridge enclosed in a protective envelope and having two recording surfaces is of the type intended specifically for use with digital recording and reproducing equipment employing access mechanisms capable of positioning to these data tracks.*

ANSI INCITS 127-1987 (R2002), Information Systems – Unrecorded Magnetic Tape Cartridge for Information Interchange, 0.250 Inch (6.30 mm), 6400–10 000 ftpi (252–394 ftpmm)

*Presents the minimum requirements for an unrecorded cartridge containing 0.250-inch (6.30-mm) wide magnetic tape regarding the mechanical and magnetic interchangeability of the cartridge between information processing systems, using physical recording densities in the range of 6400 to 10 000 flux transitions per inch (ftpi) (252 to 394 flux transitions per millimeter (ftpmm)).*

ANSI INCITS 131-1994 (R2004), Information Systems – Small Computer Systems Interface-2 (SCSI-2)

*Defines an input/output bus for interconnecting comuters and peripheral devices. It defines extensions to the Small Computer System Interface (ISO 9316:1989), referred to herein as SCSI-1. It also provides more complete standardization of the previsoulsy defined command sets. It includes the necessary specification of the mechnancial, electrical, and functional characterestics of the interface to allow interoperability of conforming devices. This standard is referred herein as SCSI-2. The term, SCSI, is used wherever it is not necessary to distinguish between the two versions.*

ANSI INCITS 135.10-1998, Information Technology - Database Languages - SQL - Part 10: Object Language Bindings (SQL/OLB)

*Defines extensions of Database language SQL to support embedding of SQL statements into programs written in the JavaTM language (Java is a registered trademark of Sun Microsystems, Inc.), commonly known as "SQL-J". It specifies the syntax and semantics of that embedding, as well as mechanisms to ensure binary portability of resulting SQL-J applications. In addition, it specifies a number of Java packages and their contained classes (including methods).*

ANSI INCITS 136-1986 (R2002), Serial Recorded Magnetic Tape Cartridge for Information Interchange, Four and Nine Track, 0.250 Inch (6.30 mm), 8000 bpi (315 bpmm), Streaming Mode, Group Code Recording

*Provides a format and recording standard for an 8000-bpi (315-bpmm) streaming 0.250-inch (6.3-mm) wide, 4- and 9-track, magnetic tape in a cartridge to be used for information interchange between information processing systems, communication systems, and associated equipment utilizing a standard code for information interchange, as agreed upon by the interchange parties. This standard specifies the requirements for the 4-track and 9-track formats. The two formats shall not exist on the same cartridge. This standard refers solely to recording on the 0.250-inch (6.30-mm) magnetic tape cartridge and complements American National Standard for Information systems – Unrecorded magnetic tape cartridge for information interchange, 0.250 inch (6.30 mm), 6400–10 000 ftpi (252–394 ftpmm), ANSI X3.127-1987.*

ANSI INCITS 137-1988 (R2004), Information Systems – One- and Two-sided, Unformatted, 90-mm (3.5-in), 5.3-tpmm (135-tpi) Flexible Disk Cartridge for 7958 BPR Use – General, Physical, and Magnetic Requirements

*The standard specifies the general, physical and magnetic requirements for inter-changeability of the one-and two-sided 90mm (3.5 in) (nominal) flexible disk cartridge (for 7958 bits-per-radian (bpr) use) as required to achieve unformatted disk cartridge interchange among disk drives using 80 tracks per side and associated information processing systems.*

ANSI INCITS 137:1988/AM1-1999, Information Systems – One- and Two-sided, Unformatted, 90-mm (3.5-in), 5.3-tpmm (135-tpi) Flexible Disk Cartridge for 7958 BPR Use – General, Physical, and Magnetic Requirements

*The revision contains substantive and editorial changes to ANSI X3.137:1988. The standard specifies the general, physical and magnetic requirements for inter-changeability of the one-and two-sided 90mm (3.5 in) (nominal) flexible disk cartridge (for 7958 bits-per-radian (bpr) use) as required to achieve unformatted disk cartridge interchange among disk drives using 80 tracks per side and associated information processing systems.*

ANSI INCITS 139-1987 (R2002), Information Systems – Fiber Distributed Data Interface (FDDI) – Token Ring Media Access Control (MAC)

*Specifies the Media Access Control (MAC), the lower sublayer of the Data Link Layer (DLL), for the Fiber Distributed Data Interface (FDDI).*

ANSI INCITS 14-1983 (R2006), Recorded Magnetic Tape for Information Interchange (200 CPI, NRZI)

*This standard provides specifications for format and recording for 1/2 inch, 9-track magnetic tape to be used for information interchange among information processing systems, communications systems, and associated equipment utilizing ANSI, X3.4-1977. This standard deals solely with recording on magnetic tape, supports and complements ANSI - Unrecorded Magnetic Tape for Information Interchange (9-Track 800 CPI, NRZI: 1600 CPI, PE; and 6250 CPI, GCR), ANSI X3.40-1983.*

ANSI INCITS 145-1986 (R2002), Identification of Hydrologic Units in the United States and the Caribbean Outlying Areas, Codes for

*Presents and describes codes used for the identification of hydrologic units in the U.S. and Caribbean outlying areas.*

ANSI INCITS 148-1988 (R2004), Information Systems – Fiber Distributed Data Interface (FDDI) – Token Ring Physical Layer Protocol (PHY)

*Specifies a Physical Layer Protocol (PHY) standard, the upper sublayer of the Physical Layer, for the Fiber Distributed Data Interface (FDDI.*

ANSI INCITS 149-1986 (R2002), Financial Transaction Card Formsets – Location of Imprinted Information

*Provides the location of the imprinted account number, area for source ID, amount of transaction, and date of transaction as they appear on 51-column and 80-column card size financial transaction card formsets.*

ANSI INCITS 150-1987 (R2002), Business Machines, Data Processing Equipment and Business Forms – Character and Line Spacing

*Specifies the most commonly used character line spacings for office machines and data processing equipment.*

ANSI INCITS 151-1987 (R2002), Bond Papers and Index Bristols – Common Sheet Sizes

*(1) Lists the preferred and common sheet sizes of bond papers and index bristols and their applicable tolerances; (2) cross references to metric sizes, and (3) references a standard test method.*

ANSI INCITS 152-1987 (R2002), Noncarbonized, Single-Ply, Adding Machine Paper Rolls, Specifications for

*Provides the following specifications for adding machine paper rolls: terminology; roll widths; roll length; paper substance and quality, thickness, finish, color, brightness, opacity, tearing and bursting strength; diameter of rolls; winding and cutting, core materials; diameter of core and spindle hole; roll end sealing; and quantity packaging and cartoning.*

ANSI INCITS 154-1988 (R2004), Office Machines and Supplies – Alphanumeric Machines – Keyboard Arrangement

*Describes the arrangement of the 48 basic keys on the keyboard and the uppercase and lowercase characters that appear on the keys. The character assignments are divided into five application areas, in recognition of the different graphic character requirements of each application.*

ANSI INCITS 157-1987 (R2003), Information Systems – Recorded Magnetic Tape for Information Interchange – 3200 CPI (126 CPMM) – Phase Encoded

*This American National Standard provides specifications for format and recording for a 1/2-inch (12.7-mm), 9-track magnetic tape to be used for interchange among information processing systems, communication systems, and associated equipment utilizing a standard code for interchange as agreed upon by the interchange parties.*

ANSI INCITS 158-1987 (R2003), Information Systems – Recorded Magnetic Tape Cassette for Information lnterchange – 4 Track, 0.150 Inch (3.81 mm) 8000 bpi (315 bpmm), Group Code Recording

*This American National Standard is intended to provide a format and recording standard for an 8000-bpi(315-bpmm) streaming 0.150-inch (3.81-mm)-wide, 4-track magnetic tape cassette to be used for information interchange among information processing systems, communication systems, and associated equipment utilizing a standard code for interchange, as agreed upon by the interchange parties.*

ANSI INCITS 160/IEEE 770-2001, Programming Language - Extended PASCAL

*Specifies the semantics and syntax of the computer programming language Extended Pascal by specifying requirements for a processor and for a conforming program. Two levels of compliance are defined for both processors and programs.*

ANSI INCITS 162-1988 (R2004), Information Systems – Unformatted Flexible Disk Cartridge for Information Interchange, 5.25 in (130 mm), 96 Tracks per inch (3.8 Tracks per Millimeter), General, Physical, and Magnetic Requirements (includes ANSI

*Specifies the general, physical, and magnetic requirements for interchangeability for two-sided , 5.25-in (130-mm), 96-tracks-per-inch (tpi) (3,8-track-per-millimeter (tpmm)) flexible disk cartridge (for 13 262 flux-transitions-per-radian (ftpr) use) as required to achieve unformatted disk cartridge interchange among disk drives using 77 or 80 per side and associated information processing systems.*

ANSI INCITS 162-1988/TC1-1995 (R2006), Information Systems - Two-Sided, High Density, Unformatted, 5.25 in, 96-tpi, Flexible Disk Cartridge for 13 262 BPR Use - General, Physical and Magnetic Requirements - Technical Corrigendum 1

*Specifies the general, physical, and magnetic requirements for interchangeability for two-sided , 5.25-in (130-mm), 96-tracks-per-inch (tpi) (3,8-track-per-millimeter (tpmm)) flexible disk cartridge (for 13 262 flux-transitions-per-radian (ftpr) use) as required to achieve unformatted disk cartridge interchange among disk drives using 77 or 80 per side and associated information processing systems.*

ANSI INCITS 163-1988 (R2002), Information Systems – Contact Start/Stop Metallic Film Storage Disk – 83,333 Flux Transitions Per Track, 130-mm (5.118-in) Outer Diameter and 40-mm (1.575-in) Inner Diameter

*Specifies the general, physical, and magnetic requirements for interchangeability for the two-sided, 5.25-in (130-mm) flexible disk cartridge (for 13262 flux transitions per radian use) as required to achieve unformatted disk cartridge interchange among disk drives using 77 or 80 tracks per side and associated information processing systems.*

ANSI INCITS 164-1990 (R2006), Information technology - Unrecorded Magnetic Tape Cassette for Information Interchange 3.81 mm (0.150 In), 252 to 394 ftpmm (6400 to 10000 ftpi)

*3.81-mm (0.150~in)-wide magnetic tape presents the minimum requirements for the mechanical and magnetic interchangeability of the cassette between information processing systems, using the physical recording density of 394 ftpmm (10 000 ftpi). The cassette is of the twin hub coplanar type, loaded with 3.81-mm (0.150-in)-wide magnetic tape. Access holes are provided for, and the tape is transported between hubs by external reel motors. Features are provided for the use of external tape capstan(s), tape position sensing, and external tape guiding. This standard applies to the cassettes used for data interchange.*

ANSI INCITS 165-1992 (R2002), Information Systems – Programming Language – DIBOL

*This standard is designed to promote the interchangeability of DIBOL programs among a variety of computers. Programs conforming to this standard will be said to be written in DIBOL.*

ANSI INCITS 166-1989 (R2005), Fiber Distributed Data Interface (FDDI) Physical Layer Medium Dependent (PMD)

*Specifies Physical Layer, Medium Dependent (PMD) requirements for the Fibre Distributed Data Interface (FDDI). The FDDI provides a high-bandwidth (100 Mbit/s) general-purpose interconnection among computers and peripheral equipment using fibre optics as the transmission medium. The FDDI may be configured to support a sustained transfer rate of approximately 80 Mbit/s (10 Mbyte/s). It may not meet the response time requirements of all unbuffered high-speed devices. The FDDI establishes the connection among many FDDI nodes (stations) distributed over distances of several kilometers in extent.*

ANSI INCITS 17-1981 (R2002), Character Set for Optical Character Recognition (OCR-A)

*Prescribes shapes and sizes of OCR-A alphanumeric characters and symbols for optical character recognition (OCR) systems.*

ANSI INCITS 171-1989 (R2005), Information Systems – One- and Two-Sided, High Density, Unformatted, 90-mm (3.5 in), 5.3-tpmm (135-tpi) Flexible Disk Cartridge for 15 916 bpi Use – General, Physical, and Magnetic Requirements

*4. This standard specifies the general, physical, and magnetic requirements for interchangeability of the one- and two-sided, high-density, 90-mm (3.5-in) (nominal) flexible disk cartridge for 15 916 bits-per-radian (bpr) use as required to achieve unformatted disk cartridge interchange among disk drives using 80 tracks per side and associated information processing systems. The one- and two-sided flexible disk enclosed ina protective case and having one or two recording surfaces is of the type intended specifically for use with digital recording and reproducing equipment employing access mechanisms capable of positioning to these data tracks.*

ANSI INCITS 172-2002, Information Technology – American National Standard Dictionary of Information Technology (ANSDIT)

*Contains concepts used in information technology. In general, concepts or terms found in an everyday nontechnical dictionary are not included. Also, concepts and terms that are: a) from specialized areas of information technology, b) still in development, and c) of a parochial nature, are not necessarily incorporated in this standard. Inevitably, the rapid growth of the field of information technology precludes the standard from being exhaustive and final.*

ANSI INCITS 175-1999 (R2004), 19-mm Type ID-1 Recorded Instrumentation Digital Cassette Tape Format

*Establishes the format of information on 19-mm type ID-1 instrumentation digital cassettes. It specifies the dimensions and locations of the helical data, control, time code, and annotation tracks. Also, it defines the format and recording requirements of the data blocks forming the helical data record containing digital instrumentation and other associated data and specifies the content, format, and recording method for the control record. This standard also specifies the recording requirements for the longitudinal records contained in the annotation and the time code tracks.*

ANSI INCITS 178-1990 (R2005), Information Systems – Packet-Switched Signaling System between Public Networks Providing Data Transmission Service

*CCITT Recommendation X.75, Packet-Switched Signalling System Between Public Networks Providing Data Transmission Services, defines the interface between public networks providing data transmission services in the packet-switched mode. The 1988 (Blue book) version of the Recommendation is the current official version of the X.75 interface definition. Subsequent references to X.75 in this document will be to the 1988 version unless otherwise stated. This standard adopts the international X.75 standard, with modifications and extensions to apply to interfaces between public networks within the United States.*

ANSI INCITS 178a-1991 (R2005), Information Systems – Packet-Switched Signaling System between Public Networks Providing Data Transmission Service (NUI Utility Extensions and Format Constraints)

*This supplement addresses extensions related to the Network User Identification (NUI) utility. In particular, it provides procedures for passing verified NUI utility values between networks and additional constraints on the parameter field format.*

ANSI INCITS 179-1990 (R2002), 95-mm Diameter Rigid Digital Recording Disk

*Provides the mechanical, physical and magnetic properties of a low-friction disk with a diameter of 95 mm (3.740 inches) and with a typical recording density of 31.5 tracks per millimeter (tpmm) (800 trakcs per inch (tpi)) with 567 flux transitions per millimeter (ftpmm) (14 400 flux transitions per inch (ftpi)) at a radius of 23 mm (0.900 inch).*

ANSI INCITS 18-1974 (R2005), Punched paper tape -- Dimensions and location of feed holes and code holes

*Covers the physical dimensions of the paper tape and its perforations and is for perforated paper tape with fully punched round holes.*

ANSI INCITS 180-1990 (R2006), Information Systems - Magnetic Tape and Cartridge for Information Interchange - 18-Track, Parallel, 1/2 inch (12.65 mm), 37 871 cpi (1491 cpmm), Group-Coded - Requirements for Recording

*This standard provides the requirements for a tape cartridge to be used for information interchange among information-processing systems, communication systems, and associated equipment utilizing a standard code for information interchange as agreed upon by the interchange parties. Sections 4 through 8 of this standard provide the general reequirements, definitions, physical and magnetic tape characteristics, and the tape-cartridge requirements. Sections 9 through 15 deal with the requirements for recording on magnetic tape.*

ANSI INCITS 181-1990 (R2006), Recorded Magnetic Tape and Cartridge for Information Interchange – 1/2 Inch (12.65 mm), Serial Serpentine, 22-track, 6667 bpi (262 bpmm), and 48-track, 10000 bpi (394 bpmm), MFM-Encoded – Requirements for Recording

*This standard provides the requirements for a tape cartridge to be used for information interchange among information-processing systems, communication systems, and associated equipment utilizing a standard code for information interchange as agreed upon by the interchange parties. This standard deals solely with the requirements for recording on magnetic tape. Compliance with the standard for unrecorded tape, ANSI Systems - Unrecorded Magnetic Tape and Cartridge for Information Interchange, l/2 inch (12.65 mm), Serial Serpentine, 22- Track, 6 667 ftpi (262 ftpmm) and 48-Track, 10 000 ftpi (394 ftpmm), ANSI X3.193,' is a requirement for nformation interchange.*

ANSI INCITS 182-1990 (R2002), Guideline for Bar Code Print Quality

*Covers the optical characteristics of a printed bar code symbol. This document shall be used with the appropriate application specifications, or symbology specifications, or both. The appropriate application specifications, or symbology specifications, or both, shall take precedence over this guideline.*

ANSI INCITS 183-1991 (R2006), Information Systems – High-Performance Parallel Interface - Mechanical, Electrical, and Signalling Protocol Specification (HIPPI-PH)

*Provides the mechanical, electrical and signalling protocol specifications for an efficient simplex high-performance point-to-point interace between pieces of data-processing equipment. The interface described in this document can be operated at peak data rates of 800 or 1600 Mbit/s, over distances of up to 25m by means of copper cabling. A distance-independent signalling protocol allows the average data rates to approach the peak data rates, even over distances longer than specified for the HIPPI-PH.*

ANSI INCITS 184-1993 (R2003), Information Systems – Fiber-Distributed Data Interface (FDDI) – Single-Mode Fiber Physical Layer Medium Dependent (SMF-PMD)

*This standard specifies a media-level, point-to-point, 12-channel, full-duplex, electrical/optical interface, with each channel operating at 500 Mbit/s or 1 Gbit/s. Multimode (MM) fiber cables, and single-mode (SM) fiber cables, are used for distances up to1 km when carrying the HIPPI-6400-PH protocol. Differential signals are used on the electrical side.*

ANSI INCITS 186-1992 (R2002), Information Systems – Fiber-Distributed Data Interface (FDDI) – Hybrid Ring Control (HRC)

*Specifies a Hybrid Ring Control (HRC) protocol that provides a mode of operation in which both packet switched and isochronous data are transmitted within the same special frame structure, called a cycle.*

ANSI INCITS 187-1990 (R2006), Recorded Magnetic Tape for Longitudinal Recording of Instrumentation Data-Interchange

*This standard provides instrumentation tape and recorder/reproducer characteristics and modes of recording to allow users of different systems to interchange analog data recorded on instrumentation magnetic tape. This standard deals solely with the requirements for recording on magnetic tape. Compliance with the proposed standard for unrecorded tape, American National Standard for Information Systems - Unrecorded Magnetic Tape for Longitudinal Recording of Instrumentation Data - Interchange, X3 project 747-0,‘) will be a requirement for information exchange.*

ANSI INCITS 189-1991 (R2002), Information Systems – Interface between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for Terminals Operating in the Packet Mode and Accessing a Packet-Switched Public Data Network

*Adopts the international CCITT X.32 standard, modifications and extensions to apply to DTE/DCE interfaces.*

ANSI INCITS 19-1974 (R2005), Eleven-Sixteenths Inch Perforated Paper Tape for Information Interchange

*Covers the physical dimensions of the paper tape and its perforations and is for perforated paper tape with fully punched round holes.*

ANSI INCITS 191-1991 (R2002), Recorded Optical Media Unit for Digital Information Interchange – 130-mm Write-Once Sampled-Servo RZ Selectable-Pitch Optical Disk Cartridge

*Specifies the characteristics of a 130mm optical disk cartridge for the purpose of information interchange between information processing systems and for information storage.*

ANSI INCITS 197-1991 (R2002), Information Systems – Unrecorded Magnetic Tape and Cartridge for Information Interchange 1/2 in (12.65 mm), Serial Serpentine, 22-Track, 6667 ftpi (262 ftpmm) and 48-Track, 10,000 ftpi (394 ftpmm)

*Provides the requirements for a tape cartridge to be used for information interchange among information-processing systems, and associated equipment. This standard provides the general requirements, definitions, physical and magnetic tape characteristics, and the tape cartridge requirements.*

ANSI INCITS 198-1992 (R2002), Programming Language – Fortran – Extended

*This standard specifies the form and established the interpretation of programs expressed in the Fortran language. The purpose of this standard is to promote portability, reliability, maintainability, and efficient execution of Fortran programs for use on a variety of computing systems.*

ANSI INCITS 199-1991 (R2002), Information Systems – 356-mm Optical Disk Cartridge (Write-Once) – Test Methods for Media Characteristics

*Specifies test methods for media characteristics of 356-mm nominal diameter optical disk cartridges used for information processing systems and for information storage.*

ANSI INCITS 20-1967 (R2005), Take-Up Reels for One-Inch Perforated Tape for Information Interchange

*Covers the physical dimensions of take-up (or storage) reels, with either fixed or separable flanges, so that reels of perforated tape may be interchanged among machines of various manufacturers, and is intended to serve as a guide in the coordination of equipment design.*

ANSI INCITS 200-1992 (R2002), Information Systems – Unrecorded Optical Media Unit for Digital Information Interchange – 356 mm WORM Optical Disk Cartridge – Parts 1 and 2

*Specifies the characteristics of a 356 mm optical disk cartridge for the purpose of information interchange between information processing systems and for information storage.*

ANSI INCITS 203-1992 (R2002), Information Systems – Helical-Scan Digital Computer Tape Cartridge for Information Interchange (3.81 mm (0.150 in) Digital Data Storage (DDS) Recorded Format)

*Provides the requirements for the helical-scan recording method*
*and the Digital Data Storage (DDS) recorded format of a 3.81-mm (0.150-in) magnetic tape cartridge to be used for information interchange between information processing systems. Information interchange between information processing systems requires the use of this standard in conjunction with the unrecorded tape and cartridge requirements provided by the American National Standard for Information Systems - Unrecorded Helical-Scan Digital Computer Tape Cartridge for Information Interchange, 3.81-mm (0.150-in), ANSI X3.206-1993.*

ANSI INCITS 204-1992 (R2002), Information Systems – Recorded Magnetic Tape for Information Interchange, 15 and 18 Track, 0.250-inch (6.35-mm) 10 000-bpi (394-bpmm) Streaming Mode, Group Code Recording

*Provides the requirements for a standard for a streaming 0.250 inch (6.30 mm), wide, 15 & 18 Track, magnetic tape in a cartridge to be used for information interchange between information processing systems, communications systems, and associated equipment utilizing a standard code for information interchange, as agreed upon by the interchange parties.*

*This standard refers solely to recording on magnetic tape.*

ANSI INCITS 205-1992 (R2002), Information Systems – Helical-Scan Digital Computer Tape Cartridge for Information Interchange (3.81-mm (0.150 in)) Data/DAT Recorded Format

*Provides the requirements for the Helical-Scan recording method and the DATA/DAT recorded format of a 3.81 mm (0.150 in) magnetic tape cartridge to be used for information interchange between information processing systems*

ANSI INCITS 207-1991 (R2002), Office Machines and Supplies – Alphanumeric Machines – Alternate Keyboard Arrangement

*Provides a performance-oriented keyboard arrangement to the keyboard presented in American National Standard for Office Machines and Supplies-Keyboard Arrangement for Alphanumeric Machines, ANSI X3.154. This standard describes the arrangement of the 48 basic printing keys on the keyboard and the characters, uppercase and lowercase, that appear on the keys.*

ANSI INCITS 209-1992 (R2002), Information Systems – Optical Character Recognition (OCR) – Matrix Character Sets for OCR-MB

*Describes the matrix of dot placement and size limits for OCR-MB alphanumeric characters and symbols for optical character recognition (OCR) systems.*

ANSI INCITS 21-1967 (R2002), Rectangular Holes in Twelve-Row Punched Cards

*Specifies the size and location of rectangular holes in twelve-row 3-1/4 inch wide punched cards. To be a processable document, suitable for information interchange, cards must also meet American National Standard Specifications for General Purpose Paper Cards for Information Processing, X3.11-1990.*

ANSI INCITS 210-1998 (R2003), Information Systems – High-Performance Parallel Interface – Framing Protocol (HIPPI-FP)

*Recommends revisions to the existing HIPPI-FP standard (Project 702) with the following goals: (a) No changes required for existing applications, (b) additional upper-layer protocol identifiers to support new applications, (c) Inclusion of the material in the separate addendum (d) It is possible that this proposed standard might define desirable additional capabilities identified during the development process.*

ANSI INCITS 211-1992 (R2002), Information Systems – 130-mm Write-Once Optical Disk Cartridge Using Continuous Servo RLL 2,7 Encoding and LDC

*Specifies: definitions of essential concepts; the environment in which the characteristics are to be tested; the environments in which the cartridge is to be operated and stored; the mechanical, physical and dimensional characteristics of the case and of the optical disk; the optical characteristics and the recording characteristics for recording the information once and for reading it many times, so as to provide physical interchangeability between data processing systems.*

ANSI INCITS 212-1992 (R2002), Information Systems – 130-mm Rewritable Optical Disk Cartridge for Information Interchange

*Specifies the characteristics of 130-mm optical disk cartridges (ODC) of the type providing for information to be written, read, and erased many times using the magneto-optical effect. Specifies*
*- definitions of the essential concepts,*
*- the environment in which the characteristics shall be tested,*
*- the environments in which the cartridge shall be operated and stored,*
*- the mechanical, physical, and dimensional characteristics of the case and of the optical disk,*
*- the magneto-optical characteristics and the recording characteristics for recording the information and for erasing it many times, so as to provide physical interchangeability between data processing systems.*

ANSI INCITS 213-1994 (R2004), Information Technology – 90-mm (3.54-in) Optical Disk Cartridge Rewritable and Read Only Using Discrete Block Format (DBF) Method for Digital Information Interchange

*Specifies the characteristics of a 90-mm (3.54-in) optical disk cartridge (ODC) of the type providing for information to be written, read, and erased many times, using thermomagnetic and magneto-optical effect. A part or all of the optical disk may be prerecorded (read only) and be reproduced by embossing information in the recording layer. This information is read without recourse to the magneto-optical effect. The optical disk cartridge consists of two parts, a protective case and an optical disk held inside the case. The optical disk shall be single-sided with one substrate and one recording layer.*

ANSI INCITS 214-1992 (R2002), Information Systems – 130-mm Write-Once Optical Disk Cartridge Using Sampled Servo and 4/15 Encoding

*Specifies the characteristics of 130-mm optical disk cartridges (ODC) of the type providing for information to be written once and read many times.*
*Specifies*
*- definitions of essential concepts,*
*- the environment in which the characteristics shall be tested,*
*- the environments in which the cartridge shall be operated and stored,*
*- the mechanical, physical, and dimensional characteristics of the case and of the optical disk,*
*- the optical characteristics and the recording characteristics for recording the information once and for reading it many times. so as to provide physical interchangeability between date processing systems.*

ANSI INCITS 215-1994 (R2006), Information Systems – Programming Language FORTH

*This Standard specifies an interface between a Forth System and a Forth Program by defining the words provided by a Standard System.*

ANSI INCITS 218-2000 (R2005), High-Performance Parallel Interface - Encapsulation of ISO 8802-2 (IEEE Std 802.2) Logical Link Control Protocol Data Units (HIPPI-LE) (revision and redesignation of ANSI X3.218-1993) (formerly ANSI NCITS 218-2000)

*Specifies a common method for encapsulating ISO/IEC 8802-2 (IEEE Std 802.2) Logical Link Control Protocol Data Units (PDU) on HIPPI.*

ANSI INCITS 22-1983 (R2006), Recorded Magnetic Tape for Information Interchange (800 CPI, NRZI)

*This standard provides specifications for format and recording 1/2 inch, 9-track magnetic tape to be used for information interchange among information processing systems, communication systems, and associated equipment utilizing the ANSI, ANSI X3.4.1977. This standard deals solely with recording on magnetic tape and supports and complements ANSI - Unrecorded Magnetic Tape for Information Interchange (9-Track 800 CPI, NRZI; 1600 CPI, PE; and 6250 CPI, GCR), ANSI X3.50-1983.*

ANSI INCITS 220-1992 (R2002), Information Systems – Digital Information Interchange 130-mm Optical Disk Cartridges of the Write-Once, Read Multiple (WORM) Type, Using the Magnetic-Optical Effect

*Specifies the characteristics of 130-mm optical disk cartridges (ODC) of the Write Once Multiple (WORM) type, which provides for the disk to be intialized once, and the information to be written once only and read many times using the magneto-optical effect.This standard specifies*
*- definitions of essential concepts;*
*- the environment in which the characteristics shall be tested;*
*- the environments in which the cartridge shall be operated and stored;*
*- the mechanical, physical, and dimensional characteristics of the case and of the optical disk;*
*- the magneto-optical characteristics and the recording characteristics for initializing the disk once, for recording the information once, for reading it many times so as to provide physical*

ANSI INCITS 222-1997 (R2007), Information Technology – High-Performance Parallel Interface – Physical Switch Control (HIPPI-SC)

*THis standard provides a protocol for controlling physical layer switches which are based on the High-Performance Parallel Interface, a simple high-performance point-to-point interface for transmitting digital data at peak data rates of 800 or 1600 Mbit/s between data-processing equipment.*

ANSI INCITS 223-1995 (R2006), Information Technology – Data Compression Algorithm – Adaptive Coding with Embedded Dictionary (DCLZ Algorithm) for Information Interchange

*This standard specifies a lossless compression algorithm to reduce the number of bits required to represent information coded by means of 8-bit bytes. This algorithm is known as DCLZ,which stands for Data Compression according to Lempel and Ziv.1.*

ANSI INCITS 224-1994 (R2004), Information Systems – Extended Magnetic Tape Format for Information Interchange (18-Track, Parallel, 12.65 mm (0.50 in), 1491 cpmm (37 871 cpi), Group-Coded Recording)

*Provides the requirements for a tape format to be used for information interchange of processed or unprocessed data between information processing systems, communication systems, and associated equipment using standard code as agreed upon by the interchange parties. This standard deals solely with the requirements for recording, with provision made for using a processing algorithm, on magnetic tape.*

ANSI INCITS 225-1994 (R2004), Information Systems – Compaction Algorithm – Binary Arithmetic Coding

*Provides the information necessary to ensure interchangeability of compacted data between information processing systems, communications systems, and associated equipment using standard codes as agreed upon by the interchange parties. This standard deals solely with the requirements for using the compaction algorithm.*

ANSI INCITS 226-1994 (R2004), Information Technology – Programming Language – Common Lisp

*Promotes the portability of Common Lisp programs among a variety of data processing systems. It is a language specification aimed at an audience of implementors and knowledgeable programmers. It is neither a tutorial nor an implementation guide.*

ANSI INCITS 227-1996 (R2006), Information Technology – Recorded Magnetic Tape Mini-Cartridge for Information Interchange – Serial, 0.250 in (6.35 mm), 20-Track, 10 000 bpi (394 bpmm) and 28-Track, 14 700 bpi (579 bpmm), MFM Encoded

*This standard provides the requirements for a tape cartridge to be used for information interchange among information processing systems, communication systems, and associated equipment utilizing a standard code for information interchange as agreed upon by the interchange parties. This standard deals with the requirements for recording on magnetic tape and the volume and file structure to be used for the interchange of information between users of information processing systems.*

ANSI INCITS 228-1993 (R2003), Information Systems – X.25 Data Transfer Phase (DTP) Procedures for Operation with Frame Relay

*Describes X.25 Data Transfer Phase (DTP), which facilitates: (a) interworking with X.25/X.31 subnetworks; and (b) provision of the data-transfer aspects of the OSI CONS in the frame relay end points (terminals).*

ANSI INCITS 229-1994 (R2004), Information Systems – Fibre Distributed Data interface (FDDI) – Station Management (SMT)

*Specifies the Station Management (SMT) for the Fiber Distributed Data Interface (FDDI) and provides the SMT that is a subset of the Network Management necessary to allow stations on an FDDI ring to work cooperatively on the network. Primary responsibilities of the SMT will be connection management including station insertion, configuration management, fault isolation and recover including error detection and station isolation, configuration partitioning, communication protocol for external authority, scheduling policies, address administration, downline load and upline requirements.*

ANSI INCITS 230-1994 (R2004), Information Technology - Fibre Channel - Physical and Signaling Interface (FC-PH)

*Describes the physical and signalling interface of a high-performance serial link for support of the Upper Level Protocols (ULPs) associated with HIPPI, IPI, SCSI, IP, and others.*

ANSI INCITS 230-1994/AM2-1999 (R2004), Information Technology - Fibre Channel - Physical and Signaling Interface (FC-PH) - Amendment 2

*Develops an additional amendment to American National Standard for Information Technology - Fibre Channel - Physical and Signaling Interface (FC-PH), ANSI X3.230-1994 that includes further clarification regarding the Bit Error Rate definition and corrects a small number of additional errors and inconsistencies.*

ANSI INCITS 231-1994 (R2004), Information Systems – Fibre Distributed Data Interface (FDDI) – Physical Layer Protocol (PHY-2)

*Specifies the Physical Layer Protocol (PHY), the upper layer sublayer of the Physical Layer, for Fibre Distributed Data Interface (FDDI.*

ANSI INCITS 232-1996 (R2006), Information Technology – SCSI-2 Common Access Method Transport and SCSI Interface Module

*This standard defines the Common Access Method (CAM) for the Small Computer Systems Interface (SCSI). The purpose of this standard is to define a method whereby multiple environments may adopt a common procedure for the support of SCSI devices. The CAM provides a structured method for supporting peripherals with the software (e.g., device driver) and hardware (e.g., host bus adapter) associated with any computer.*

ANSI INCITS 234-1993 (R2003), Information Systems – Test Methods for Media Characteristics – 130-mm Rewritable Optical Disk Data Storage Cartridges with Continuous Composite Servo (CCS)

*Specifies test methods for media characteristics of optical disks used for information processing systems and for information storage.*

ANSI INCITS 235-1995 (R2005), Information Technology – Unrecorded Magnetic Tape Cartridge for Information Interchange – 0.25 in (6.35 mm), 10000 – 12 500 ftpi (394 – 492 ftpmm) Coercivity 550 oersteds (44 000 amperes/meter) (Types 6150, 6250, 6037)

*Provides the information necessary to ensure mechanical and magnetic interchangeability for a tape cartridge between information processing systems, communication systems, and associated equipment. This standard provides the general requirements, definitions, physical and magnetic tape characteristics, and the cartridge requirements.*

ANSI INCITS 237-1995 (R2006), Fibre Distributed Data Interface (FDDI) – Token Ring Low-Cost Fibre Physical Layer Medium Dependent (LCF-PMD)

*This standard specifies requirements for the Fibre Distributed Data Interface (FDDI) - Token ring low-cost fibre physical layer medium dependent (LCF-PMD).FDDI provides a high-bandwidth (100 Mbit/s), general-purpose interconnection among computers and peripheral equipment using fibre optics as the primary transmission medium.*

ANSI INCITS 238-1994 (R2004), Information Technology- Programming Language – PL/B

*Specifies the form and establishes the interpretation of programs written in the PL/B programming language. The standard is designed to promote portability of PL/B programs among a variety of data processing systems. It is intended for use by implementors.*

ANSI INCITS 239-1994 (R2004), Information Systems - Fibre Distributed Data Interface (FDDI) - Token Ring Media Access Control-2 (MAC-2)

*Specifies the Media Access Control (MAC), the middle sublayer of the Data Link Layer (DLL), for Fibre Distributed Data Interface (FDDI.*

ANSI INCITS 241-1994 (R2004), Information Systems – Data Compression Method – Adaptive Coding with Sliding Window for Information Interchange

*Specifies an encoding method for the lossless compression of binary data.*

ANSI INCITS 242-1994 (R2004), Information Systems – Magnetic Tape Cartridge for Information Interchange – 0.50 in (12.65 mm), Serial Serpentine, 48-Track, 42 500 bpi (1 673 bpmm) DLT1 Format

*Provides the requirements for a tape cartridge to be used for information interchange among information-processing systems, communications systems, and associated equipment utilizing a standard code for information interchange as agreed upon by the interchange parties. This standard deals with the requirements for the unrecorded cartridge and for recording on the enclosed magnetic tape.*

ANSI INCITS 243-1996 (R2006), Information Technology – Recorded Magnetic Tape Cartridge for Information Interchange – Serial, 0.250 inch (6.35 mm), 26-Track, 16 000 bpi (630 bpmm), Streaming Mode, Group Code Recording

*This standard provides the requirements for a streaming 0.250-inch (6.35-mm) wide, 26-track, magnetic tape in a cartridge to be used for information interchange between information processing systems,communication systems, and associated equipment utilizing a standard code for information interchange, as agreed upon by the interchange parties. This standard refers solely to recording on magnetic tape.*

ANSI INCITS 244-1995 (R2005), Information Technology – Test Methods for Media Characteristics – 90 mm Read Only and Rewritable M.O. Optical Disk Data Storage Cartridges with Continuous Composite Servo (CCS)

*Specifies test methods of 90mm Read Only and Rewritable M.O. Optical Disk Cartridges with CCS used for information processing systems and for information storage.*

ANSI INCITS 245-1995 (R2006), Information technology - Abstract Test Suite for FDDI Media Access Control Conformance Testing (FDDI MAC ATS)

*This American National Standard contains the abstract test suite for the Fiber Distributed Data Interface (FDDI) token ring Media Access Control (MAC) layer protocol. This test suite was developed based on the principles defined in OSI Conformance Testing Methodology and Framework (ISO 9646) and written in Tree and Tabular Combined Notation (TTCN), and intended for testing conformance to the MAC standard (ISO 9314-2: 1989) of any FDDI stations.*

ANSI INCITS 246-1994 (R2004), Information Processing Systems – Test Methods for Media Characteristics of 90mm Read Only and Rewritable M.O. Optical Disk Data Storage Cartridge with Discrete Block Format (DBF)

*Specifies test methods for media characteristics of optical disks used for information processing systems and for information storage (90-mm rewritable optical disk cartridges, using discrete block format (DBF.*

ANSI INCITS 248-1996 (R2006), IInformation technology - Abstract Test Suite for FDDI Physical Layer Protocol Conformance Testing (FDDI PHY ATS)

*This standard defines a conformance test of the PHY functions in a path through an FDDI node. Figure 1 is a functional block diagram of an FDDI path. The path contains the necessary functions to repeat (that is, decode and retransmit) frames through an FDDI node. The PHY Repeat Filter is optional when there is a MAC in the repeat path. If there is no MAC in the repeat path, then the function is implemented in PHY.*

ANSI INCITS 249-1995 (R2005), Information Technology – Unrecorded Magnetic Tape Mini-Cartridge for Information Interchange – 0.25 in (6.35 mm), 10 000 – 14 700 ftpi (394–579 ftpmm) Coercivity 550 oersteds (44 000 amperes/meter (Types 2000, 2060, 2080

*Provides the information necessary to ensure mechanical and magnetic interchangeability for a tape cartridge between information processing systems, communication systems, and associated equipment. This standard provides the general requirements, definitions, physical and magnetic tape characteristics, and the cartridge requirements.*

ANSI INCITS 250-1996 (R2006), Information Technology – Recorded Magnetic Tape Mini Cartridge for Information Interchange – 12/24-Track, Serial, 0.250 inch (6.35 mm) 10 000 bpi (394 bpmm) Group-Coded Recording

*This standard provides the requirements for a tape mini cartridge to be used for information interchange among information processing systems, communication systems, and associated equipment utilizing a standard code as agreed upon by the interchange parties. This standard deals solely with the requirements for recording on magnetic tape.*

ANSI INCITS 251-1995 (R2005), Unrecorded Magnetic Tape Cartridge for Information Interchange – 0.25 in (6.35 mm), 20 000 ftpi (787 ftpmm) Coercivity 550 oersteds (44 000 amperes/meter) (Types 6320, 6525, 6080, 6081)

*Provides the information necessary to ensure mechanical and magnetic interchangeability for a tape cartridge between information processing systems, communication systems, and associated equipment. This standard provides the general requirements, definitions, physical and magnetic tape characteristics, and the cartridge requirements.*

ANSI INCITS 255-1996 (R2006), Information Technology – Fibre Distributed Data Interface (FDDI) – Abstract Test Suite for FDDI Physical Medium Dependent Conformance Testing (PMD ATS)

*International Standard IS0 9314-3: 1990 [ANSI X3.166-1989 (R1995)]) Fibre Distributed Data Interface (FDDI) - Physical Layer Medium Dependent (PMD), specifies the requirements for the optical input/output port of FDDI stations as well as for cable plants. The intention of IS0 9314-3 [ANSI X3.166] is that when conforming stations are connected to each other through a conforming cable plant, the bit error rate for a station to station link will not exceed 2,5 x lo-lo.This standard specifies a series of tests that verify the conformance of FDDI stations to the requirements of IS0 9314-3 [ANSI X3.1661.*

ANSI INCITS 256-2001, Radio Frequency Identification (RFID)

*Establishes a technical standard for a family of compatible RFID devices, specifically, RFID devices operating in freely available international frequency bands at license-free power levels. Its purposes are as follow:*
*Promote interoperability and compatibility between RFID devices by defining a common API and limited physical and data link layer options.*
*Support item management applications and provide flexibility in the physical layer definitions to allow additional features for uses that value such enhancements.*
*The scope includes the following:*
*° Frequency*
*° Interface definitions*
*° RDID system definition*
*° Minimum features*
*° Compliance requirements*
*° Document structure and references*

ANSI INCITS 257-1997 (R2002), Information Technology - FDDI Station Management-2 Common Services (SMT-2-CS)

*This standard specifies the common services portion of station management-2 (SMT-2-CS) for the Fibre Distributed Data Interface (FDDI).*

ANSI INCITS 258-1997 (R2002), Fibre Distributed Data Interface (FDDI) - Station Management-2 - Isochronous Services (SMT-2-IS)

*The Isochronous Services (SMT-2-IS) which are required to manage an Isochronous Meida Access Controller (I-MAC) that provides isochronous channel service to circuit-switched users such as a CS-Mux.*

ANSI INCITS 259-1997 (R2002), Information Technology - FDDI Station Management-2 Packet Services (SMT-2-PS)

*This standard specifies the Packet services portion of Station Management-2 (SMT-2-PS) for the Fibre Distributed Data Interface (FDDI).*

ANSI INCITS 261-1996 (R2006), Information Technology – Extended Magnetic Tape Format for Information Interchange (36-Track, Parallel Serpentine, 12.65 mm (0.05 in), 1491 cpmm (37 871 cpi) Group-Coded Recording)

*This standard provides the requirements for a 36-track tape format to be used for information interchange of data between information processing systems, communication systems, and associated equipment using standard code as agreed upon by the interchange parties. This standard deals solely with the requirements for recording, with provision made for using a processing algorithm, on magnetic tape.*

ANSI INCITS 262-1995 (R2005), Fibre Distributed Data Interface (FDDI), Conformance Test Protocol Implementation Conformance Statement Proforma (CT-PICS)

*Provides the PICS proforma for the Fibre Distributed Data Interface (FDDI) specified in the base standards as denoted in Section 5, General Description, of this PICS.*

ANSI INCITS 263-1995 (R2005), Fibre Distributed Data Interface (FDDI) – Token Ring Twisted Pair Physical Layer Medium Dependent (TP-PMD)

*Specifies Twisted Pair Physical Layer Medium Dependent (TP-PMD) requirements for the Fibre Distributed Data Interface (FDDI). FDDI provides a high-bandwidth (100 Mbit/s) general-purpose interconnection among computers and peripheral equipment using fibre optics and twisted pair as the transmission medium. FDDI can be configured to support a sustained data transfer rate of at least 80 Mbit/s (10 Mbyte/s). It may not meet the response time requirements of all unbuffered high-speed devices. FDDI provides connectivity for many nodes distributed over distances of several kilometers in extent.*

ANSI INCITS 264-1996 (R2006), Information Technology – Unrecorded Helical-Scan Digital Computer Tape Cassette for Information Interchange, 19 mm (0.748 in) Type D-1

*This standard provides the unrecorded requirements for a computer tape cassette to be used for information interchange between information processing systems. Such a cassette is comprised of two parts: - a case to provide protection from contaminants and human handling and to facilitate loading/unloading of the cassette by a drive; and - a magnetic tape of 19 mm (0.748 in) nominal width held inside the case on twin hubs.*

ANSI INCITS 265-1995 (R2006), Information Technology – Magnetic Tape and Cartridge for Information Interchange – Unrecorded, 36-track, Parallel, 12.57 mm (0.495 in), 1944 ftpmm (49 378 ftpi) Group-Coded Recording

*This standard provides the requirements for an unrecorded tape cartridge to be used for information interchange among information-processing systems. Such a cartridge comprises two parts:- a case to provide protection of the media from contaminants and human handling, and to facilitate loading and unloading of the cartridge by the drive; - a magnetic tape of 12.573 mm (0.495 in) width held inside the case on a reel. The tape shall be transported on the reel for digital recording at a physical density of 1944 ftpmm (49 378 ftpi.*

ANSI INCITS 266-1996 (R2006), Information Technology – Magnetic Tape Cartridge for Information Interchange, 0.50 in (12.65 mm), Serial Serpentine 112-Track, 42 500 bpi (1 673 bpmm) DLT2 Format

*This standard provides the requirements for a tape cartridge to be used for information interchange among information-processing systems, communication systems, and associated equipment utilizing a standard code for information interchange as agreed upon by the interchange parties. This standard deals with the requirements for the unrecorded cartridge and for recording on the enclosed magnetic tape. The use of a labeling standard such as American National Standard for Information systems - File structure and labeling of magnetic tapes for information interchange, ANSI X3.27-i 987, or later editions, will support data interchange between data-processing systems.*

ANSI INCITS 267-1996 (R2006), Information Technology – Helical-Scan Digital Computer Tape Cartridge, 12.65 mm (0.498 in), for Information Interchange

*This standard specifies the requirements for a helical data storage (HDS) tape cartridge to be used for information interchange among information-processing systems, communication systems, and associated equipment utilizing a standard code for information interchange as agreed upon by the interchange parties. Such a cartridge comprises two parts: - a case to provide protection from contaminants and handling, utilize loading/unloading of the cartridge by a drive; - a magnetic tape of 12.65 mm (0.498 in) nominal width held inside the cartridge on a single supply reel.*

ANSI INCITS 269-1996 (R2006), Information Technology – Fibre Channel Protocol for SCSI

*This standard defines the SCSI Fibre Channel Protocol (FCP). The FCP is a mapping protocol (FC-4) for applying the SCSI command set to the Fibre Channel. The FCP defines the Fibre Channel information units in accordance with the SCSI Architecture Model (ANSI X3.270-1996). The FCP additionally defines how the Fibre Channel services are used to perform the services defined by the SCSI Architecture Model.*

ANSI INCITS 27-1987 (R2003), Magnetic Tape Labels and File Structure for Information Interchange

*This standard specifies the file structure and the labeling of magnetic tapes for the interchange of information between users of information processing systems.*

ANSI INCITS 273-1997 (R2002), Information Technology - CASE Tool Integration Messages

*This standard includes an abstract interface to services used by CASE tools.*

ANSI INCITS 274-1996 (R2001), Information Technology – Programming Language REXX

*Provides errata, issued in response to questions that have been raised regarding certain specifications contained in the content of: X3.274-1996, Programming Language Rexx.*

ANSI INCITS 274-1996/AM1-2000 (R2001), Information Technology – Programming Language REXX

*Specifies the semantics and syntax of the programming language REXX by specifying requirements for a conforming language processor. The scope of this standard includes:*
*- the syntax and constraints of the REXX language;*
*- the semantic rules for interpreting REXX programs;*
*- the restrictions and limitations that a conforming language processor may impose;*
*- the semantics of configuration interfaces.*

ANSI INCITS 278-1997 (R2002), Information Technology - Fibre distributed data interface (FDDI) - Physical Layer Repeater Protocol (PHY-REP)

*Specifies the Physical Layer Repeater Protocol (PHY- REP) for the upper sublayer of the FDDI Physical Layer. Specifies the PHY level entity of a repeater. This repeater will use existing PMD specifications.*

ANSI INCITS 280-1996 (R2006), Information technology - Data Compression Algorithm Adaptive Lossless Data Compression (ALDC), Algorithm for Information Interchange

*This American National Standard provides the requirements for a lossless compression algorithm to reduce the number of bytes required to represent data. The algorithm is known as the ALDC (Adaptive Lossless Data Compression) algorithm. The ALDC algorithm has been assigned ISO algorithm identifier numbers as follows: History Buffer Size Algorithm id number 512-Byte 3 1024-Byte 4 2048-Byte 5.*

ANSI INCITS 282-1996 (R2006), Information technology - Magnetic Tape Cartridge for Information Interchange, 0.50 in (12.65 mm), Serial Serpentine, 128-Track, 62 500 bpi (2460 bpmm), DLT3 Format

*This standard provides the requirements for a tape cartridge to be used for information interchange among information-processing systems, communication systems, and associated equipment utilizing a standard code for information interchange as agreed upon by the interchange parties. This standard deals with the requirements for the unrecorded cartridge and for recording on the enclosed magnetic tape. The use of a labeling standard such as American National Standard for Informafion technology - File structure and labeling of magnetic tapes for information interchange, ANSI X3.27-1987 (R1993), will support data interchange between data-processing systems.*

ANSI INCITS 284-1997 (R2004), Information Technology - Identification Cards - Health Care Identification Cards

*Specifies directly or by reference the requirements for cards used in health care transactions. It takes into consideration both human and machine aspects and states minimum requirements for conformity. It contains physical characteristics, layouts, data access techniques, data storage techniques, numbering system, registration procedures, but not security requirements. Security measures are at the discretion of the card issuer.*

ANSI INCITS 286-1997 (R2002), Information Technology - Abstract Test Suite for FDDI Station Management Conformance Testing (FDDI SMT ATS)

*Contains the abstract test suites for the FDDI token ring Station Management (SMT) layer protocol. The SMT Protocol is extensive and very complex. In the development process, the protcol was broken into six separate areas. Those areas dealt with Physical Connection management (PCM), Entity Coordination Management (ECM), Ring Management (RMT), Configuration Management (CMT), Frame Based Management (FBM), and Management Information Base (MIB).*

ANSI INCITS 29-1971 (R2005), Properties of Unpunched Oiled Paper Perforator Tape, Specifications for

*Defines the physical characteristics of unpunched oiled paper tape to be used in perforated tape equipments.*

ANSI INCITS 293-1996 (R2006), Information Technology – Serial Storage Architecture – Physical Layer 1 (SSA-PH1)

*This standard defines the physical layer of the Serial Storage Architecture (SSA). SSA defines a serial interface hierarchy to be used for purposes within its distance and performance characteristics, including but not limited to storage subsystems. This standard is intended to be used with an upper layer protocol and a transport layer.This standard defines the physical layer of the Serial Storage Architecture (SSA). SSA defines a serial interface hierarchy to be used for purposes within its distance and performance characteristics, including but not limited to storage subsystems.*

ANSI INCITS 294-1996 (R2006), Information Technology – Serial Storage Architecture – SCSI-2 Protocol (SSA-S2P)

*This standard describes an upper-level protocol of Serial Storage Architecture. SSA-S2P is a mapping of the existing SCSI-2 protocol, ANSI X3.131-1994, with extensions to map SCSI-2 to the SSA serial link.*

ANSI INCITS 295-1996 (R2006), Information Technology – Serial Storage Architecture – Transport Layer 1 (SSA-TL1)

*This document defines the transport layer of the Serial Storage Architecture (SSA). SSA defines a serial interface hierarchy to be used for purposes within its distance and performance characteristics, including but not limited to storage subsystems. This standard is intended to be used with an upper layer protocol [e.g., SCSI-2 Protocol (SSA-S2P)J and a physical layer [e.g., SSA Physical Layer 1 (SSA-PHl)]. A major goal of the SSA-TLI standard is to define a transport layer acceptable to vendors looking for an evolution from parallel SCSI and systems designers looking for opportunities to more fully exploit the capabilities inherent to a serial bus.*

ANSI INCITS 296-1997 (R2007), Information Technology--Single-Byte Command Code Sets CONnection (SBCON) Architecture

*This standard describes an input/output (I/O) and interconnection architecture including specification of fiber optic links, switched point-to-point topology, and I/O protocols for high bandwidth, high performance and long distance information exchange.*

ANSI INCITS 30-1997 (R2003), Information Technology - Representation of Date for Information Interchange

*The scope is limited to the representation of calendar date for interchange among data systems; it does not describe how the date is determined.*

ANSI INCITS 300-1997 (R2007), Information Technology - High-Performance Parallel Interface - Serial Specification (HIPPI-Serial)

*This standard defines a physical-level interface for transmitting digital data at 800 M/bits or 1600 M/bits serially over fiber-optic cables across distances of up to 10 km.*

ANSI INCITS 302-1998 (R2003), Information Technology - SCSI Parallel Interface-2 (SPI-2)

*Defines the mechanical, electrical, timing, and protocol requirements of the SCSI parallel interface to allow conforming devices to inter-operate. The SCSI parallel interface is a local I/O bus that may be operated over a wide range of transfer rates.*

ANSI INCITS 303-1998 (R2003), Information Technology - Fibre Channel - Physical and Signalling Interface-3 (FC-PH-3)

*Recommends the development of a third generation physical interface for Fibre Channel. This interface will be fully backwards-compatible with the architecture defined in both FC-PH and FC-PH-2, but will also incorporate significant new technologies and functionality.*

ANSI INCITS 304-1997 (R2002), Information Technology - SCSI-3 Multimedia Commands (MMC)

*Defines the multimedia command set extensions for all classes of SCSI devices. Commands specified define standard access and control of those features of the device that are used in multimedia applications (audio, video, animation). The entire standard command set available for a subject device is fully specified by the clause/clauses of this standard pertaining to that device, the applicable clauses of SCSI-3 Primary commands, and any additional command set standards pertaining to the subject device as documented in the SCSI-3 family of standards.*

ANSI INCITS 305-1998 (R2003), Information Technology - SCSI-3 Enclosure Services (SES) Command Set

*Details the SCSI Enclosure Services (SES) command set documents, the commands and parameters necessary to manage and sense the state of the power supplies, cooling devices, displays, indicators, individual drives, and other non-SCSI elements installed in an enclosure. The command set uses the SCSI SEND DIAGNOSTIC and RECEIVE DIAGNOSTIC RESULTS commands to obtain configuration information for the enclosure and to set and sense standard bits for each type of element that may be installed in the enclosure.*

ANSI INCITS 305-1998/AM1-2000 (R2003), Information Technology - SCSI-3 Enclosure Services (SES)

*Consists of corrections to INCITS 305:1998*

ANSI INCITS 306-1998 (R2003), Information Technology - SCSI-3 Block Commands (SBC)

*Defines the command set extensions to facilitate operation of SCSI block devices. The clause(s) of this standard pertaining to the SCSI block device class, implemened in conjuction with the applicable clauses of the SCSI-3 Primary Commands, fully specify the standard command set for SCSI block devices.*

ANSI INCITS 307-1997 (R2007), Information Technology - Serial Storage Architecture - Physical Layer 2 (SSA-PH2)

*layer 2 (ANSI NCITS 308-1997), and any protocols supported by SSA-TL2 (ANSI NCITS 308-1997). The goals of SSA-PH2 (ANSI NCITS 307-1997) are: a) extending the cable distance; b) copper cable operation at 40 MB/s; c) full duplex operation to achieve an aggregate 80 MB/s between two ports; and d) other capabilities that fit within the scope of SSA-PH2 (ANSI NCITS 307-1997) that may be proposed during the development phase by the participants in the project.*

ANSI INCITS 308-1997 (R2007), Information Technology - Serial Storage Architecture - Transport Layer 2 (SSA-TL2)

*This document defines a transport layer of the Serial Storage Architecture (SSA) that runs SSA-S2P and SSA-S3P while running on SSA-PH2. The goals of SSA-TL2 are to: a) provide an Extended Distance Option; b) provide support for higher data rates in the physical layer 2 (SSA-PH2);c) enhance packet formats and addressing methods; d) define a transport layer acceptable to vendors looking for an evolution from parallel SCSI and systems designers looking for opportunities to more fully exploit the capabilities inherent to a serial bus.*

ANSI INCITS 309-1997 (R2007), Information Technology - Serial Storage Architecture - SCSI-3 Protocol (SSA-S3P)

*This document defines a protocol layer of the Serial Storage Architecture (SSA) that runs on SSA-TL2 while running on SSA-PH2. The goals of SSA-S3P are: a) map the SAM services and terminology to SSA; b) define the data field format of the SSA-S3P SMSs; c) support for dual port and alternate pathing; d) provide support for auto-sense; e) provide support for third-party operations; f) other capabilities that fit within the scope of SSA-S3P that may be proposed during thedevelopment phase by the participants in the project.*

ANSI INCITS 31-1988 (R2002), Codestart – Structure for the Identification of the Counties and County Equivalents of the United States and Its Outlying and Associated Areas for Information Interchange

*This Standard establishes a structure for the assignment of identifying data codes to counties and county equivalents of the United States and its outlying and associated areas, for the purpose of information interchange among data processing systems.*

ANSI INCITS 310-1998 (R2003), Information Technology - Representation of Time for Information Interchange

*Presents representation of time for interchange among data systems; it does not describe how time is determined.*

ANSI INCITS 311-1998 (R2003), Information Technology - Magnetic Tape Format for Information Interchange - 128-Track, Parallel Serpentine, 12.65 mm (1/2 in), 3400 bpmm (86 360 bpi), Run Length Recording

*Provides the requirements for a 128-track tape format to be used for information interchange of data between information processing systems, communication systems, and associated equipment using standard code as agreed upon by the interchange parties. Deals solely with the requirements for recording, with provision made for using a processing algorithm, on magnetic tape.*

ANSI INCITS 312-1998 (R2003), Information Technology - Magnetic Tape Cartridge for Information Interchange - 0.50 in (12.65 mm), Serial Serpentine, 128-Track, 81 600 bpi (3212 bpmm), DLT4 Format

*Provides the requirements for a tape cartridge to be used for information interchange among information-processing systems, communication systems, and associated equipment utilizing a standard code for information interchange as agreed upon by the interchange parties. Deals with the requirements for the unrecorded cartridge and for recording on the enclosed magnetic tape.*

ANSI INCITS 314-1998 (R2003), Information Technology - SCSI-3 Medium Changer Commands (SMC)

*Defines the command set extensions for operation of SCSI medium changer devices, and command set extensions that allow medium changer functions in other types of SCSI devices.*

ANSI INCITS 315-1998 (R2003), Information Technology - Magnetic Tape and Cartridge for Information Interchange - Unrecorded, 128-track, Parallel Serpentine, 12.65 mm (1/2 in), 2550 ftpmm (64 770 ftpi)

*Provides the requirements for an unrecorded tape cartridge to be used for information interchange among information-processing systems. Such a cartridge comprises two parts: - a case to provide protection of the media and contaminants and human handling, and to facilitate loading and unloading of the cartridge by the drive; - a magnetic tape of 12.65 mm (0.498 in) width held inside the case on a reel.*

ANSI INCITS 317-1998 (R2003), AT Attachment with Packet Interface Extension (ATA/ATAPI-4)

*Specifies the AT Attachment Interface between host systems and storage devices. It provides a common attachment interface for systems manufacturers, system integrators, software suppliers, and suppliers of intelligent storage devices.*

ANSI INCITS 318-1998 (R2003), Information Technology - SCSI Controller Commands-2 (SCC-2)

*Defines the command set extensions to facilitate operation of SCSI storage array devices. Clauses of this standard pertaining to the SCSI storage array device class, implemented in conjunction with the applicable clauses within any of the SCSI command standards, shall specify the standard command set available for SCSI storage arrays.*

ANSI INCITS 319-1998 (R2002), Information Technology - Programming Languages - Smalltalk

*This is a standard for the Smalltalk langauge such that: 1. working only from the standard, a conforming implementation can be produced, 2. Smalltalk programs which conform to the standard will have the same execution semantics on any conforming implementation, and 3. the standard shall be sufficiently complete to allow useful Smalltalk programs to be constructed.*

ANSI INCITS 320-1998 (R2003), Information Technology - Spatial Data Transfer Standard

*The standard will provide a common mechanism for transferring digital spatial data among different systems, for sharing and integrating data from many diverse sources.*

ANSI INCITS 322-2002, Information Technology - Card Durability Test Methods Working Paper

*Describes Test Methods for the evaluation of Identification (ID) Card durability. An ID card is defined as a card identifying its holder and issuer which may carry data required as input for the intended use of the card.*
*These test methods are to be used by card issuers, card manufacturers and card component suppliers to make comparisions of ID card performance. These test methods do not imply a specific correlation to end use field performance or a given card service life. However, these test methods may be useful for ranking or comparing the relative durability of ID cards.*
*Results obtained by use of these test methods should not be represented as equivalent to field use performance or an absolute index of ultimate card service unless a degree of quantitive correlation has been established for the ID card material construction in question.*

ANSI INCITS 323-1998 (R2003), Information Technology - High-Performance Parallel Interface - 6400 Mbit/s Physical Layer (HIPPI-6400-PH)

*Specifies a physical-level, point-to-point, full-duplex, link interface for reliable, flow-controlled transmission of user data at 6400 Mbit/s, per direction, across distances of up to 1 km. A parallel copper cable interface for distances of up to 40 m is specified. Connections to a separate longer-distance optical interface are provided. Small fixed-size micropackets provide an efficient, low-latency, structure for small transfers, and a component for large transfers.*

ANSI INCITS 323-1998/AM1-2001(R2006), Information Technology - High-Performance Parallel Interface - 6400 Mbit/s Physical Layer Amendment 1

*Reaffirmation of Ammendment 1 which consists of corrections to NCITS 323:1998.*

ANSI INCITS 324-1999, Information Technology - High-Performance Parallel Interface - 6400 Mbit/s Physical Switch Control (HIPPI-6400-SC)

*Provides switch control for physical layer switches using the 6400 Mbits/second High-Performance Parallel Interface (HIPPI-6400), a high-performance point-to-point interface between data-processing equipment. The purpose of this standard is to facilitate the development and use of the HIPPI-6400 in computer systems by providing common physical switch control. The standard provides switch control structures for physical layer switches interconnecting computers, high-performance display systems, and high-performance, intelligent block-transfer peripherals. This standard also applies to point-to-point HIPPI-6400 topologies. This is the second public review for this standard. It first appeared in the April 10, 1998 issue of Standards Action and is being resubmitted due to substantive changes to the text.*

ANSI INCITS 325-1998 (R2003), Information Technology - Serial Bus Protocol 2 (SBP-2)

*Defines a protocol for the transport of commands and data over high performance serial bus, as specified in American National Standard for High Performance Serial Bus, ANSI/IEEE1394-1995. The transport protocol, Serial Bus Protocol 2 or SBP-2, requires implementations to conform to the requirements of the aforementioned standard as well as to International Standard for Control and Status Register (CSR) Architecture for Microcomputer Buses, ISO/IEC 13213:1994, and permits the exchange of commands, data and status between initiators and targets connected to Serial Bus.*

ANSI INCITS 328-2000 (R2005), Information Technology - 19 mm DD-2 Helical Scan Digital Computer Tape Cassette for Information Interchange

*Establishes the requirements for DD-2 digital data storage cassettes to be used for information interchange between information processing systems. This standard was first listed in the February 26, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text, which are listed here in their entirety.*

ANSI INCITS 329-2000 (R2005), Magnetic Tape Cartridge for Information Interchange, 0.50 in (12.65 mm), Serial Serpentine, 208-Track, 85 940 bpi (3383 bpmm), DLT5 Format

*Magnetic Tape Cartridge for Information Interchange, 0.50 in (12.65 mm), Serial Serpentine, 208-Track, 85 940 bpi (3383 bpmm), DLT5 Format.*

ANSI INCITS 330-2000 (R2005), Information Technology - Reduced Block Commands (RBC)

*This standard defines a Reduced Block Command set for logical block devices. The Reduced Block Commands along with the required SPC-2 commands and their restrictions described in this standard, fully specify the complete command set for RBC logical block devices.*

ANSI INCITS 330-2000/AM1-2003, Information Technology - Reduced Block Command Set (RBC) - Amendment 1

*Consists of corrections to INCITS 330:2000.*

ANSI INCITS 332-1999, Amendment 2-2006, Information technology - Fibre Channel 2nd Generation Arbitrated Loop (FC-AL-2) Amendment 2 (Supplement to INCITS 332:1999

*This standard defines functional requirements for an interoperable Arbitrated Loop topology to suppor the Fibre Channel standard.*

ANSI INCITS 332-1999 (R2004), Information Technology - Fibre Channel Arbitrated Loop (FC-AL-2)

*Specifies signaling interface enhancements for ANSI X3, FC-PH-x to allow L_Ports to operate with an Arbitrated Loop topology. This standard defines L_Ports that retain the functionality of Ports as specified in ANSI X3, FC-PH-x. The Arbitrated Loop topology attaches multiple communicating points in a Loop without requiring switches.*

ANSI INCITS 332:1999/AM1-2003, Information technology - Fibre Channel Arbitrated Loop (FC-AL-2) Amendment 1

*This amendment consists of corrections to INCITS 332:1999.*

ANSI INCITS 333-2000 (R2005), Information Technology - SCSI Multimedia Commands - 2 (MMC-2)

*This standard defines a multimedia command set extensions for Device Type 5 devices. The commands specified within this standard define standard access and control to those Features of the device that are used in multimedia applications. The SPC command set and these extensions are transport independent and may be implemented across a wide variety of environments for that a SCSI command mapping and delivery vehicle has been defined. To date these include Fibre Channel, SCSI Parallel Interface, High Performance Serial Bus, Serial Storage Architecture, and ATA/ATAPI.*

ANSI INCITS 334-2000 (R2005), Information Technology - Magnetic Tape Cartridge for Information Interchange - 0.50 in (12.65 mm), Serial Serpentine 128-Track, 62 500 BPI (2 460 BPMM) DLT 3-XT Format

*Specifies the physical and magnetic characteristics of a 0.5-in (12.65-mm)-wide 128-track magnetic tape cartridge, to enable physical interchange of such cartridges. It also specifies the quality of the recorded signals, a format - called Digital Linear Tape 3 Extended (DLT 3-XT) - and a recording method, thereby allowing data interchange between drives. The use of a labeling standard such as American National Standard for Information Technology - File Structure and Labelling of Magnetic Tapes for Information Interchange, ANSI X3.27-1987 (R1998), will support data interchange between data processing systems.*

ANSI INCITS 335-2000 (R2005), Information Technology - SCSI-3 Stream Commands (SSC)

*This standard defines the command set extensions to facilitate operation of SCSI stream devices. The clauses of this standard, implemented in conjunction with the applicable clauses of the SCSI Primary commands - 2 standard, fully specify the standard command set for the SCSI stream device class.*

ANSI INCITS 337-2000 (R2005), Information Technology - Scheduled Transfer Protocol (ST) (formerly ANSI NCITS 337-2000)

*Specifies a connection-oriented data transfer protocol supporting flow-controlled Read and Write sequences and non-flow-controlled, persistent-memory Put, Get and FetchOp sequences. For all sequences, small control messages are used to preallocate buffers at the data destination before the data movement begins, thus allowing the data to be moved immediately from the physical network into the end device's memory. The control and data messages may use different physical media or may share a single physical medium. Procedures are provided for moving data over HIPPI, Ethernet, and other media.*

ANSI INCITS 338-2003, Information Technology - High-Performance Parallel Interface – 6400 Mbit/s Optical Specification (HIPPI-6400-OPT)

*Specifies a media-level, point-to-point, 12-channel, full-duplex, electrical/optical interface, with each channel operating at 500 Mbit/s or 1 Gbit/s. Multimode (MM) fiber cables, and single-mode (SM) fiber cables, are used for distances up to1 km when carrying the HIPPI-6400-PH protocol. Differential signals are used on the electrical side.*

ANSI INCITS 34-1972 (R2005), Interchange Rolls of Perforated Tape for Information Interchange

*Describes conventions for rolled-up, perforated tapes which are used for the interchange of information. This standard defines and applies to interchange rolls of tape not contained on reels, it does not preclude the interchange of tapes wound on take-up reels.*

ANSI INCITS 340-2000 (R2005), Information Technology - AT Attachment with Packet Interface - 5 (ATA/ATAPI-5)

*This standard specifies the AT Attachment Interface between host systems and storage devices. It provides a common attachment interface for systems manufacturers, system integrators, software suppliers, and suppliers of intelligent storage devices and defines the connectors and cables for physical interconnection between host and storage device, as well as the electrical and logical characteristics of the interconnecting signals.*

ANSI INCITS 341-2000 (R2005), 25.4 mm (1 in) Type DCRsi Recorded Instrumentation - Digital Cartridge Tape Format

*Establishes the format of information on 25.4-mm (1-in)-type DCRsi instrumentation digital cartridges. It specifies the dimensions and locations of the transverse scan data and pilot tone track, the control track and the longitudinal data track.*

ANSI INCITS 344-2001 (R2006), Information Technology - Helical-Scan Digital Tape Casette 12.65 mm for Recorded Instrumentation - Digital Cassette Tape Format

*This standard establishes the format of information on 12.65 mm instrumentation magnetic tape cassettes. It specifies the dimensions and locations of helical data and control tracks. It defines the format and recording requirements of the data blocks forming the helical data track containing digital instrumentation and other associated data, and specifies the content, format, and recording method for the control track. The physical requirements, magnetic requirements, and test methods for the magnetic tape and tape cassette are not specified in this standard, but can be found in the references or in the technical literature.*

ANSI INCITS 345-2001 (R2006), Information Technology - Magnetic Tape Cartridge for Information Interchange, 0.50 in (12.65 mm), Serial Serpentine, 208-Track, 98 214 bpi (3866 bpmm), DLT 6 Format

*This standard provides the requirements for a tape cartridge to be used for information interchange among information-processing systems, communication systems, and associated equipment utilizing a standard code for information interchange as agreed upon by the interchange parties. This standard deals with the requirements for the unrecorded cartridge and for recording on the enclosed magnetic tape. The use of a labeling standard such as American National Standard for Information systems - File structure and labeling of magnetic tapes for information interchange, ANSI X3.27-1987 (R1993) or later editions, will support data interchange between data-processing systems.*

ANSI INCITS 346-2001 (R2006), Information Technology - Protected Area Run Time Interface Extension Services (PARTIES)

*This standard describes a BIOS firmware layer that may be used to both place and execute system diagnostics on a protected area of the system hard disk. The purpose of these diagnostics is to accurately determine for both the user and a technical support engineer that the hard drive is functioning correctly. These diagnostics are placed in a protected area of the disk drive because they are less vulnerable to attack from viruses, system software corruption, and the user. The firmware layer described herein may also be used to run DOS-based rescue utilities once the drive has been shown to be working by the diagnostics described above.*

ANSI INCITS 350-2003, Information Technology - Fibre Channel Protocol for SCSI, Second Version (FCP-2)

*This standard defines a second version of the SCSI Fibre Channel Protocol (FCP). This standard is a mapping protocol for applying the SCSI command set to Fibre Channel. This standard defines how the Fibre Channel services and the defined Information Units (IUs) are used to perform the services defined by the SCSI-3 Architecture Model-2 (SAM-2).*

ANSI INCITS 353-2006, Information technology - Spatial Data Standard for Facilities, Infrastructure, and Environment (SDSFIE)

*This INCITS SDSFIE Standard provides a means to model and categorize real-world geographic phenomena of interest to the Facilities, Infrastructure, and Environment (FIE) Domain(s) into a set of geographic dat that can be represented in a spatial database and presented to a user in digital form. This SDSFIE standard is intended to provide the enterprise spatial database schema to support multiple FIE applications.*

ANSI INCITS 356-2002 (R2007), Information technology - Fibre Channel - Audio Video (FC-AV)

*Specifies the transport of existing representations of Audio and Video information over Fibre Channel and the interoperation of digital segments based on Fibre Channel with other analog and digital equipment.*

ANSI INCITS 357-2002 (R2007), Information Technology - Fibre Channel - Virtual Interface Architecture Mapping Protocol (FC-VI)

*Defines the Fibre Channel mapping protocol for the Virtual Interface (VI) Architecture(FC-VI). FC-VI defines the Fibre Channel Information Units in accordance with the VI Architecture model. FC-VI additionally defines how Fibre Channel services are used to perform the services required by the VI Architecture model of its network transport.*

ANSI INCITS 358-2002, Information technology - BioAPI Specification (Version 1.1)

*Defines the Application Programming Interface and Service Provider Interface for a standard biometric technology interface. It is beyond the scope of this specification to define security requirements for biometric applications and service providers, although some related information is included by way of explanation of how the API is intended to support good security practices.*

ANSI INCITS 359-2004, Information technology - Role Based Access Control

*Consists of two main parts - the RBAC Reference Model and the RBAC System and Administrative Functional Specification. The RBAC Reference Model defines sets of basic RBAC elements (i.e., users, roles, permissions, operations and objects) and relations as types and functions that are included in this standard. The RBAC System and Administrative Functional Specification specifies the features that are required of an RBAC system.*

ANSI INCITS 360-2002, Information Technology -SCSI Multimedia Commands - 3 (MMC-3)

*This standard defines multimedia command set extensions for Device Type 5 devices. The commands specified within this standard define standard access and control to those Features of the device that are used in multimedia applications. The SPC and these extensions are transport independent and may be implemented across a wide variety of environments for which a SCSI transport protocol has been defined. To date these include Fibre Channel, SCSI Parallel Interface, High Performance Serial Bus (IEEE 1394), Serial Storage Architecture, and ATA/ATAPI.*

ANSI INCITS 361-2002 Erratum , Erratum to INCITS 361:2002, Information Technology - AT Attachment with Packet Interface - 6 (ATA/ATAPI-6)

*Specifies the AT Attachment interface between host systems and storage devices. It provides a common attachment interface for systems manufacturers, system integrators, software suppliers, and suppliers of intelligent storage devices.*

ANSI INCITS 361-2002, Information Technology - AT Attachment with Packet Interface - 6 (ATA/ATAPI-6)

*This standard specifies the AT Attachment Interface betweenhost systems and storage devices. It provides a common attachment interface for systems manufacturers, system integrators, software suppliers, and suppliers of intelligent storage devices.*
*The application environment for AT Attachment Interface is any host system that has storage devices contained within the processor enclosure.*
*This standard defines the connectors and cables for physical interconnection between host and storage device, as well as the electrical and logical characteristics of the interconnecting signals. It also defines the operational registers within the storage device, and the commands and protocols for the operation of the storage device.*
*This standard maintains a high degree of compatibility with the AT Attachment with*

ANSI INCITS 363-2002, Information Technology - BIOS Enhanced Disk Drive Services - 2 (EDD-2)

*Assumes that the reader is familiar with the conventional INT 13h interface, the usage of the BIOS Device Parameter Table, and the basic operation of mass storage devices. This standard describes in detail BIOS functions and data structures that are used as an abstraction layer to allow higher-level applications to access mass storage devices in an interface and command-set independent manner. To comply with this standard, higher-level software shall call the INT functions using the data structures described herein, and system firmware shall provide the INT functions and data structures described herein. The storage industry has increased the capacity and functionality of many types of mass storage devices. This increase in capacity and functionality has required the development of a BIOS interface. This standard documents the BIOS interface that is supplied by many BIOS*

ANSI INCITS 364-2003, Information Technology - Fibre Channel 10 Gigabit (10GFC)

*10GFC describes signaling and physical requirements that may be utilized by the FC-2 level to transport data at a rate in excess of 10 gigabits per second.*

ANSI INCITS 365-2002 (R2007), Information Technology – SCSI RDMA Protocol (SRP)

*The SCSI family of standards provides for many different transport protocols that define the rules for exchanging information between different SCSI devices. This standard defines the rules for exchanging information between SCSI devices using an RDMA communication service. Other SCSI transport protocol standards define the rules for exchanging information between SCSI devices using other interconnects.*

ANSI INCITS 366-2003, Information Technology -SCSI Architecture Model - 2 (SAM-2)

*Defines a reference model that specifies common behaviors for SCSI devices, and an abstract structure that is generic to all SCSI I/O system implementations.*

ANSI INCITS 367-2003, Information technology -SCSI Parallel Interface-5 (SPI-5)

*This standard defines the mechanical, electrical, timing, and protocol requirements of the SCSI parallel interface to allow conforming SCSI devices to inter-operate. The SCSI parallel interface is a local I/O bus that may be operated over a wide range of transfer rates.*

ANSI INCITS 368-2003, Information technology - Passive Interconnect Perfomance (PIP)

*This document expands the coverage to the complete assembled interconnect including connectors, uniform bulk cable, and non-uniform bulk cable. A syntax and framework is described for all types of passive interconnect. The methodology for performing the electrical measurements required to determine compliance with the performance requirements for bulk cable of several types, various assembled interconnects and printed circuit board designs is included.*

ANSI INCITS 369-2003, Information technology - SCSI Signal Modeling-2 (SSM-2)

*This Standard establishes a common methodology for SCSI system signal modeling. Using this methodology, SCSI systems may be modeled accurately and consistently. This Standard establishes the requirements for the exchange of signal performance information between component suppliers, system integrators, and those carrying-out simulations. This Standard defines the acceptable methods for extracting the electrical and signal performance attributes of the constituent parts of a SCSI bus segment. This Standard establishes the acceptable methods for modeling these parts. It shall be used in conjunction with the requirements within the SCSI Parallel Interface (SPI-x) family of standards.*

ANSI INCITS 37-1999 (R2004), Programming Language APT

*Establishes the form for, and the interpretation of ,programs expressed in the Automatically Programmed Tools (APT) language and of the System-Neutral CLFILE (SCL), which can be generated by processors, such as APT, or by graphical systems. The purpose is to promote portability of these input language programs to a wide variety of computers. In addition, the SCL permits commonality and portability, regardless of the source that produces it, to a wide variety of manufacturing equipment.*

ANSI INCITS 371.1-2003, Information technology - Real Time Locating Systems (RTLS) - Part 1: 2.4 GHz Air Interface Protocol

*INCITS 371.1 is one of the two Air Interface Protocols, establishes a technical standard for an RTLS air protocol, specifically, RTLS transmitters operating in 2.4 GHz ISM frequency bands at appropriate license-free power levels for the US with broad international application.*

ANSI INCITS 371.2-2003, Information technology - Real Time Locating Systems (RTLS) - Part 2: 433 MHz Air Interface Protocol

*INCITS 371.2 is one of the two Air Interface Protocols, establishes a technical standard for an RTLS air protocol, specifically, RTLS transmitters operating in 433 MHz frequency bands at appropriate license-free power levels for the US with broad international application.*

ANSI INCITS 371.3-2003, Information technology - Real Time Locating Systems (RTLS) - Part 3: Application Programming Interface

*This National Standard defines an API specification that serves as a boundary across which application software uses facilities of programming languages to invoke the services of the RTLS Air Interface Protocol standard as defined by INCITS T20.*

ANSI INCITS 372-2003, Information technology - Fibre Channel Backbone (FC-BB-2)

*This Standard for Fibre Channel Backbone (FC-BB-2) consists of three distinct Fibre Channel mappings resulting in the following three specifications: FC-BB-2_ATM (FC over ATM backbone network), FC-BB-2_SONET (FC over SONET backbone network) FC-BB-2_IP (FC over TCP/IP backbone network).*

ANSI INCITS 373-2003, Information Technology - Fibre Channel - Framing and Signaling (FC-FS)

*Describes the framing and signaling interface of a high performance serial link for support of FC-4s associated with upper level protocols (e.g., SCSI, IP, SBCCS, VI).*

ANSI INCITS 374-2003, Information technology - Fibre Channel - Single-Byte Command Code Sets Mapping Protocol - 3 (FC-SB-3)

*Describes a communication interface between a channel and I/O control units that utilize the Single-Byte Command Code Sets (SBCCS) as implemented in a wide range of data processing systems. It employs information formats and signaling protocols that provide a uniform means for communicating with various types of I/O control units, facilitating a high bandwidth, high performance, and long distance information exchange environment.*

ANSI INCITS 375-2004, Information technology - Serial Bus Protocol 3 (SBP-3)

*This standard defines a protocol for the transport of commands and data over High Performance Serial Bus, as specified by IEEE Std 1394-1995 [B8] as amended by IEEE Std 1394a-2000 [B9] and IEEE Std 1394b-2002 [B10] (collectively IEEE 1394). The transport protocol, Serial Bus Protocol 3 (SBP-3), requires implementations to conform to the aforementioned standards as well as to IEEE Std 1212-2001, Control and Status Register (CSR) Architecture for microcomputer buses [B6], and permits the exchange of commands, data and status between initiators and targets connected to Serial Bus.*

ANSI INCITS 376-2003, Information technology - Serial Attached SCSI (SAS)

*The SCSI family of standards provides for many different transport protocols that define the rules for exchanging information between different SCSI devices. This standard defines the rules for exchanging information between SCSI devices using a serial interconnect. Other SCSI transport protocol standards define the rules for exchanging information between SCSI devices using other interconnects.*

ANSI INCITS 377-2004, Information technology - Finger Pattern Based Interchange Format

*This ANSI/INCITS Standard specified the interchange format for the exchange of pattern-based fingerprint recognition data.*

ANSI INCITS 378-2004, Information technology - Finger Minutiae Format for Data Interchange

*This Standard specifies a concept and data format for representation of fingerprints using the fundamental notion of minutiae. The data format is generic, in that it may be applied and used in a wide range of application areas where automated fingerprint recognition is involved. No application-specific requirements or features are addressed in this standard. The Standard contains definitions of relevant terms, a description of where minutiae shall be defined, a data format for containing the data, and conformance information.*

ANSI INCITS 379-2004, Information technology - Iris Image Interchange Format

*This Standard specifies two alternative image interchange formats for biometric authentication systems that utilize iris recognition. The first is based on a rectilinear image storage format that may be a raw, uncompressed array of intensity values or a compressed format such as that specified by the JPEG standard. Images may be monochrome or color with 256 or more intensity levels (grey or per-color), and vary in size depending on field of view and compression. Typical size is 25 –30 Kbytes for JPEG format. The second format is based on a polar image specification that requires certain pre-processing and image segmentation steps, but*

ANSI INCITS 38-1988 (R2004), Codes – Identification of the States, the District of Columbia, and the Outlying and Associated Areas of the United States for Information Interchange

*Provides two-digit numeric representations and two-letter alphabetic representations for: (1) Each state of the United States, (2) The District of Columbia, and (3) The Outlying and Associated areas of the United States.*

ANSI INCITS 380-2003, Information technology - SCSI Stream Commands - 2 (SSC-2)

*Defines the command set extensions to facilitate operation of the sequential-access device type member of the SCSI stream device class. The clauses of this standard, implemented in conjunction with the applicable clauses of the SCSI Primary Commands - 3 standard, fully specify the standard command set for the sequential-access device type member of the SCSI stream device class.*

ANSI INCITS 381-2004, Information technology - Finger Image Based Data Interchange Format

*This standard specifies a data record interchange format for storing, recording, and transmitting the information from one or more finger or palm image areas within a CBEFF data structure. This proposed standard could be used for the exchange and comparison of finger image data. It defines the content, format, and units of measurement for the exchange of finger image data that may be used in the verification or identification process of a subject.*

ANSI INCITS 382-2004, Information technology - SCSI Medium Changer Commands -2 (SMC-2)

*This standard defines the command set extensions for operation of SCSI media changer devices, and command set extensions that allow media changer functions in other types of SCSI devices.*

ANSI INCITS 383-2004, Information technology - Biometric Profile - Interoperability and Data Interchange Biometrics - Based Verification and Identification of Transportation Workers

*This ANSI/INCITS Standard specifies the application profile in support of identification and verification of Transportation workers, through the use of Biometric data collected during enrollment, at local access points (i.e. doors or other controlled entrances) and across local boundaries within the defined area of control.*

ANSI INCITS 384-2004, Information Technology - Fibre Channel- Switch Fabric-3 (FC-SW-3)

*FC-SW-3 describes the operation and interaction of Fibre Channel Switches. This standard includes: a) E_Port Operation and Fabric Configuration; b) Path selection (FSPF and FSPF-Backbone); c) Bridge Port (B_Port) Operation; d) Distributed server interaction and communication; e) Exchange of information between Switches to support zoning; f) Distribution of Event Notifications between Switches.*

ANSI INCITS 385-2004, Information technology - Face Recognition Format for Data Interchange

*This biometric data interchange format specification accommodates: 1) Detailed human examination of facial images 2) Human verification of identity by comparison of persons against facial images 3) Computer automated identification (one-to-many searches) 4) Computer automated verification (one-to-one searches) This standard specifies the proposed record format. The cryptographic protection of the biometrical data structures defined in this document is out of scope.*

ANSI INCITS 386-2004, Information technology - Fibre Channel HBA API (FC-HBA)

*A standard application programming interface (API) defines a scope within which, and a grammar by which it is possible to write application software without attention to vendor-specific infrastructure behavior. The Fibre Channel HBA API standard specifies a standard API the scope of which is management of Fibre Channel host bus adapters (HBAs) and use of certain Fibre Channel facilities for discovery and management of the components of a Fibre Channel storage area network (SAN).*

ANSI INCITS 387-2004, Information technology - Fibre Channel - Generic Services - 4 (FC-GS-4)

*FC-GS-4 describes in detail the basic Fibre Channel services introduced in FC-FS. The Fibre Channel services described in this document are: a) Directory Service; b) Management Service; and c) Alias Service. In addition, to the aforementioned Fibre Channel services, the Common Transport (CT) protocol is described. The Common Transport service provides a common FC-4 for use by the Fibre Channel services.*

ANSI INCITS 388-2004, Information Technology - Storage Management

*This Technical Specification defines the a method for the interoperable management of a heterogeneous Storage Area Network (SAN). This Technical Specification describes the information available to a WBEM Client from an SMI-S compliant CIM Server. This Technical Specification describes an object-oriented, XML-based, messaging-based interface designed to support the specific requirements of managing devices in and through Storage Area Networks (SANs).*

ANSI INCITS 389-2005, Information technology - Protocol to Facilitate Operation of Information and Electronic Products through Remote and Alternative Interfaces and Intelligent Agents: Universal Remote Console

*This standard is part of a set of standards to facilitate operation of information and electronic products through remote and alternative interfaces and intelligent agents. The purpose of this standard is to provide a framework of components that combine to enable remote User Interfaces and remote control of network-accessible electronic devices and services through a Universal Remote Console (URC). This standard provides an overview of the URC framework and its components.*

ANSI INCITS 39-1986 (R2002), Recorded Magnetic Tape for Information Interchange (1600 CPI, PE)

*Provides specifications for format and recording for a 1/2 inch (12.7-mm), 9-track magnetic tape to be used for information interchange among information processing systems, communication systems, and associated equipment utilizing a code for information interchange that was agreed upon by the interchange parties. This standard deals solely with recording on magnetic tape and support and complements American National Standard for Unrecorded Magnetic Tape for Information Interchange (9-Track 800 CPI, NRZI; 1600 CPI, PE; and 6250 CPI, GCR), ANSI X3.40:1983*

ANSI INCITS 390-2005, Information Technology - Protocol to Facilitate Operation of Information and Electronic Products: User Interface Socket Description

*This standard is part of a set of standards to facilitate operation of information and electronic products through remote and alternative interfaces and intelligent agents. A User Interface Socket is an abstract concept that describes the functionality and state of a device or service (target) in a machine interpretable manner. The purpose of this standard is to define an eXtensible Markup Language (XML) based language for describing a User Interface Socket.*

ANSI INCITS 391-2005, Information Technology - Protocol to Facilitate Operation of Information and Electronic Products through Remote and Alternative Interfaces and Intelligent Agents: Presentation Templates

*This standard is part of a set of standards to facilitate operation of information and electronic products through remote and alternative interfaces and intelligent agents. The purpose of this standard is to define a language (Presentation Template Markup Language) for describing modality-independent user interface specifications, or Presentation Templates associated with a User Interface Socket Description, as defined by ANSI INCITS 390-2005.*

ANSI INCITS 392-2005, Information technology - Protocol to Facilitate Operation of Information and Electronic Products through Remote and Alternative Interfaces and Intelligent Agents: Target Description

*This standard is part of a set of standards to facilitate operation of information and electronic products through remote and alternative interfaces and intelligent agents. The purpose of this standard is to define an eXtensible Markup Language (XML) based language for the description of Targets and their Sockets, as used within the URC framework for discovery purposes. A document conforming to this language is a Target Description.*

ANSI INCITS 393-2005, Information Technology - Information and Electronic Products through Remote and Alternative Interfaces and Intelligent Agents: Resource Description

*Part of a set of standards to facilitate operation of information and electronic products through remote and alternative interfaces and intelligent agents. The purpose of this standard is to define a syntax for describing Resources, Resource Sheets, User Interface Implementation Descriptions, Resource Services, and Resource Sheet Collections relevant to the user interface of a device or service ("Target.)*

ANSI INCITS 394-2004, Information Technology - Application Profile for Interoperability, Data Interchange and Data Integrity of Biometric Based Personal Identification for Border Management

*Specifies the application profile to be used when incorporating biometrics-based identification and verification into border management applications and systems. Border management includes: pre-arrival, arrival, stay management, departure, and database reconciliation/ management.*

ANSI INCITS 395-2005, Information technology - Biometric Data Interchange Formats - Signature/Sign Data

*This Standard specifies a data interchange format for representation of digitised sign or signature data, for the purposes of biometric enrolment, verification or identification through the use of Raw Signature/Sign Sample Data or Common Feature Data. The data interchange format is generic, in that it may be applied and used in a wide range of application areas where electronic signs or signatures are involved. No application-specific requirements or features are addressed in this standard.*

ANSI INCITS 396-2005, Information technology - Hand Geometry Interchange Format

*This standard specifies a data record interchange format for storing, recording, and transmitting the information from a hand silhouette within a CBEFF data structure. This proposed standard could be used for the exchange and comparison of hand geometry data. It defines the content, format, and units of measurement for the exchange of hand silhouette data that may be used in the verification or identification process of a subject.*

ANSI INCITS 397-2005, Information technology - AT Attachment with Packet Interface-7 (ATA/ATAPI-7)

*This standard specifies the AT Attachment Interface between host systems and storage devices. It provides a common attachment interface for systems manufacturers, system integrators, software suppliers, and suppliers of intelligent storage devices.*

ANSI INCITS 398-2005, Information technology - Common Biometric Exchange Formats Framework (CBEFF)

*Specifies a common set of data elements necessary to support multiple biometric technologies and to promote interoperability of biometric-based application programs and systems by allowing for biometric data exchange. These common data elements can be placed in a single file, record, or data object used to exchange biometric information between different system components and applications. This publication specifies the Biometric data elements.*

ANSI INCITS 399-2004, Information technology - Fibre Channel Switch API (FC-SWAPI)

*A standard application programming interface (API) defines a scope within which, and a grammar by which, it is possible to write application software without attention to vendor-specific infrastructure behavior. This standard specifies a standard API the scope of which is management of Fibre Channel Switches and exercise of certain Fibre Channel facilities for discovery and management of the components of a Fibre Channel storage area network (SAN.*

ANSI INCITS 4-1986 (R2002), Information Systems – Coded Character Sets – 7-Bit American National Standard Code for Information Interchange (7-Bit ASCII)

*Details information interchange among information processing systems, communication systems, and associated equipment. Specifies a set of 128 characters (control characters and graphics characters such as letters, digits, and symbols) with their coded representation.*

ANSI INCITS 40-1993 (R2003), Information Systems – Unrecorded Magnetic Tape for Information Interchange (9-track 800 CPI, NRZI; 1600 CPI, PE; and 6250 CPI, GCR)

*This standard provides the information necessary to enable mechanical and magnetic interchangeability for reels of 1/2-inch-wide unrecorded magnetic tape between information processing systems, communication systems, and associated equipment utilizing American National Standard for Information systems - Coded character sets - 7-bit american national standard code for information interchange (7-bit ASCII), ANSI X3.4-1986, and amendments thereto. This standard deals solely with magnetic tape for digital recording and supports and complements American National Standards on recorded magnetic tape for information interchange.*

ANSI INCITS 400-2004, Information technology - SCSI Object-Based Storage Device Commands (OSD)

*Defines the command set extensions to control operation of Object-Based Storage devices. The clause(s) of this standard pertaining to the SCSI Object-Based Storage Device class, implemented in conjunction with the applicable clauses of the ISO/IEC 14776-453 SCSI Primary Commands -3 (SPC-3), specify the standard command set for SCSI Object-Based Storage devices.*

ANSI INCITS 401-2005, Information technology - SCSI Multimedia Commands -4 (MMC-4)

*Defines a set of SCSI command descriptor blocks that are useful in accessing and controlling devices with a peripheral device type set to 5.*

ANSI INCITS 402-2005, Information technology - SCSI Architecture Model - 3 (SAM-3)

*This standard defines a reference model that specifies common behaviors for SCSI devices, and an abstract structure that is generic to all SCSI I/O system implementations.*

ANSI INCITS 403-2005, Informtion technology - Automation/Drive Interface - Commands (ADC)

*This standard defines the model and command set extensions to facilitate operation of automation drive interface devices. The clauses of this standard, implemented in conjunction with the applicable clauses of SPC-2 and SPC-3, fully specify the standard command set for automation drive interface devices.*

ANSI INCITS 404-2006, Information technology - Fibre Channel Physical Interfaces -2 (FC-PI-2)

*This standard describes the physical interface portions of a high performance electrical and optical link variants that support the higher level Fiber Channel protocols including FC-FS, the higher Upper Level Protocols (ULPs) associated with HIPPI, IPI, SCSI, IP and others.*

ANSI INCITS 405-2005, Information technology - SCSI Block Commands - 2 (SBC-2)

*Defines the command set extensions to facilitate operation of SCSI direct-access block devices. The clauses of this standard, implemented in conjunction with the applicable clauses of SPC-3, fully specify the standard command set for SCSI direct-access block devices.*

ANSI INCITS 406-2005, Information technology - Automation/Drive Interface - Transport Protocol (ADT)

*Defines the protocol requirements of the Automation/Drive Interface - Transport Protocol to allow conforming ADI SCSI devices to inter-operate.*

ANSI INCITS 407-2005, Information technology - BIOS Enhanced Disk Drive Services - 3 (EDD-3)

*This standard assumes that the reader is familiar with the conventional INT 13h interface, the usage of the BIOS Device Parameter Table, and the basic operation of mass storage devices. This standard describes in detail BIOS functions and data structures that are used as an abstraction layer to allow higher-level applications to access mass storage devices in an interface and command-set independent manner.*

ANSI INCITS 408-2005, Information technology - SCSI Primary Commands - 3 (SPC-3)

*The SCSI family of standards provides for many different types of SCSI devices (e.g., disks, tapes, printers, scanners). This standard defines a device model that is applicable to all SCSI devices. Other SCSI command standards (see 3.1.18) expand on the general SCSI device model in ways appropriate to specific types of SCSI devices. This standard defines the SCSI commands that are mandatory and optional for all SCSI devices. Support for any feature defined in this standard is optional unless otherwise stated. This standard also defines the SCSI commands that may apply to any device model.*

ANSI INCITS 409.1-2005, Information technology - Biometric Performance Testing and Reporting - Part 1: Principles and Framework

*This standard addresses testing the accuracy of identification and verification devices, algorithms, and systems. This standard does NOT address related performance issues such as throughput, turnaround-time, cost of ownership, life-time cycle costs, user implementations, environmental impact, cost/benefit breakpoints, etc. This part is intended to summarize the other parts of the standard. An overview of the primary testing protocols, biometric applications, and performance metrics is presented. It also provides guidance on data analysis techniques, recording of results, and performance reporting measures available.*

ANSI INCITS 409.2-2005, Information technology - Biometric Performance Testing and Reporting - Part 2: Technology Testing and Reporting

*This standard specifies methods for performance testing of biometric systems and devices. It constitutes a specialization of a biometric testing framework standard in that it is concerned only with the offline use of stored (i.e. previously captured) biometric samples, and not the interaction of human subjects with a biometric sensor.*

ANSI INCITS 409.3-2005, Information technology - Biometric Performance Testing and Reporting - Part 3: Scenario Testing and Reporting

*This standard specifies the requirements for scenario-based biometric testing and reporting. The goal of scenario testing is to determine the overall system performance in a prototype or simulated application. Testing is carried out on a complete system in an environment that models a real-world target application of interest. Each tested system will have its own acquisition sensor and so will receive slightly different data. Consequently, care will be required that data collection across all tested systems is in the same environment with the same population. Test results will be repeatable only to the extent that the modeled scenario can be carefully controlled.*

ANSI INCITS 409.4-2006, Information Technology - Biometric Performance Testing and Reporting - Part 4: Operational Testing Methodologies

*This standard is Part 4 - Operational Testing Methodologies of the Biometric Performance Testing and Reporting Standard 1602-D. The objective of this standard is to establish requirements for operational performance-based biometric testing and reporting.*

ANSI INCITS 410-2006, Information technology - Identification cards - Limited Use (LU), Proximity Integrated Circuit Card (PICC)

*A physical specification with similar electronic characteristics of a Proximity Integrated Circuit Cards (PICCs) such as those specified within ISO/IEC 14443 Part-2 and 3 but in thinner ID-1 (card body) formats as defined within the selected card thickness of ISO/IEC 15457 for thin flexible cards. Construction attributes, pertaining to the materials, functionality and environmental requirements and targeted use are also specified. This type of PICC is to be classified as a Limited Use - Proximity Integrated Circuit Card (LU-PICC.*

ANSI INCITS 412-2006, Information technology - SNIA Multipath Management API Specification

*This API provides management interfaces to standard capabilities defined in ANSI INCITS 408- 2005 (SPC-3) and common vendor-specific extensions to the standard capabilities. The intended audience is vendors that deliver drivers that provide these capabilities. This standard relates to SCSI multipathing features and excludes multipathing between interconnect devices (such as Fibre Channel switches) and transport specific multipathing (such as iSCSI multiple connections per session.*

ANSI INCITS 413-2007, Information technology – RapidIO™ Interconnect Specification

*The RapidIO™architecture was developed to address the need for a high-performance low pin count packet-switched system level interconnect to be used in a variety of applications as an open standard. The architecture is targeted toward networking, telecom, and high performance embedded applications. It is intended primarily as an intra-system interconnect, allowing chip-to-chip and boardto- board communications at Gigabyte per second performance levels.*

ANSI INCITS 414-2006, Information technology - Fibre Channel - Backbone - 3 (FC-BB-3)

*The Fibre Channel Backbone - 3 (FC-BB-3) standard consists of four distinct Fibre Channel mappings resulting in the following four models: - FC-BB-3_ATM (FC over ATM backbone network) - FC-BB-3_SONET (FC over SONET backbone network) - FC-BB-3_IP (FC over TCP/IP backbone network) - FC-BB-3_GFPT (FC over SONET/SDH/OTN/PDH backbone network using GFPT adaptation.*

ANSI INCITS 415-2006, Information technology - Homeland Security Mapping Standard - Point Symbology for Emergency Management

*Applicable to all organizations that create maps or otherwise display features for the Emergency Management or First Responder communities. It is limited at this time to support portrayal of point features that relate to the emergency management and hazard mapping disciplines.*

ANSI INCITS 416-2006, Information technology - Fibre Channel Protocol for SCSI, Third Version (FCP-3)

*This standard defines a third version of the SCSI Fibre Channel Protocol (FCP). This standard is a mapping protocol for applying the SCSI command set to Fibre Channel. This standard defines how the Fibre Channel services and the defined Information Units (IUs) are used to perform the services defined by the SCSI Architecture Model - 3 (SAM-3). This third version includes additions and clarifications to the second version, removes information that is now contained in other standards, and describes additional error recovery capabilities for the Fibre Channel Protocol.*

ANSI INCITS 417-2006, Information technology - Serial Attached SCSI- 1.1 (SAS-1.1)

*The SCSI family of standards provides for many different transport protocols that define the rules for exchanging information between different SCSI devices. This standard defines the rules for exchanging information between SCSI devices using a serial interconnect. Other SCSI transport protocol standards define the rules for exchanging information between SCSI devices using other interconnects. This standard also defines the rules for exchanging information between ATA hosts and ATA devices using the same serial interconnect. Other ATA transport protocol standards define the rules for exchanging information between ATA hosts and ATA devices using other interconnects.*

ANSI INCITS 418-2006, Information technology - Fibre Channel Switch Fabric - 4 (FC-SW-4)

*This American National Standard for FC-SW-4 describes the operation and interaction of Fibre Channel Switches. This standard includes: a) E_Port Operation and Fabric Configuration; b) Path selection (FSPF); c) Bridge Port (B_Port) Operation; d) Distributed server interaction and communication; e) Exchange of information between Switches to support zoning; f) Distribution of Event Notifications between Switches; g) Virtual Fabrics Switch Support; h) Enhanced Commit Service; i) Virtual Channels.*

ANSI INCITS 421-2006, INformation technology - Biometric Profile - Interoperability and Data Interchange - DoD Implementations

*This standard describes an infrastructure that supports a data collection system to capture biometric data from persons of military interest that may present a threat to national security. Persons of military interest include EPW, detained personnel, civilian internees, and other military detainees. Biometric data currently collected from Red force personnel includes fingerprints and facial images.*

ANSI INCITS 422-2007, Information technilogy - Application Profile for Commercial Biometric Physical Access Control

*This ANSI/INCITS Standard specifies the application profile to be used when incorporating biometrics-based identification and verification into commercial physical access control systems. A biometric access control system incorporates enrollment into the physical access control system and enrollment into the biometric system, biometric access challenge stations, an access decision infrastructure, and an access control management infrastructure. Access control credentials are a significant portion of the access control system.*

ANSI INCITS 424-2007, Information technology - Fibre Channel Framing and Signaling (FC-FS-2)

*This standard describes the framing and signaling interface of a high performance serial link for support of FC-4s associated with upper level protocols (e.g., SCSI, IP, SBCCS, VI). This standard is based on FC-FS with subsequent modifications approved by the T11 committee. Extended Link Services (ELSs) are not specified in this standard. FC-LS should be consulted for the functional description of all ELSs referenced in this specification.*

ANSI INCITS 426-2007, Information technology - Fibre Channel Security Protocols (FC-SP)

*This standard is one of the Fibre Channel family of standards. This standard describes the protocols used to implement security in a Fibre Channel fabric. This standard includes the definition of protocols to authenticate Fibre Channel entities, protocols to set up session keys, protocols to negotiate the parameters required to ensure frame-by-frame integrity and confidentiality, and protocols to establish and distribute policies across a Fibre Channel fabric.*

ANSI INCITS 428-2007, Information technology - Storage Management Host Bus Adapter Application Programming Interface (SM-HBA)

*A standard application programming interface (API) defines a scope within which, and a grammar by which it is possible to write application software without attention to vendor-specific infrastructure behavior. SM-HBA specifies a standard API the scope of which is management of FC and SAS HBAs, and the use of FC and SAS capabilities for discovery and management of the components of the respective fabric or domain.*

ANSI INCITS 45-1982 (R2002), Character Set for Handprinting, Specifications for

*Prescribes shapes and sizes of handprinted characters to be used in Optical Character Recognition (OCR) systems and shapes of handprinted characters for man-to-man communication. The standard encompasses international requirements.*

ANSI INCITS 46-1974 (R2002) , Unrecorded Magnetic Six-Disk Pack (General, Physical, and Magnetic Characteristics)

*Specifies the general, physical and magnetic requirements for interchangeability of the magnetic six-disk pack, as required to achieve unrecorded pack interchange between disk storages and associated information processing systems.*

ANSI INCITS 47-1988 (R2005), Codes – Structure and Data Requirements for the Identification of Named Populated Places, Primary County Divisions, and Other Locational Entities of the United States and its Outlying and Associated Areas for Information Interchange

*Establishes a structure for the assignment of identifying data codes to locational entities in the United States and its outlying and associated areas, for the purpose of information interchange among data-processing systems. Types of locational entities for which this strucutre is intended include (but are not limited to) populated places, primary county divisions such as townships and New England towns, Indian reservations, and facilities such as airports and military bases. This standard also establishes requirements for associated data that improve the utility of the primary data codes.*

ANSI INCITS 48-1986 (R2002), Magnetic Tape Cassette for Information Interchange, 3.81 mm (0.150 in) Tape at 32 bpmm (800 bpi), PE (includes ANSI X3.48/TC-1-1995)

*For unrecorded and recorded cassettes containing 3.81-mm (0.150-in) -wide magnetic tape presents the minimum requirements for mechanical and magnetic interchangeability of the cassette and for data interchange between information processing systems, which are capable of utilizing a standard code for information interchange as agreed upon by the interchange parties, using a data density of 32 bpmm (800 bpi).*

ANSI INCITS 48-1986/TC-1-1995 (R2006), Information Systems: Magnetic Tape Cassette for Information Interchange (3.81 mm, 01.50 inch) Tape at 32 bpmm (800 BPI), Phase Enclosed

*This American National Standard for unrecorded and recorded cassettes containing 3.81-mm (0.150-in) -wide magnetic tape presents the minimum requirements for mechanical and magnetic interchangeability of the cassette and for data interchange between information processing systems, which are capable of utilizing a standard code for information interchange as agreed upon by the interchange parties, using a data density of 32 bpmm (800 bpi.*

ANSI INCITS 49-1975 (R2002), Character Set for Optical Character Recognition (OCR-B)

*Describes nominal shapes, sizes, and printing positions of OCR-B alphanumeric characters and symbols for optical character recognition (OCR) systems.*

ANSI INCITS 52-1976 (R2002) , Unrecorded Single Disk Cartridge (Front Loading, 22000 BPI), General, Physical, and Magnetic Requirements

*Specifies the general, physical, and magnetic requirements for interchangeability of the single-disk cartridge (front loading) as required to achieve unrecorded cartridge interchange between disk storage drive and associated information processing systems.*

ANSI INCITS 53-1976 (R2004), Programming Language PL/I

*Specifies both the form and interpretation of computer programs written in PL/I. Is intended to provide a high degree of machine independence and thereby facilitate program exchange among a variety of computing systems. The standard serves as an authoritative reference rather than as a tutorial exposition.*

ANSI INCITS 54-1986 (R2002), Recorded Magnetic Tape for Information Interchange (6250 CPI, Group Coded Recording)

*Provides specifications for a 1/2-inch (12,7 mm), 9-track magnetic tape to be used for information interchange among information processing systems, communication systems, and associated equipment utilizing*

*a standard code as agreed upon by the interchange parties. This standard deals solely with recording on magnetic tape and support and complements American National Standard for Unrecorded Magnetic Tape for Information Interchange (9-Track 800 CPI, NRZI; 1600 CPI, PE; and 6250 CPI, GCR), ANSI X3.40:1983.*

ANSI INCITS 55-1992 (R2002), Information Systems – Unrecorded Magnetic Tape Cartridge for Information Interchange – 0.250 Inch (6.30 mm), 1600 bpi (63 bpmm), Phase Encoded

*For an unrecorded cartridge containing 0.250-inch (6.30 mm) magnetic tape presents the minimum requirements for the mechanical and magnetic interchangeability of the cartridge between information processing systems, communications systems, and associated equipment using the American National Standard Code for Information Interchange, ANSI X3.4:1977 (ASCII). This standard refers solely to the magnetic tape and standard length or long length cartridges for digital recording and complements American National Standard, ANSI X3.56:1977.*

ANSI INCITS 56-1986 (R2002), Recorded Magnetic Tape Cartridge for Information Interchange (4-Track, 0.250 Inch, 1600 BPI, Phase Encoded)

*Provides a format and recording standard for a 0.250-in (6.30-mm) wide 4-track, magnetic tape in a cartridge to be used for information interchange between information processing systems, communication systems, and associated equipment utilizing a standard code, as agreed upon by the interchange parties. This standard refers solely to recording on the 0.250-in (6.30-mm) magnetic tape cartridge.*

ANSI INCITS 58-1977 (R2002), Unrecorded Eleven-Disk Pack – General, Physical, and Magnetic Requirements

*Specifies the general, physical and magnetic requirements for the physical interchange of magnetic eleven-disk packs for use in electronic data processing systems.*

ANSI INCITS 61-1986 (R2002), Geographic Point Locations for Information Interchange, Representation of

*To establish uniform formats for geographic point location data. It provides a means for representing these data in digital form for the purpose of interchanging information among data systems and for improving clarity and accuracy in interpersonal communications.*

ANSI INCITS 62-1987 (R2002), Information Systems – Optical Character Recognition (OCR) – Paper Used in OCR Systems

*Incorporates new wording for subclause 3.5.2 to better reflect the preset state and practical use of OCR papers and equipment, as well as incorporate procedures from existing recognized standards.*

ANSI INCITS 62-1987/AM1-1999 (R2002), Information Systems - Optical Character Recognition (OCR) - Paper Used in OCR Systems Amendment 1

*Contains basic definitions, measurement requirements, specifications, and recommendations for papers used with optical character recognition readers.*

ANSI INCITS 72-1981 (R2003), Recorded Magnetic Tape Cartridge for Information Interchange, 4 Track, 0.250 Inch (6.30 mm), 1600 BPI (63 BPMM), Phase Encoded, Parallel

*This American National Standard is intended to provide a format and recording standard for a 0.250-inch (6.30-mm) -wide, 4-track magnetic tape in a cartridge to be used for information interchange between information processing systems, communication systems and associated equipment utilizing the American National Standard Code for Information Interchange, ANSI X3.4-1977 (ASCII).*

ANSI INCITS 73-1980 (R2002), Cartridge, Single-Sided Unformatted Flexible Disk (for 6631 BPR Use)

*Specifies the general, physical, and magnetic requirements for interchangeability of the single-sided flexible disk cartridge - for use at 6631 bits per radian (BPR) - as required to achieve unformatted disk cartridge interchange among disk drives and associated information processing systems. The single-sided flexible disk cartridge (for 6631-BPR use), enclosed in a protective envelope and having at least one recording surface, is of the type intended specifically for use with digital recording reproducing equipment employing access mechanisms capable of positioning to 77 data tracks. This standard is not intended as a substitute for a purchase specification.*

ANSI INCITS 74-1987 (R2004), Information Systems – Programming Language – PL/I General-Purpose Subset

*Defines the computer programming language PL/I General Purpose Subset. Is intended to serve as an authoritative reference rather than as a tutorial introduction.*

ANSI INCITS 76-1981 (R2002), Unformatted Single Disk Cartridge (Top Loading, 200 TPI, 4400 BPI) – General, Physical, and Magnetic Requirements

*Specifies the general, physical, and magnetic requirements for interchangeability of the single-disk cartridge (top loading) as required to achieve unrecorded cartridge interchange between disk storages and associated information processing systems.*

ANSI INCITS 82-1980 (R2006), Cartridge, One-Sided Single-Density Unformatted 5.25 Inch Flexible Disk

*This standard specifies general, physical, and magnetic requirements for interchangeablity of the one-sided 5.25-inch (nominal) flexible disk cartridge - for use at 3979 bits per radian (BPR) - as required to achieve unformatted disk cartridge interchange among disk drives using 35 tracks (can be negoitiated between concerned parties for use in drives using up to 40 tracks) and associated information processing systems. The one-sided flexible disk cartridge (for 3979-BPR use), enclosed in a protective envelope and having at least one recording surface, is a the type intended specifically equipment employing access mechanisms capable of positioning to these data tracks.*

ANSI INCITS 83-1995 (R2005), Information Systems – ISO Registration According to ISO 2375 – ANSI Sponsorship Procedures

*Specifies the procedure to be followed in submitting proposals for character sets for ANSI sponsorship for submission to the ISO Registration Authority for processing in accordance with the ISO procedure for registration.*

ANSI INCITS 85-1981 (R2003), One Half Inch Magnetic Tape Interchange Using a Self-Loading Cartridge

*This standard provides the information necessary to allow physical interchange of a self-loading cartridge to be used with 1/2-inch-wide magnetic tape, as described in American National Standard for Unrecorded Magnetic Tape for Information Interchange (9-Track 200 and 800 CPI, NRZI, 1600 CPI, PE), ANSI x3.40-1976, and modified herein, when contained in a self-loading cartridge.*

ANSI INCITS 86-1980 (R2002), Inks, Optical Character Recognition (OCR)

*Specifies optical character recognition (OCR) inks by their spectral characteristics for different users with the OCR community. It includes definitions, test methods, and information needed to apply this standard.*

ANSI INCITS 89-1981 (R2002), Unrecorded Single-Disk Double-Density Cartridge (Front Loading, 2200 BPI, 200 TPI), General, Physical, and Magnetic Requirements for

*Specifies the general, physical, and magnetic requirements for interchangeability of the single-disk cartridge (front loading) as required to achieve unrecorded cartridge interchange between disk storages and associated information processing systems.*

ANSI INCITS 92-1981 (R2003), Data Encryption Algorithm

*This standard provides a complete description of a mathematical algorithm for encrypting and decrypting binary-coded information.*

ANSI INCITS 93M-1981 (R2002), Optical Character Recognition Positioning

*Specifies the location of OCR-A and OCR-B characters in relationship to other characters on a document or page and to reference points of the document or page.*

ANSI INCITS 94-1985 (R2002), Programming Aid to Numerically Controlled Manufacturing (PANCM)

*Standardizes the language features of the SPLIT, ACTION, and COMPACT II languages, to ensure compatibility of language enhancements and to promote portability of part programs between implementations.*

ANSI INCITS 96-1983 (R2002), Forms, Paper Sizes for Single-Part Continuous Business

*Specifies sizes for single-part continuous business forms for use in handwritten or machine applications, or both. Such forms are continuous lengths of forms that have sprocket feed holes in both the left and right margins. Specifies a common physical format and tolerances for continuous business forms so as to ensure compatibility between such forms and conforming office and data processing print mechanisms. This standard also specifies the diameter and location of sprocket feed holes.*

ANSI INCITS 99-1983 (R2002), Optical Character Recognition (OCR) Print Quality, Guideline for

*Describes the print quality parameters and measuring techniques for determining the quality of machine-printed characters to maximize the likelihood that they can be read by electro-optical means.*

ANSI INCITS TR-10-1995, Information Processing Systems Technical Report – Part Programming Tutorial for American National Standard APT Language As Defined by ANSI X3.37-1995 (NOT AN AMERICAN NATIONAL STANDARD)

ANSI INCITS TR-13-1998, Information Processing Systems Technical Report – Object-Oriented Extentions to Pascal (NOT AN AMERICAN NATIONAL STANDARD)

ANSI INCITS TR-14-1995, IRDS Conceptual Schema, Part 1: Conceptual Schema for IRDS, Part 2: Modeling Language Analysis (NOT AN AMERICAN NATIONAL STANDARD)

ANSI INCITS TR-15-1995, Technical Report for Fault Isolation - Information Characterization (NOT AN AMERICAN NATIONAL STANDARD)

ANSI INCITS X4.6-1979 (R2003), 10-Key Keyboard for Adding and Calculating Machines

*Prescribes the arrangement of the 10 numeric keys, one through zero, for adding and calculating machines of the 10-key type.*

ANSI/ISO 19101-2002, Geographic information -- Reference model

*This International Standard defines the framework for standardization in the field of geographic information and sets forth the basic principles by which this standardization takes place.*
*This framework identifies the scope of the standardization activity being undertaken and the context in which it takes place. The framework provides the method by which what is to be standardized can be determined and describes how the contents of the standards are related.*
*Although structured in the context of information technology and information technology standards, this International Standard is independent of any application development method or technology implementation approach.*

ANSI/ISO 8378-3-1986 (R2003), Information Processing - Data Interchange on 130 mm (5.25 in) Flexible Disk Cartridges Using Modified Frequency Modulation Recording at 7 958 ftprad, 3,8 tpmm (96 tpi), on Both Sides - Part 3: Track Format B

*Specifies the quality of recorded signals, the track layout, and a track format to be used on 130 mm (5.25 in) flexible disk cartridges intended for data interchange between data processing systems.*

ANSI/ISO/IEC 9541-1-1991/AM3-2000 (R2006), Information Technology - Font Information Interchange - Part 1: Architecture - AMENDMENT 3: Multilingual Extensions to Font Resource Architecture

*ISO/IEC 9541 defines a method of naming glyphs and glyph collections, independent of any document encoding technique; it assumes that one or more methods of associating document encoding techniques with glyph identifiers used in font resources will be provided by text processing systems. This part of ISO/IEC 9541 specifies the architecture of a font resource, i.e., the font description, font metrics, glyph description and glyph metrics properties required for font references and the interchange of font resources.*

ANSI/ISO/IEC 9541-2-1991/AM1-2000 (R2006), Information Technology - Font Information Interchange - Part 2: Interchange Format - AMENDMENT 1: Support for Font Technology Advances

*ISO/IEC 9541, as a whole, specifies the architecture of font resources, as well as the formats for font interchange amongst information processing systems. This part of ISO/IEC 9541 specifies the interchange formats for font information, and the minimum subsets of that information required for interchange, and requires definitions in ISO/IEC 9541-I. Font subsets defined by ISO/IEC 9541 establish the minimum set of font properties. Font resources defined by this part of ISO/IEC 9541 are used in various document processing environments in which ASN.I or SGML parsing algorithms are recognised. The format of font resource information is in both ASN.I and SGML.*

INCITS 370-2004, Information technology - ATA/ATAPI Host Adapters Standard (ATA - Adapter)

*This standard specifies the AT Attachment Interface between host systems using Automatic Direct Memory Access (ADMA) and storage devices. It provides a common link layer interface for systems manufacturers, system integrators, and software suppliers. The application environment for the AT Attachment Interface is any host system that has a PCI bus and storage devices contained within the processor enclosure. This standard maintains a high degree of compatibility with the AT Attachment with Packet Interface – 6 standard (ATA/ATAPI-6), INCITS 361-2002, and while specifying link-layer register definitions and usage information, is not intended to require changes to presently installed devices.*

INCITS/ ISO/ IEC 7811-2-2001 (R2006), Identification Cards – Recording Technique – Part 2: Magnetic Stripe

*This part of ISO/IEC 7811 is one of a series of standards describing the characteristics for identification cards as defined in the definitions clause and the use of such cards for international interchange. This part of ISO/IEC 7811 specifies requirements for a low coercivity magnetic stripe (including any protective overlay) on an identification card, the encoding technique and coded character sets. It takes into consideration both human and machine aspects and states minimum requirements.*

INCITS/ISO 1073-1-1976 (R2004), Alphanumeric Character Sets for Optical Recognition - Part 1: Character Set OCR-A - Shapes and Dimensions of the Printed Image

*This International Standard for character shapes and sizes is intended to facilitate and foster the use of Optical Character Recognition (OCR) in data processing, by defining character shapes suitable for both human and machine reading.*

INCITS/ISO 1073-2-1976 (R2004), Alphanumeric Character Sets for Optical Recognition - Part 2: Character Set OCR-B - Shapes and Dimensions of the Printed Image

*This International Standard for character shapes and sizes is intended to facilitate and foster the use of Optical Character Recognition (OCR) in data processing, by defining character shapes suitable for both human and machine reading.*

INCITS/ISO 1831-1980 (R2004), Printing Specifications for Optical Character Recognition

*This International Standard contains the basic definitions, measurement requirements, specifications and recommendations for OCR paper and print.*

INCITS/ISO 19106-2004, Geographic information - Profiles

*This International Standard is intended to define the concept of a profile of the ISO geographic information standards developed by ISO/TC 211 and to provide guidance for the creation of such profiles.*

INCITS/ISO 19107-2003, Geographic information - Spatial schema

*This International Standard specifies conceptual schemas for describing the spatial characteristics of geographic features, and a set of spatial operations consistent with these schemas. It treats vector geometry and topology up to three dimensions. It defines standard spatial operations for use in access, query, management, processing, and data exchange of geographic information for spatial (geometric and topological) objects of up to three topological dimensions embedded in coordinate spaces of up to three axes.*

INCITS/ISO 19108-2002, Geographic information - temporal schema

*This International Standard defines concepts for describing temporal characteristics of geographic information. It depends upon existing information technology standards for the interchange of temporal information. It provides a basis for defining temporal feature attributes, feature operations, and feature associations, and for defining the temporal aspects of metadata about geographic information. Since this International Standard is concerned with the temporal characteristics of geographic information as they are abstracted from the real world, it emphasizes valid time rather than transaction time.*

INCITS/ISO 19110-2005, Geographic information - Methodology for feature cataloguing

*Defines the methodology for cataloguing feature types. This International Standard specifies how the classification of feature types is organized into a feature catalogue and presented to the users of a set of geographic data. This International Standard is applicable to creating catalogues of feature types in previously uncatalogued domains and to revising existing feature catalogues to comply with standard practice. This International Standard applies to the cataloguing of feature types that are represented in digital form. Its principles can be extended to the cataloguing of other forms of geographic data.*

INCITS/ISO 19111-2003, Geographic information - Spatial referencing by coordinates

*Defines the conceptual schema for the description of spatial referencing by coordinates.*

INCITS/ISO 19112-2003, Geographic information - Spatial referencing by geographic identitiers

*This International Standard defines the conceptual schema for spatial references based on geographic identifiers. It establishes a general model for spatial referencing using geographic identifiers, defines the components of a spatial reference system and defines the essential components of a gazetteer. Spatial referencing by coordinates is addressed in ISO 19111. However, a mechanism for recording complementary coordinate references is included. This International Standard enables producers of data to define spatial reference systems using geographic identifiers and assists users in understanding the spatial references used in datasets. It*

INCITS/ISO 19114-2003, Geographic information - Quality evaluation procedures

*This International Standard provides a framework of procedures for determining and evaluating quality that is applicable to digital geographic datasets, consistent with the data quality principles defined in ISO 19113. It also establishes a framework for evaluating and reporting data quality results, either as part of data quality metadata only, or also as a quality evaluation report.*

INCITS/ISO 19115-2003, Geographic information - Metadata

*This International Standard defines the schema required for describing geographic information and services. It provides information about the identification, the extent, the quality, the spatial and temporal schema, spatial reference, and distribution of digital geographic data. This International Standard is applicable to: - the cataloguing of datasets, clearing house activities, and the full description of datasets; - geographic datasets, dataset series, and individual geographic features and feature properties. This International Standard defines: etc.*

INCITS/ISO 19116-2004, Geographic information - Positioning services

*This International Standard specifies the data structure and content of an interface that permits communication between position-providing device(s) and position-using device(s) so that the position-using device(s) can obtain and unambiguously interpret position information and determine whether the results meet the requirements of the use.*

INCITS/ISO 19117-2005, Geographic information - Portrayal

*This International Standard defines a schema describing the portrayal of geographic information in a form understandable by humans. It includes the methodology for describing symbols and mapping of the schema to an application schema. It does not include standardization of cartographic symbols, and their geometric and functional description.*

INCITS/ISO 19119-2005, Geographic information - Services

*Identification and definition of the architecture patterns for service interfaces used for geographic information and definition of the relationships to the Open Systems Environment model. This International Standard presents a geographic services taxonomy and a list of example geographic services placed in the services taxonomy. This International Standard prescribes how to create a platform-neutral service specification, and how to derive platform-specific service specifications that are conformant with this.*

INCITS/ISO 19125-1-2004, Geographic information - Simple feature access - Part 1: Common architecture

*This part of ISO 19125 establishes a common architecture and defines terms to use within the architecture. This part of ISO 19125 does not attempt to standardize and does not depend upon any part of the mechanism by which Types are added and maintained, including the following: a) syntax and functionality provided for defining types; b) syntax and functionality provided for defining functions; c) physical storage of type instances in the database; d) specific terminology used to refer to User Defined Types, for example UDT.*

INCITS/ISO 19125-2-2004, Project 1500 - ISO 19125-2:2004, Geographic information - Simple feature access - Part 2: SQL option

*This part of ISO 19125 specifies an SQL schema that supports storage, retrieval, query and update of simple geospatial feature collections via the SQL Call Level Interface (SQL/CLI) (ISO/IEC 9075-3:2003.*

INCITS/ISO 2033-1983 (R2004), Information Processing - Coding of Machine Readable Characters (MICR and OCR)

*This International Standard defines the coded representation of printed characters recognized by reading equipment.*

INCITS/ISO 2047-1975, Information Processing - Graphical Representations for the Control Characters of the 7-Bit Coded Character Set

INCITS/ISO 2382-21-1985 (R2006), Data processing - Vocabulary - Part 21 : Interfaces between process computer systems and technical processes

*This part of ISO/IEC 2382 is intended to facilitate international communication in data processing. It presents, in two languages, terms and definitions of selected concepts relevant to the field of data processing and identifies relationships between the entries.*

INCITS/ISO 2382-22-1986 (R2006), Information Processing Systems - Vocabulary - Part 22: Calculators

*This part of ISO/IEC 2382 is intended to facilitate international communication i information processing. It presents, in two languages, terms and definitions of selected concepts relevant to the field of information processing and identifies relationships between the entries.*

INCITS/ISO 3275-1974 (R2004), Information Processing - Implementation of the 7-Bit Coded Character Set and its 7-Bit and 8-Bit Extensions on 3,81 mm Magnetic Cassette for Data Interchange

*This International Standard specifies the implementation of the 7-bit coded character set and of its 7-bit and B-bit extensions for the interchange of data on 3.81 mm magnetic tape cassette.*

INCITS/ISO 3791-1976, Office Machines and Data Processing Equipment - Keyboard Layouts for Numeric Applications

INCITS/ISO 4062-1977, Office Machines ad Data Processing Equipment - Keyboard Layouts for Numeric Applications

INCITS/ISO 4341-1978 (R2002), Magnetic Tape Cassette and Cartridge Labeling and File Structure for Information Interchange

*Specifies file structures for data interchange on magnetic tape cassettes. To provide for the range of sophistication in equipment and applications, the basic, compact, and extended systems are specified. This standard is not limited to the 3, 81 mm magnetic tape cassette described in ISO 3407 but could also be applied to higher capacity cassettes or cartridges.*

INCITS/ISO 5138-3-1981 (R2004), Office Machines - Vocabulary - Part 03: Addressing Machines

*The Vocabulary is intended to facilitate international exchanges in the field of office machines. It presents, in two languages, terms and definitions of selected concepts relevant to this field and identifies relationships between the entries. This section of the Vocabulary deals with addressing machines. It concerns the main operating processes and types of machines used, their functions and technical parts.*

INCITS/ISO 5654-2-1982 (R2002), Information Processing - Data Interchange on 200 mm (8 in) Flexible Disk Cartridges Using Two-Frequency Pre-Recording at 13 262 ftprad on One Side - Part 2: Track Format

*Specifies the quality of recorded signals, track layout and the track format to be used on 200 mm (8 in) flexible disk cartridges recorded at 13 262 ftprad on one side, which is intended for data interchange between data processing systems.*

INCITS/ISO 5807-1985 (R2003), Information Processing – Documentation Symbols and Conventions for Data, Program and Systems Flowcharts, Program Network Charts, and System Resources Charts

*Specifies symbols to be used in information processing documentation and gives guidance on the conventions for their use in (a)data flowcharts; (b)program flowcharts;(c) system flowcharts;(d)program network charts; and (e)system resource charts.*

INCITS/ISO 6586-1980 (R2004), Data Processing - Implementation of the ISO 7-Bit and 8-Bit Coded Character Sets on Punched Cards

*This International Standard defines the implementation of the IS0 7-bit and B-bit coded character sets on punched cards. It specifies the representation of 7-bit combinations and 8-bit combinations on 12-row punched cards. This representation is derived from, and compatible with, the code known as the “Hollerith Code”. It will ensure compatibility with a large proportion of existing punched card files.*

INCITS/ISO 6596-2-1985 (R2002), Information Processing - Data Interchange on 130 mm (5.25 in) Flexible Disk Cartridges using Two-Frequency Recording at 7 958 ftprad, 1,9 tpmm (48 tpi), on One Side - Part 2: Track Format

*Specifies the magnetic characteristics, the track layout, and a track format to be used on a 130 mm (5.25 in) flexible disk cartridge, recorded at 7 958 ftprad on one side using two-frequency recording at a track density of 1,9 tracks per millimetre (tpmm) [48 tracks per inch (tip)], which is intended for data interchange between data processing systems.*

INCITS/ISO 6709-1983 (R2004), Standard Representation of Latitude, Longitude and Altitude for Geographic Point Locations

*This International Standard specifies a variable-length format for the representation of latitude, longitude and altitude for use in data interhange. The representation of altitude is optional and its presence or absence is implicit in the format.*

INCITS/ISO 6936-1988 (R2004), Information Processing - Conversion between the Two Coded Character Sets of ISO 646 and ISO 6937-2 and the CCITT International Telegraph Alphabet No. 2 (ITA 2)

*The International Standard specifies rules for conversion between the 58 characters (including control functions) of the CCITT International Telegraph Alphabet No. 2 (CCITT Recommendation F.1) and the characters of the IS0 646 and IS0 6937-2 coded character sets.*

INCITS/ISO 7064-2003, Data Processing - Check Character Systems

*Specifies a set of check character systems capable of protecting strings against errors which occur when people copy or type data.*

INCITS/ISO 7065-2-1985 (R2002), Information Processing - Data Interchange on 200 mm (8 in) Flexible Disk Cartridges Using Modified Frequency Modulation Recording at 13 262 ftprad, 1,9 tpmm (48 tpi), on Both Sides - Part 2: Track Format

*Specifies the magnetic characteristics, the track layout, and a track format to be used on a 200 mm (8 in) flexible disk cartridge, recorded*

*at 13 262 ftprad on both sides using modified frequency modulation recording at a track density of 1,9 tracks per millimetre (tpmm) [48 tracks per inch (tpi)] which is intended for data interchange between data processing systems.*

INCITS/ISO 7487-2-1985 (R2002), Information Processing - Data Interchange on 130 mm (5.25 in) Flexible Disk Cartridges Using Modified Frequency Modulation Recording at 7 958 ftprad, 1,9 tpmm (48 tpi), on Both Sides - Part 2: Track Format A

*Specifies the quality of recorded signals, the track layout, and a track format to be used on such a flexible disk cartridge, which is intended for data interchange between data processing systems.*

INCITS/ISO 7487-3-1986 (R2002), Information Processing - Data Interchange on 130 mm (5.25 in) Flexible Disk Cartridges Using Modified Frequency Modulation Recording at 7 958 ftpard, 1,9 tpmm (48 tpi), on both sides - Part 3: Track Format B

*Defines the quality of recorded signals, the track layout, and a track format (format B) to be used on 130 mm (5.25 in) flexible disk cartridges intended for data interchange between data processing systems. To be used in conformance with ISO 7487 when it meets all requirements of either parts 1 and 2 or parts 1 and 3 of it.*

INCITS/ISO 8378-2-1986 (R2002), Information Processing - Data Interchange on 200 mm (8 in) Flexible Disk Cartridges Using Modified Frequency Modulation Recording at 13 262 ftprad, 1,9 tpmm (48 tpi), on Both Sides - Part 2: Track Format A

*Describes the quality of recorded signals, the track layout and track format for 130 mm (5,25 in) flexible disk cartridges intended for data interchange between data processing systems and recorded at 7 958 ftprad and 3,8 tpmm (96 tpi) on both sides using modified frequency modulation recording. Such a flexible disk cartridge shall be in conformance with ISO 8378 if meeting either the requirements of parts 1 and 2 or 1 and 3.*

INCITS/ISO 8485-1989 (R2005), Programming Languages - APL

*This standard defines the programming language APL and the environment in which APL programs are executed. Its purpose is to facilitate interchange and promote portability of APL programs and programming skills.*

INCITS/ISO 8630-2-1987 (R2002), Information Processing - Data Interchange on 130 mm (5.25 in) Flexible Disk Cartridges Using Modified Frequency Modulation Recording at 13 262 ftprad, on 80 Tracks on Each Side - Part 2: Track format A for 77 Tracks

*Specifies the quality of recorded signals, the track layout, and a track format to be used on 130 mm (5.25 in), 13 262 ftprad flexible disk cartridges intended for data interchange between data processing*
*systems.*

INCITS/ISO 8630-3-1987 (R2002), Information Processing - Data Interchange on 130 mm (5.25 in) Flexible Disk Cartridges Using Modified Frequency Modulation Recording at 13 262 ftprad, on 80 Tracks on Each Side - Part 3: Track Format B for 80 Tracks

*Specifies the quality of recorded signals, the track layout, and a track format to be used on 130 mm (5.25 in), 13 262 ftprad flexible disk cartridges intended for data interchange between data processing*
*systems.*

INCITS/ISO 8859-7-2004, Information Processing - 8-Bit Single-Byte Coded Graphic Character Sets - Part 7: Latin/Greek Alphabet

*This part of ISO/IEC 8859 specifies a set of 188 coded graphic characters identified as Latin/Greek alphabet.*

INCITS/ISO 8860-2-1987 (R2007), Information Processing - Data Interchange on 90 mm (3.5 in) Flexible Disk Cartridges Using Modified Frequency Modulation Recording at 7 958 ftprad on 80 Tracks on Each Side - Part 2: Track Format

*Specifies the track layout, the track format and the characteristics of recorded signals.*

INCITS/ISO 8879-1986 (R2004), Information Processing - Text and Office Systems - Standard Generalized Markup Language (SGML)

*This International Standard specifies an abstract syntax known as the Standard Generalized Markup Language (SGML). The language expresses the description of a document's structure and other attributes, as well as other information that makes the markup interpretable.*

INCITS/ISO 9036-1987 (R2004), Information Processing - Arabic 7-Bit Coded Character Set for Information Interchange

*This International Standard specifies a set of 120 characters (control characters and graphic characters such as letters, digits and symbols) with their coded representation. These characters are mandatory and unchangeable.*

INCITS/ISO 9529-2-1989 (R2002), Information Processing Systems - Data Interchange on 90 mm (3.5 in) Flexible Disk Cartridges Using Modified Frequency Modulation Recording at 15 916 ftprad on 80 tracks on Each Side - Part 2: Track Format

*Specifies the track layout, the track format and the characteristics of the recorded signals.*

INCITS/ISO 9542-1988/AM1-1999 (R2006), Information Processing Systems - Telecommunications and Information Exchange between Systems - End System to Intermediate System Routeing Exchange Protocol for Use in Conjunction with the Protocol for Providing the

*Specifies a) procedures for transmission of multicast announcement, multicast address mapping and group composition information between Network entities residing in End Systems and Network entities residing in Intermediate Systems; b) the encoding of the protocol data units used for multicast announcement, multicast address mapping and group composition information.*

INCITS/ISO 962-1974 (R2004), Information Processing - Implementation of the 7-Bit Coded Character Set and its 7-Bit and 8-Bit Extensions on 9-Track 12,7 mm (0.5 in) Magnetic Tape

*This International Standard specifies the implementation of the 7-bit coded character set and its 7-bit and 8-bit extensions on 9-track 12,7 mm (0.5 in) magnetic tape.*

INCITS/ISO/IEC 10021-8-1995 (R2004), Information Technology - Message Handling Systems (MHS) - Part 8: Electronic Data Interchange Messaging Service

*This part of ISO/IEC 10021 defines the overall system and service of ED1 messaging.*

INCITS/ISO/IEC 10021-9, Information Technology - Message Handling Systems (MHS) - Part 9: Electronic Data Interchange

*This part of ISO/IEC 10021 is one of a set of standards for message handling. The entire set provides a comprehensive bluemint for a message handling system (MHS) realized by any number of cooperating open systems.*

INCITS/ISO/IEC 10026-1-1998, Information technology - OSI - Distributed Transaction Processing - Part 1: OSI TP Model

*This part of ISO/IEC 10026: a) provides a general intro. to the concepts & mechanisms defined in ISO/IEC 10026; b) defines a model of disbributed transaction processing; c) defines the requirements to be met by the OSI TP Service; & d) takes into consideration the need to coexist with other Application Service Elements.*

INCITS/ISO/IEC 10026-2-1998, Information technology - OSI - Distributed Transaction Processing - Part 2: OSI TP Service

*This part of ISO/IEC 10026 defines in an abstract way the Distributed Transaction Processing Service with the Application Layer in terms of: a) the actions & events of the service primitives; b) the parameter data associated with each service primitives's action & event; and c) the relationship between, and the valid sequences of these actions and events.*

INCITS/ISO/IEC 10026-3-1998, Information technology - OSI - Distributed Transaction Processing - Part 3: Protocol Specification

*This part of ISO/IEC 10026 provides a) a statement of the nature of the automation giving the necessary behaviour of each of the participating entities which are providing the OSI TP Service; b) the definition clause of the abstract syntax required to convey the TP protocol control information; c) the conformance requirements to be met by implementations of this protocol.*

INCITS/ISO/IEC 10026-4-1995, Information technology - OSI - Distributed Transaction Processing: Protocol Implementation Conformance Statement (PICS) proforma

*Details of the use of this proforma is provided in this Recommendation | Part of ISO/IEC 10026.*

INCITS/ISO/IEC 10026-5-1998, Information technology - OSI - Distributed Transaction Processing - Part 5: Application context proforma and guidelines when using OSI TP

*This part of ISO/IEC 10026 specifies requirements specific to OSI TP that should be contained in an application context definition, in addition to the general requirements for an application context definition.*

INCITS/ISO/IEC 10026-6-1995, Information technology - Open Distributed Processing -Trading function: Specification - Part 6: Unstructed Data Transfer

*This part of ISO/IEC 10026 provides a model for the transfer of application data for transcation processing applications whose application-specific protocol has not been standardized within the OSI environment.*

INCITS/ISO/IEC 10030-2002, Information Technology - Telecommunications and Information Exchange Between Systems-end System Routeing Information Exchange Protocol for Use in Conjunction With ISO/IEC 8878

*Defines a protocol for the exchange of routeing information between an End System and a Subnetwork Address Resolution Entity, and between an Intermediate System and a Subnetwork Address Resolution Entity.*

INCITS/ISO/IEC 10036-1996 (R2004), Information Technology - Font Information Interchange - Procedures for Registration of Font-Related Identifiers

*This International Standard specifies the procedures to be followed by a Registration Authority in preparing, maintaining, and publishing registers of idientifiers which identify font-related objects. The objective of this International Standard is to provide a single point of contact for registration requests and for users to obtain information about the object registered (central registration within the registration authority's organization is not required, but a central point of contact is required.*

INCITS/ISO/IEC 10089-1991 (R2004), Information Technology - 130 mm Rewritable Optical Disk Cartridge for Information Interchange

*This International Standard specifies definitions of the essential concepts; the environment in which the characteristics are to be tested; the environments in which the cartridge are to be operated and stored; the mechanical, physical and dimensional characteristics of the case and of the optical disk; the magneto-optical characteristics and the recording characteristics for recording the information, for reading the information and for erasing it many times, so as to provide physical interchangeability between data processing systems; two formats for the physical disposition of the tracks and sectors, the error correction codes, the modulation methods used for recording.*

INCITS/ISO/IEC 10090-1992 (R2004), Information Technology - 90 mm Optical Disk Cartridges, Rewritable and Read Only, for Data Interchange

*This International Standard specifies the conditions for conformance testing and the Reference Drive; the mechanical and physical characteristics of the cartridge, so as to provide mechanical interchangeability between data processing systems; the format of the information on the disk, both embossed and user-written; the characteristics of the embossed information on the disk; the magneto-optical characteristics of the disk, enabling processing systems to write data onto the disk; the minimum quality of user-written data on the disk, enabling data processing systems to read data from the disk.*

INCITS/ISO/IEC 10118-1-2000 (R2005), Information Technology - Security Techniques - Hash Functions - Part 1: General

*ISO/IEC 10118 specifies hash-functions and is therefore applicable to the provisions of authentication, integrity and non-repudiation services. Hash-functions map arbitrary strings of bits to a fixed-length strings od bits, using a specified algorithm.*

INCITS/ISO/IEC 10118-2-2000 (R2006), Information Technology - Security Techniques - Hash-Functions - Part 2: Hash-Functions Using an n-Bit Block Cipher

*This part of ISO/IEC 10118 specifies hash-functions which make use of an n-bit block cipher algorithm. They are therefore suitable for an environment in which such an algorithm is already implemented.*

INCITS/ISO/IEC 10118-3-2003, Information Technology - Security Techniques - Hash-Functions - Part 3: Dedicated Hash-Functions

*This part of ISO/IEC 10118 specifies dedicated hash-functions, i.e., specially designed hash-functions. The hash- functions in this part of ISO/IEC 10118 are based on the iterative use of a round-function. Seven distinct round-functions are specified, giving rise to distinct dedicated hash-functions. The first and third dedicated hash-functions in clauses 7 and 9 respectively provide hash-codes of lengths up to 160 bits; the second in clause 8 provides hash-codes of lengths up to 128 bits; the fourth in clause 10 provides hash-codes of lengths up to 256 bits; the sixth in clause 12 provides hash-codes of a fixed length, 384 bits;*

INCITS/ISO/IEC 10118-3-2004, Information technology - Security techniques - Hash-functions - Part 3: Dedicated hash-functions

*This part of ISO/IEC 10118 specifies dedicated hash-functions, i.e. specially designed hash-functions. The hash-functions in this part of ISO/IEC 10118 are based on the iterative use of a round-function. Seven distinct round-functions are specified, giving rise to distinct dedicated hash-functions.*

INCITS/ISO/IEC 10118-4-1998, Information Technology - Security Techniques - Hash-Functions - Part 4: Hash-Functions Using Modular Arithmetic

*Specifies two hash-functions which make use of modular arithmetic. These hash-functions, which are believed to be collision-resistant, compress messages of arbitrary but limited length toa hash-code whose length is determined by the length of the prime number used in the reduction-function defined in 7.3. Thus, the hash-code is easily scaled tothe input length of any mechanism (e.g., signature algorithm, identification scheme). The hash-functions specified in this part of ISO/IEC 10118, known as MASH-1 and MASH-2 (Modular Arithmetic Secure Hash) are particularly suitable for environments in which implementations of modular arithmetic of sufficient length are already available. The two hash-functions differ only in the exponent used in the round-function.*

INCITS/ISO/IEC 10149-1995 (R2004), Information Technology - Data Interchange on Read-Only 120 mm Optical Data Disks (CD-ROM)

*This International Standard specifies the characteristics of 120 mm optical disks for information interchange between information processing systems and for information storage, called CD-ROM. The optical disk specified by this International Standard is of the type in which the information is recorded before delivery to the user and can only be read from the disk. Characteristics are specified for tracks recorded with digital data. According to this International Standard, a disk may also contain one or more tracks recorded with digital audio data. Such tracks shall be recorded according to IEC 908.*

INCITS/ISO/IEC 10175-1-1996, Information Technology - Text and Office Systems - Document Printing Application (DPA) - Part 1: Abstract Service Definition and Procedures

INCITS/ISO/IEC 10175-2-1996, Information Technology - Text and Office Systems - Document Printing Application (DPA) - Part 2: Protocol Specification

INCITS/ISO/IEC 10179-1996 AMENDMENT 1-2003, Information technology - Processing languages - Document Style Semantics and Specification Language (DSSSL) AMENDMENT 1: Extensions to DSSSL

*This International Standard amends ISO/IEC 10179:1996*

INCITS/ISO/IEC 10179-1996 (R2004), Information Technology - Text Composition - Document Style Semantics and Specification Language (DSSSL)

*Designed to specify the processing of valid SGML documents. DSSSL defines the semantics, syntax, and processing model of two languages for the specification of document processing: a) The transformation language for transforming SGML documents marked up in accordance with one or more DTD's. b) The style language, where the result is achieved by applying a set of formatting characteristics to portions of the data, and the specification is, therefore, as precise as the application requires, leaving some formatting decisions, such as line-end and column-end decisions, to the composition and layout process.*

INCITS/ISO/IEC 10180-1995 (R2004), Information Technology - Processing Languages - Standard Page Description Language (SPDL)

*This International Standard defines a language for the specification of electronic graphics, in a form suitable for presentation (printing or displaying on other suitable media). This International Standard is intended to be extensible in order to accommodate future developments in imaging technology.*

INCITS/ISO/IEC 10206-1991 (R2004), Information Technology - Progamming Languages - Extended Pascal

*This Internation Standard specifes the semantics and syntax of the computer programming language Extended Pascal by specifying requiremtns for a processor and for a confirming program. Two levels of compliance are defined for both processors and programs.*

INCITS/ISO/IEC 10279-1991 (R2005), Information Technology - Programming Languages - Full BASIC

*This International Standard is designed to promote the interchangeability of BASIC programs among a variety of automatic data processing systems. This International Standard specifies its own conformance subsets, which include those specified in ANSI X3.1 13-1987 and ECMA-116.*

INCITS/ISO/IEC 10367-1991 (R2004), Information Technology - Standardized Coded Graphic Character Sets for Use in 8-Bit Codes

*This International Standard specifies a unique coded graphic character set for use as GO set and a series of coded graphic character sets of up to 96 characters for use as the Gl, G2 and G3 sets in versions of ISO/IEC 4873. All sets specified in this International Standard are shown as elements of an 8-bit code.*

INCITS/ISO/IEC 10373-1-1998, Identification cards - Test methods - Part 1: General characteristics tests

*This International Standard defines test methods for characteristics of identification cards according to the definition given in ISO/IEC 7810. Each test method is cross-referenced to one or more base standards, which may be ISO/IEC 7810 or one or more of the supplementary standards that define the information storage technologies employed in identification cards applications.*
*NOTE 1 - Criteria for acceptability do not form part of this International Standard but will be found in the International Standards mentioned above.*
*NOTE 2 - Test methods described in this International Standard are intended to be performed separately. A given card is not required to pass through all the tests sequentially.*
*This part of ISO/IEC 10373 defines test methods which are common to one or more*

INCITS/ISO/IEC 10373-2-1998, Identification cards - Test methods - Part 2: Cards with magnetic stripes

*This International Standard defines test methods for characteristics of identification cards according to the definition given in ISO/IEC 7810. Each test method is cross-referenced to one or more base standards, which may be ISO/IEC 7810 or one or more of the supplementary standards that define the information storage technologies employed in identification cards applications.*
*NOTE 1 - Criteria for acceptability do not form part of this International Standard but will be found in the International Standards mentioned above.*
*NOTE 2 - Test methods described in this International Standard are intended to be performed separately. A given card is not required to pass through all the tests sequentially.*
*This part of ISO/IEC 10373 defines test methods which are specific to magnetic stripe*

INCITS/ISO/IEC 10373-3-2001 (R2006), Identifications Cards - Test Methods - Part 3: Integrated Circuit(s) Cards with Contacts and Related Interface Devices

*This part of ISO/IEC 10373 defines test methods for characteristics of integrated circuit(s) cards with contacts and related interface devices according to the definition given in ISO/IEC 7816. Each test method is cross-referenced to one or more base standards, which may be ISO/IEC 7810 or one or more of the supplementary standards that define the information storage technologies employed in identification card applications.*

INCITS/ISO/IEC 10373-5-1998, Identification cards - Test methods - Part 5: Optical memory cards

*This International Standard defines test methods for characteristics of identification cards according to the definition given in ISO/IEC 7810. Each test method is cross-referenced to one or more base standards, which may be ISO/IEC 7810 or one or more of the supplementary standards that define the information storage technologies employed in identification cards applications.*
*NOTE 1 - Criteria for acceptability do not form part of this International Standard but will be found in the International Standards mentioned above.*
*NOTE 2 - Test methods described in this International Standard are intended to be performed separately. A given card is not required to pass through all the tests sequentially.*
*This part of ISO/IEC 10373 deals with test methods which are specific to optical memory*

INCITS/ISO/IEC 10373-6-2001 (R2006), Identification Cards - Test Methods - Part 6: Proximity Cards

*This International Standard defines test methods for characteristics of identification cards according to the definition given in ISO/IEC 7810. Each test method is cross-referenced to one or more base standards, which may be ISO/IEC 7810 or one or more of the supplementary standards that define the information storage technologies employed in identification cards applications.*

INCITS/ISO/IEC 10373-6-2001/AM2-2003, Identification cards - Test methods - Part 6: Proximity cards - Amendment 2: Improved RF test methods

*This second amendment modifies Part 6 of ISO/IEC 10373.*

INCITS/ISO/IEC 10373-7-2001 (R2006), Identification Cards - Test Methods - Part 7: Vicinity Cards

*This International Standard defines test methods for characteristics of identification cards according to the definition given in ISO/IEC 7810. Each test method is cross-referenced to one or more base standards, which may be ISO/IEC 7810 or one or more of the supplementary standards that define the information storage technologies employed in identification cards applications.*

INCITS/ISO/IEC 10536-1-1992 (R2004), Identification Cards - Contactless Integrated Circuit(s) Cards - Part 1: Physical Characteristics

*This part specifies the physical characteristics of contactless integrated circuit(s) cards (CICCs). It applies to identification cards of the ID-1 card type. Annex A includes test methods and acceptance criteria for certain of the requirements.*

INCITS/ISO/IEC 10536-2-1995 (R2004), Identification Cards - Contactless Integrated Circuit(s) Cards - Part 2: Dimensions and Location of Coupling Areas

*This part of ISO/IEC 10536 specifies the dimensions, location, nature and assignment of each of the coupling areas to be provided for interfacing slot or surface card coupling devices (CCDs) with contact less integrated circuit(s) cards (CICCs) of the ID-1 card type. Annex A shows the determination of the X and Y axes which are used in relating the field locations to the CICC. Annex B shows examples of coupling elements in both a CICC and a CCD.*

INCITS/ISO/IEC 10538-1991 (R2004), Information Technology - Control Functions for Text Communication

*This International Standard defines the control functions, and their coded representations needed. for use in text communication.*

INCITS/ISO/IEC 10561-1999 (R2006), Information Technology - Office Equipment - Printing Devices - Method for Measuring Throughput - Class 1 and Class 2 Printers

*This International Standard specifies a method for measuring the throughput of class 1 and class 2 printers, as defined in ISO/IEC 11160-1. This International Standard specifies three different test patterns: a standard business letter; a spreadsheet; a graphic pattern. In addition, this International Standard defines a method for a performance test and one for an endurance test.*

INCITS/ISO/IEC 10589-1992/AM1-1996, Intermediate system to intermediate system intra-domain-routeing routine information exchange protocol for use in conjunction with the protocol for providing the connectionless-mode Network Service (ISO 8473) Amendment 1

*Amendment 1 to ISO/IEC 10589:1992 Implementation conformance statement proformas*

INCITS/ISO/IEC 10589-1992/AM2-1999, Intermediate system to intermediate system intra-domain-routeing routine information exchange protocol for use in conjunction with the protocol for providing the connectionless-mode Network Service (ISO 8473) Amendment 2

*Amendment 2 to ISO/IEC 10589:1992 Extensions for group composition and related MST multicast routeing*

INCITS/ISO/IEC 10589-2002, Intermediate System to Intermediate System Intra-Domain-Routeing Routine Information Exchange Protocol for Use in Conjunction with the Protocol for Providing the Connectionless-mode Network Service (ISO 8473)

*Specifies a protocol which is used by Network Layer entities operating the protocol specified in ISO 8473 in Intermediate Systems to maintain routeing information for the purpose of routeing within a single routeing domain. The protocol specified in this International standard relies upon the provision of a connectionless-mode underlying service.*

INCITS/ISO/IEC 10641-1993 (R2004), Information Technology – Computer Graphics and Image Processing – Conformance Testing of Implementations of Graphic Standards

*This International Standard specifies a general framework for testing conformance to a computer graphics standard.*

INCITS/ISO/IEC 10646-2003, Information technology - Universal Multiple-Octet Coded Character Set (UCS)

*ISO/IEC 10646 specifies the Universal Multiple-Octet Coded Character Set (UCS). It is applicable to the representation, transmission, interchange, processing, storage, input, and presentation of the written form of the languages of the world as well as of additional symbols.*

INCITS/ISO/IEC 10741-1-1995, Information Technology - User System Interfaces - Dialogue Interaction - Part 1: Cursor Control for Text Editing

INCITS/ISO/IEC 10746-1-1998, Information technology - Open Distributed Processing - Reference model: Overview

*Gives an introduction and motivation for ODP; provides an overview of the RM-ODP and an explanation of its key concepts;*
*gives guidance on the application of the RM-ODP.*

INCITS/ISO/IEC 10746-2-1996 (R2004), Information Technology - Open Distributed Processing - Reference Model: Foundations

*This ITU-T Recommendation/International Standard covers the concepts which are needed to perform the modelling of ODP systems (see clauses 5 to 14), and the principles of conformance to ODP systems (see clause 15.*

INCITS/ISO/IEC 10746-3-1996 (R2004), Information Technology - Open Distributed Processing - Reference Model: Architecture

*This ITU-T Recommendation I International Standard: - defines how ODP systems are specified, making use of concepts in ITU-T Recommendation X.902 I ISO/IEC 10746-2; - identifies the characteristics that qualify systems as ODP systems. It establishes a framework for coordinating the development of existing and future standards for ODP systems and is provided for reference by those standards.*

INCITS/ISO/IEC 10746-4-1998, Information technology - Open Distributed Processing - Reference Model: Architectural semantics - Part 4

*The purpose of this standard is provide an architectural semantics for ODP.*

INCITS/ISO/IEC 10746-4-1998/AM1-2001, Information Technology - Open Distributed Processing - Reference Model: Architectural Semantics - Part 4 - AMENDMENT1: Computational Formalization

*Specifies Amendment 1 to ISO/IEC*

INCITS/ISO/IEC 10918-1-1994 (R2004), Information Technology - Digital Compression and Coding of Continuous-Tone Still Images: Requirements and Guidelines

*This CCITT Recommendation | International Standard is applicable to continuous-tone - grayscale or colour - digital still image data. It is applicable to a wide range of applications which require use of compressed images. It is not applicable to bi-level image data.*

INCITS/ISO/IEC 10918-2-1995 (R2004), Information Technology - Digital Compression and Coding of Continuous-Tone Still Images: Compliance Testing

*This Recommendation | International Standard is concerned with compliance tests for the continuous-tone still image encoding processes, decoding processes, and compressed data formats specified in ITU-T Rec. T.81 | ISO/IEC 10918-1.*

INCITS/ISO/IEC 10918-3-1997 (R2004), Information Technology - Digital Compression and Coding of Continuous-Tone Still Images - Part 3: Exensions

*This Recommendation | International Standard is applicable to continuous-tone - grayscale or colour - digital still image data. It is applicable to a wide range of applications which require use of compressed images.*

INCITS/ISO/IEC 10994-1992 (R2002), Information Technology – Data Interchange on 90mm Flexible Disk Cartridges Using Modified Frequency Modulation Recording at 31 831 ftprad on 80 Tracks on Each Side – ISO Type 303

*Specifies the characteristics of 90-mm flexible disk cartridges recorded at 31 831 ftprad using modified frequency modulation recording, on 80 tracks on each side. Such flexible disk cartridges are identified as ISO Type 303. This standard specifies the mechanical, physical and magnetic characteristics of the cartridge, so as to provide physical interchangeability between data processing systems. It also specifies the method of recording, the quality of the recorded signals, the track layout and the track format. Together with ISO 9293, this standard provides for full data interchange between data processing systems.*

INCITS/ISO/IEC 11072-1992 (R2004), Information Technology – Computer Graphics – Computer Graphics Reference Model

*This International Standard, the Computer Graphics Reference Model (CGRM), defines a structure within which current and future International Standards for computer graphics shall be compared and their relationships described.*

INCITS/ISO/IEC 11159-1996 (R2004), Information Technology - Office Equipment - Minimum Information to be Included in Specification Sheets - Copying Machines

*This International Standard is intended to facilitate the users in selecting a copying machine which meets their requirements. It applies to copying machines that could be operated in an office environment. Copying machines requiring specially equipped rooms or specially instructed operators are not considered in this International Standard.*

INCITS/ISO/IEC 11160-1-1996 (R2004), Information Technology - Office Equipment - Minimum Information to be Included in Specification Sheets - Printers - Part 1: Class 1 and Class 2 Printers

*This part of ISO/IEC 11160 specifies the minimum information that is to be included in the specification sheets of printers so that users may compare the characteristics of different machines and select a printer which meets their requirements. ISO/IEC 11160 will cover different classes of printers. This part covers Class 1 and Class 2 printers, as defined in annex A.*

INCITS/ISO/IEC 11160-2-1996 (R2004), Information Technology - Office Equipment - Minimum Information to be Included in Specification Sheets - Printers - Part 2: Class 3 and Class 4 Printers

*This part of ISO/IEC 11160 specifies the minimum information that is to be included in the specification sheets of printers so that users may compare the characteristics of different machines and select a printer which meets their requirements. ISO/IEC 11160 will accommodate different classes of printers. This part covers Class 3 and Class 4 printers, as defined in annex B.*

INCITS/ISO/IEC 11172-1-1993 (R2004), Information Technology - Coding of Moving Pictures and Associated Audio for Digital Storage Media at up to about 1,5 Mbit/s - Part 1: Systems

*This part of ISO/IEC 11172 specifies the system layer of the coding. It was developed principally to support the combination of the video and audio coding methods defined inISO/IEC 11172-2 and ISO/IEC 11172-3.*

INCITS/ISO/IEC 11172-2-1993 (R2004), Information Technology - Coding of Moving Pictures and Associated Audio for Digital Storage Media at up to about 1,5 Mbit/s - Part 2: Video

*This part of ISO/IEC 11172 specifies the coded representation of video for digital storage media and specifies the decoding process. The representation supports normal speed forward playback, as well as special functions such as random access, fast forward playback, fast reverse playback, normal speed reverse playback, pause and still pictures. This part of ISO/IEC 11172 is compatible with standard 525- and 625-line television formats, and it provides flexibility for use with personal computer and workstation displays.*

INCITS/ISO/IEC 11172-3-1993 (R2004), Information Technology - Coding of Moving Pictures and Associated Audio for Digital Storage Media at up to about 1,5 Mbit/s - Part 3: Audio

*This part of ISO/IEC 11172 specifies the codded representation of high quality audio for storage media and the method for decoding of high quality audio signals. The input of the encoder and the output of the decoder are compatible with existing PCM standards such as standard Compact Disc and Digital Audio Tape.*

INCITS/ISO/IEC 11172-4-1995 (R2004), Information Technology - Coding of Moving Pictures and Associated Audio for Digital Storage Media at up to about 1,5 Mbit/s - Part 4: Conformance Testing

*This part of ISO/IEC 11172 specifies how tests can be designed to verify whether bitstreams and decoders meet requirements specified in parts 1. 2 and 3 of ISO/IEC 11172. In this part of ISO/IEC 11172, encoders are not addressed specifically. An encoder is entitled to be an ISO/IEC 11172 encoder if it generates bitstreams compliaint with the syntactic and semantic bitstream requirements specified in parts 1, 2 and 3 of ISO/IEC 11172.*

INCITS/ISO/IEC 11179-1-2004, Information Technology - Specification and Standardization of Data Elements - Part 1: Framework for the Specification and Standardization of Data Elements

*ISO/IEC 11179 specifies the kind and quality of metadata necessary to describe data, and it specifies the management and administration of that metadata in a metadata registry (MDR). It applies to the formulation of data representations, concepts, meanings, and relationships between them to be shared among people and machines, independent of the organization that produces the data. It does not apply to the physical representation of data as bits and bytes at the machine level. In ISO/IEC 11179, metadata refers to descriptions of data. ISO/IEC 11179 does not contain a general treatment of metadata.*

INCITS/ISO/IEC 11179-2-1999 (R2005), Information Technology - Specification and Standardization of Data Elements - Part 2: Classification for Data Elements

*This part of ISO/IEC 11179 provides procedures and techniques for associating data with classification schemes. Several components of data elements invite classification - components covered by ISO/IEC 11179 - include object classes, properties, representations, value domains, and data element concepts, as well as data elements themselves.*

INCITS/ISO/IEC 11179-3-2003, Information Technology - Specification and Standardization of Data Elements - Part 3: Basic Attributes of Data Elements

*The primary purpose of ISO/IEC 11179-3 is to specify the structure of a Metadata Registry (see 1.1).*

INCITS/ISO/IEC 11179-4-2004, Information technology - Metadata registries (MDR) - Part 4: Formulation of data elements

*This part of ISO/IEC 11179 specifies requirements and recommendations for constructing definitions for data and metadata. Only semantic aspects of definitions are addressed; specifications for formatting the definitions are deemed unnecessary for the purposes of ISO/IEC 11179.*

INCITS/ISO/IEC 11179-5-2005, Information technology - Metadata registries (MDR) - Part 5: Naming and Identification principles

*This part of ISO/IEC 11179 provides instruction for naming and identification of the following administered items: data element concept, conceptual domain, data element, and value domain. It describes the parts and structure of identification.*

INCITS/ISO/IEC 11179-6-2005, Information technology - Metadata registries (MDR) - Part 6: Registration

*This part of ISO/IEC 11179 specifies the procedure by which administered items required in various application areas could be registered and assigned an internationally unique identifier. For each Administered Item to be registered, this part of ISO/IEC 11179 defines the type of information that is specified, the conditions that are met, and the procedure(s) that are followed.*

INCITS/ISO/IEC 11319-1993 (R2003), Information Technology – 8 mm Wide Magnetic Tape Cartridge for Information Interchange – Helical Scan Recording

*This standard specifies the physical and magnetic characteristics of an 8 mm wide magnetic tape cartridge to enable interchangeability of such cartridges. It also provides a format and recording method, thus allowing, together with ISO 1001 for Magnetic Tape Labelling, full data interchange by means of such magnetic tape cartridges*

INCITS/ISO/IEC 11404-1996 (R2007), Information Technology - Programming Languages, Their Environments and System Software Interfaces - Language - Independent Datatypes

*Specifies the nomenclature and shared semantics for a collection of datatypes commonly occurring in programming language and software interfaces, referred to as the Language-Independent (LI) Datatypes. Specifies both primitive datatypes, in the sense of being defined ab initio with reference to other datatypes, and non-primitive datatypes, in the sense of being wholly or partly defined in terms of other datatypes.*

INCITS/ISO/IEC 11544-1993 (R2004), Information Technology - Coded Representation of Picture and Audio Information - Progressive Bi-Level Image Compression

*This Recommendation | International Standard defines a bit-preserving (lossless) compression method for coding image bit-planes and is particularly suitable for bi-level (Two-tone, including black-white) images.*

INCITS/ISO/IEC 11557-1992 (R2004), Information Technology – 3.81 mm Wide Magnetic Tape Cartridge for Information Interchange – Helical Scan Recording – DDS-DC Format Using 60 m and 90 m Length Tapes

*Specifies the physical and magnetic characteristics of a 3,81 mm-wide magnetic tape cartridge to enable interchangeability of such cartridges. It also specifies the quality of the recorded signal, the recording method and the recorded format, thereby allowing data interchange between drives by means of such magnetic tape cartridges.*

INCITS/ISO/IEC 11571-1994 (R2006), Information Technology – Telecommunications and Information Exchange Between Systems – Numbering and Sub-addressing Private Integrated Services Networks

*This International Standard defines the requirements for the handling of network addresses for the identification of entities whichuse/providetelecommunicationsservicesofferedbyPrivate integrated Services Networks (PISNs). This International Standard covers numbering, including the requirements for the support of a Private Numbering Plan, and the support of subaddressing.*

INCITS/ISO/IEC 11571-1998, Information Technology - Telecommunications and Information Exchange Between Systems - Private Integrated Services Networks - Addressing

*Defines the requirements for the handling of network addresses for the identification of entities which use or provide telecommunication services offered by Private Integrated Services Networks (PISNs). This International Standard covers numbering, including the requirements for the support of a Private Numbering Plan, the addressing of network service access points for open systems interconnection (OSI NSAP addressing), and the support of subaddressing.*

INCITS/ISO/IEC 11572-2000, Information Technology - Telecommunications and Information Exchange Between Systems - Private Integrated Services Network - Circuit Mode Bearer Services - Inter-exchange Signalling Procedures and Protocol

*This International Standard defines the signalling procedures and protocol for the purpose of circuit-switched Call Control at the Q-reference point between Private Integrated Network Exchanges (PINXs) connected together within a Private Integrated Services Network (PISN).*

INCITS/ISO/IEC 11574-1994, Information Technology – Telecommunications and Information Exchange Between Systems – Private Integrated Services Network – Circuit-mode 64 kbit/s Bearer Services – Service Description, Functional Capabilities and Information Flows

*This International Standard specifies the service description and control aspects, including functional capabilities and information flows, of standardised circuit mode bearer services which may be supported by a Private Integrated Services Network (PISN).*

INCITS/ISO/IEC 11576-1994 (R2003), Information Technology - Procedure for the Registration of Algorithms for the Lossless Compression of Data

*Specifies the procedures to be followed by a Registration Authority in preparing, maintaining and publishing an International Register of numeric identifiers allocated to algorithms for the lossless compression of data, excluding cryptographic algorithms.*

INCITS/ISO/IEC 11579-1-1994/TC1-1996 (R2006), Information technology - Telecommunications and Information Exchange between Systems - Private Services Network - Part 1: Reference Configuration for PISN Exchanges (PINX) Technical Corrigendum 1

*This part of ISO/IEC 11579 specifies a reference configuration (RC) for private integrated services network exchanges (PINX) for their interconnection to form private integrated services networks (PISN). The configuration is not intended to require any specific implementation of a PINX, but only to provide guidance for the specification of PINX capabilities. This RC is sufficient to support ISDN-like applications. It can be extended to also support non-ISDN-like applications. This RC describes a conceptual PINX. By combining multiple PINXs to a private integrated services network the RC becomes applicable to a PISN.*

INCITS/ISO/IEC 11581-1-2000, Information Technology - User System Interfaces and Symbols - Icon Symbols and Functions - Part 1: Icons - General

*Applies to software products providing office applications such as document production, desktop publishing, finance, and planning that present their functions via a graphical user interface. Applies to software products for people who are familiar with office work but who are at present not necessarily familiar with computer-based applications. ISO/IEC 11581 is meant to be used by persons involved in the design, implementation, and evaluation of icons for graphical user interfaces to computer-based office applications, and by procurers of systems that employ such interfaces. Other parts of ISO/IEC 11581 contain: graphics of commonly used icons, and descriptions of the functionality of the icons. This part of ISO/IEC 11581-1 provides a framework for the development and design of icons and their application on screens capable of displaying graphics as well as text. It contains: general requirements and*

INCITS/ISO/IEC 11581-2-2000, Information Technology - User System Interfaces and Symbols - Icon Symbols and Functions - Part 2: Object Icons

*Applies to icons that are shown on a screen, that users can manipulate and interact with, and that represent data, or computer system functions. Addresses only object icons. "Object icons" is a term used in ISO/IEC 11581 to describe icons that represent functions by association with an object and that can be moved and opened. Other types of icons are covered in other parts of the standard that are listed in the Foreword. Annex A describes the information to be given when submitting new object icons for inclusion in this part of ISO/IEC 11581.*

INCITS/ISO/IEC 11581-3-2000, Information Technology - User System Interfaces and Symbols - Icon Symbols and Functions - Part 3: Pointer Icons

*Applies to icons that are shown on a screen, that users can manipulate and interact with, and that represent data or computer system functions. Addresses only pointer icons. Pointers are icons that are logically attached to a physical input device, and that the user manipulates to interact with other screen elements, see ISO/IEC 11581-1. This part describes user interaction with and appearance of pointer icons on the screen. It also specifies how pointer icons on a screen change appearance to give users feedback. Other types of icons are covered in other parts of the standard that are listed in the Foreword.*

INCITS/ISO/IEC 11581-6-1999 (R2006), Information Technology - User System Interfaces and Symbols - Icon Symbols and Functions - Part 6: Action Icons

*ISO/IEC 11581 applies to icons that are shown on a screen, that users can manipulate and interact with, and that represent data or computer system functions. This part of ISO/IEC 11581 addresses only action icons. Action icons represent actions by association with objects that prompt the user to recall the intended actions. This part of ISO/IEC 11581 describes user interaction with and appearance of action icons on the screen. Other types of icons are covered in other parts of the standard, listed in the Foreword.*

INCITS/ISO/IEC 11693-2000 (R2005), Identification Cards - Optical Memory Cards - General Characteristics

*Provides information necessary to store data on cards, to read data from cards, and for the physical, optical, and data interchangeability of optical memory cards in information processing systems.*

INCITS/ISO/IEC 11694-1-2000 (R200x), Identification Cards - Optical Memory Cards - Linear Recording Method - Part 1: Physical Characteristics

*This part of ISO/IEC 11694 specifies the optical properties and characteristics of optical memory cards using the linear recording method.*

INCITS/ISO/IEC 11694-2-2000 (R2005), Identification Cards - Optical Memory Cards - Linear Recording Method - Part 2: Dimensions and Location of the Accessible Optical Area

*Defines the dimensions and location of the accessible optical area of optical memory cards with ID-1 dimensions using the linear recording method.*

INCITS/ISO/IEC 11694-3-2001, Identification Cards - Optical Memory Cards - Linear Recording Method - Part 3: Optical Properties and Characteristics

*Specifies the optical properties and characteristics of optical memory cards using the linear recording method.*

INCITS/ISO/IEC 11694-4-1996, Identification Cards – Optical Memory Cards – Linear Recording Method – Part 4: Logical Data Structures

INCITS/ISO/IEC 11694-4-2001, Identification cards - Optical memory cards - Linear recording method - Part 4: Logical data structures

*This part of ISO/IEC 11694 specifies the logical data structures for optical memory cards necessary to allow compatibility and interchange between systems using the linear recording method.*

INCITS/ISO/IEC 11770-2-1996 (R2004), Information Technology – Security Techniques – Key Management – Part 2: Mechanisms Using Symmetric Techniques

*The purpose of key management is to provide procedures for handling cryptographic keting material to be used in symmetric or asymmetric cryptographic algorithms according tothe security policy in force. The part of ISO/IEC 11770 defines key establishment mechanisms using symmetric cryptographic techniques.*

INCITS/ISO/IEC 11770-3-1999 (R2006), Information Technology - Security Techniques - Key Management - Part 3: Mechanisms Using Asymmetric Techniques

*Defines key management mechanisms based on asymmetric cryptographic techniques.*

INCITS/ISO/IEC 12087-1-1995 (R2005), Information Technology – Computer Graphics and Image Processing – Image Processing and Interchange (IPI) – Functional Specification – Part 1: Common Architecture for Imaging

*ISO/IEC 12087 is concerned with the manipulation, processing and interchange of all types of digital images. The main purpose of this part is to define a generic, unifying imaging architecture to which other parts of ISO/IEC 12087 conform. This part of of ISO/IEC 12087 also defines those "specializations" or "delineations" of the generic imaging architecture that are required to support IPI-PIKS and IPI-IIF.*

INCITS/ISO/IEC 12087-2-1994 (R2004), Information Technology – Computer Graphics and Image Processing – Image Processing and Interchange (IPI) – Functional Specification – Part 2: Programmer's Imaging Kernel System Application Program Interface

*This part of ISO/IEC 12087 establishes the specification of the application program interface (API). called the Programmer’s Imaging Kernel System (PIKS.*

INCITS/ISO/IEC 12087-3-1995 (R2006), Information Technology – Computer Graphics and Image Processing – Image Processing and Interchange (IPI) – Functional Specification – Part 3: Image Interchange Facility (IIF)

*This part of ISO/IEC 12087 facilitates the interchange of digital images. For this purpose, conceptual, architectural, and functional definitions of the Image Interchange Facility (IPI-IIF) are established. ISO/IEC 12087-3 consists of two major parts, the: a) IIF data format (IIF-DF) definition (by means of a formal syntax, described according to the Abstract Syntax Notation One (ASN. 1) -- refer to clause 5), and the b) IIF Gateway definition (by means of a manual page description of the functionality of an Application Program Interface (API) -- refer to clause 7.*

INCITS/ISO/IEC 12087-3-1995/AM1-1996 (R2006), Information Technology - Computer Graphics and Image Processing - Image Processing and Interchange (IPI) - Functional Specification - Part 3: Image Interchange Facility (IIF): Amendment 1: Type

*This part of ISO/IEC 12087 facilitates the interchange of digital images. For this purpose, conceptual, architectural, and functional definitions of the Image Interchange Facility (IPI-IIF) are etablished. ISO/IEC 12087-3 consists of two major parts, the: a) IIF data format (IIF-DF) definition (by means of a formal syntax, described according to the Abstract Syntax Notation One (ASN. 1) -- refer to clause 5), and the b) IIF Gateway definition (by means of a manual page description of the functionality of an Application Program Interface (API) -- refer to clause 7.*

INCITS/ISO/IEC 12087-5-1998 (R2004), Information Technology - Computer Graphics and Image Processing - Image Processing and Interchange (IPI) - Functional Specification - Part 5: Basic Image Interchange Format (BIIF)

*This part of ISO/IEC 12087 establishes the specification of the Basic Image Interchange Format (BIIF) part of the standard. BIIF is a standard developed to provide a foundation for interoperability in the interchange of imagery and imagery-related data among applications.*

INCITS/ISO/IEC 12088-4-1995 (R2006), Information Technology – Computer Graphics and Image Processing – Image Processing and Interchange – Application Program Interface Language Bindings – Part 4: C

*Consists of the three parts that define the functional aspects of this part of ISO/IEC 12088. The Common Architecture of Imaging (IPI-CAI) defines the overall architecture. The Programmer's Imaging Kernel System (IPI-PIKS) and the Image Interchange Facility (IPI-IIF) each specify a language-independent image-processing Application Program Interface (API) within the Image Processing and Interchange Standard. Either API may be implemented independently or both may be combined in one implementation. For integration into a programming language, IPI-PIKS and IPI-IIF APIs are embedded in a language-dependent layer obeying the particular conventions of that language. This part of ISO/IEC 12088 specifies such a language-dependent layer for the C language.*

INCITS/ISO/IEC 12089-1997 (R2004), Information Technology - Computer Graphics and Image Processing - Encoding for the Image Interchange Facility (IIF)

*Defines the encoding rules which shall apply to the representation of IPI-IIF image data. The IPI-IIF data format is defined in American National Standard for Information Technology - Computer Graphics and Image Processing - Image Processing and Interchange (IPI) - Functional Specification - Part 3: Image Interchange Facility (IIF), ANSI/ISO/IEC 12087-3. It is Part 3 of the Image Processing and Interchange International Standard, defined in ISO/IEC 12087. The IPI-IIF facilitates the interchange of digital images.*

INCITS/ISO/IEC 12246-1993 (R2003), Information Technology - 8 mm Wide Magnetic Tape Cartridge Dual Azimuth Format for Information Interchange - Helical Scan Recording

*Specifies the physical and magnetic characteristics of an 8 mm wide magnetic tape cartridge to enable interchangeability of such cartridges. Also specifies the quality of the recorded signals, the format and the recording method.*

INCITS/ISO/IEC 12248-1993 (R2003), Information Technology - 3,81 mm Wide Magnetic Tape Cartridge for Information Interchange - Helical Scan Recording - DATA/DAT-DC Format Using 60 m and 90 m Length Tapes

*Specifies the physical and magnetic characteristics of a 3,81 mm wide magnetic tape cartridge to enable interchangeability of such cartridges. Also specifies the quality of the recorded signals, the recorded format and the recording method.*

INCITS/ISO/IEC 13211-1-1995, Information Technology - Prolog Language Part 1: General Core

*This part of ISO/IEC 13211 specifies: a)The representation of Prolog text, b)The syntax and constraints of the Prolog language, c) The semantic rules for interpreting Prolog text, d)the representation of input data to be processed by Prolog, e)The representation of output produced by Prolog, and f)The restrictions and limits imposed on a conforming Prolog processor.*

INCITS/ISO/IEC 13211-2-2000 (R2006), Information Technology - Programming Languages - Prolog - Part 2: Modules

*This part of ISO/IEC 13211 is designed to promote the applicability and portability of Prolog modules that contain Prolog text complying with the requirements of the Programming Language Prolog as specified in this part of ISO/IEC 13211. This part of ISO/IEC 13211 specifies: a) The representation of Prolog text that constitutes a Prolog module, b) The constraints that shall be satisfied to prepare Prolog modules for execution, and c) The requirements, restrictions and limits imposed on a conforming Prolog processor that processes modules.*

INCITS/ISO/IEC 13235-1-1998, Information technology - Open Distributed Processing -Trading function: Specification - Part 1

*The scope of this standard is: an enterprise spec. for the trading function; an information spec. for the trading fuction; a computional spec. for traders; conformance requirements in terms of conformance points.*

INCITS/ISO/IEC 13235-3-1998, Information technology - Open Distributed Processing - Trading Function - Part 3: Provision of Trading Function using OSI Directory service

*This part of the standard describes how the ODP trading Fucntion can be realised using information entries and support mechanisms of the OSI Directory.*

INCITS/ISO/IEC 13248-1-1998, Information technology - OSI - The Directory: Protocol Implementation Conformance Statement (PICS) proforma for the Directory Access Protocol - Part 1

*The standard provides the PICS performa for the Directory Access Protocol (DAP) specificed in ITU-T Rec. X.500 Series (1993)/ISO/IEC 9594:1995.*

INCITS/ISO/IEC 13248-2-2002, Information technology - OSI - The Directory: Protocol Implementation Conformance Statement (PICS) proforma for the Directory System Protocol - Part 2

*The standard provides the PICS performa for the Directory Access Protocol (DAP) specificed in ITU-T Rec. X.500 Series (1993)/ISO/IEC 9594:1995.*

INCITS/ISO/IEC 13248-3-2002, Information technology - OSI - The Directory: Protocol Implementation Conformance Statement (PICS) proforma for the Directory Operational Binding Management Protocol - Part 3

*The standard provides the PICS performa for*

*the Directory Operational Binding Management Protocol (DOP) specificed in ITU-T Rec. X.500 Series (1993)/ISO/IEC 9594:1995.*

INCITS/ISO/IEC 13248-4-2002, Information technology - OSI - The Directory: Protocol Implementation Conformance Statement /PICS) proforma for the Directory Information Shadowing Protocol - Part 4

*The standard provides the PICS performa for the Directory Information Shadowing Protocol (DISP) specificed in ITU-T Rec. X.500 Series (1993)/ISO/IEC 9594:1995.*

INCITS/ISO/IEC 13249-1-2006, Information technology -- Database languages -- SQL multimedia and application packages -- Part 1: Framework

*This part of ISO/IEC 13249 defines those concepts, notations and conventions that are common to two or more other parts of ISO/IEC 13249. In particular it describes the way ISO/IEC 9075 is used in other parts to define the user-defined types and their behaviour appropriate to each subject area.*

INCITS/ISO/IEC 13249-2-2003, Information technology -- Database languages -- SQL multimedia and application packages -- Part 2: Full-Text

*This part of ISO/IEC 13249: a) introduces the Full-Text part of ISO/IEC 13249 (all parts); b) gives the references necessary for this part of ISO/IEC 13249; c) defines notations and conventions specific to this part of ISO/IEC 13249; d) defines concepts specific to this part of ISO/IEC 13249; e) defines the full-text user-defined types and their associated routines.*

INCITS/ISO/IEC 13249-3-2006, Information technology -- Database languages -- SQL multimedia and application packages -- Part 3: Spatial

*This part of ISO/IEC 13249: a) introduces the Spatial part of ISO/IEC 13249, b) gives the references necessary for this part of ISO/IEC 13249, c) defines notations and conventions specific to this part of ISO/IEC 13249, d) defines concepts specific to this part of ISO/IEC 13249, e) defines spatial user-defined types and their associated routines.*

INCITS/ISO/IEC 13249-5-2006, Information technology -- Database languages -- SQL multimedia and application packages -- Part 5: Still image

*This part of ISO/IEC 13249: a) introduces the still image part of ISO/IEC 13249 (all parts); b) gives the references necessary for this part of ISO/IEC 13249; c) defines notations and conventions specific to this part of ISO/IEC 13249; d) defines concepts specific to this part of ISO/IEC 13249; e) defines the still image user-defined types and their associated routines.*

INCITS/ISO/IEC 13249-6-2006, Information technology -- Database languages -- SQL multimedia and application packages -- Part 6: Data mining

*This part of ISO/IEC 13249: a) introduces the Data mining part of ISO/IEC 13249, b) gives the references necessary for this part of ISO/IEC 13249, c) defines notations and conventions specific to this part of ISO/IEC 13249, d) defines concepts specific to this part of ISO/IEC 13249, e) defines data mining user-defined types and their associated routines.*

INCITS/ISO/IEC 13250-2003, Information Technology - SGML Applications - Topic Maps

*NOTE 1 This clause defines the scope of this International Standard. It should not be confused with the concept of “scope” defined in 3.16, which only applies in the context of topic maps. Topic maps enable multiple, concurrent views of sets of information objects. The structural nature of these views is unconstrained; they may reflect an object oriented approach, or they may be relational, hierarchical, ordered, unordered, or any combination of the foregoing. Moreover, an unlimited number of topic maps may be overlaid on a given set of information resources.*

INCITS/ISO/IEC 13335-1-2004, Information technology - Security techniques - Management of information and communications technology security - Part 1: Concepts and models for information and communications technology security management

*ISO/IEC 13335 contains guidance on the management of ICT security. Part 1 of ISO/IEC 13335 presents the concepts and models fundamental to a basic understanding of ICT security, and addresses the general management issues that are essential to the successful planning, implementation and operation of ICT security.*

INCITS/ISO/IEC 13403-1995 (R2004), Information Technology – Information Interchange on 300 mm Optical Disk Cartridges of the Write Once, Read Multiple (WORM) Type Using the CCS Method

*This International Standard specifies the characteristics of 300 mm optical disk cartridges (ODC) of the WORM type providing for embossed information and for data to be written once and read multiple times. Together with the standard for Volume and File Structure, this International Standard provides for full data interchange between data processing systems. Interchange involves the ability to write and read data without introducing any error.*

INCITS/ISO/IEC 13422-1994 (R2003), Information Technology - Data Interchange on 90 mm Flexible Disk Cartridges on 10 Mbyte Capacity Using Sector Servo Tracking - ISO Type 304

*Specifies the characteristics of 90 mm Flexible Disk Cartridges of 10 Mbyte formatted capacity, recorded at 33 157 ftprad using modified frequency modulation recording and sector servo tracking on 255 data tracks on each side.*

INCITS/ISO/IEC 13481-1993 (R2004), Information Technology – Data Interchange on 130 mm Optical Disk Cartridges – Capacity: 1 Gigabyte Per Cartridge

*This International Standard specifies the physical and magnetic characteristics of a 12,7 mm wide, 48-track magnetic tape cartridge, to enable interchangeability of such cartridges. It also specifies the quality of the recorded signals, a format - called Digital Linear Tape 1 (DLT 1) - and a recording method. Together with a labelling standard, e.g. ISO 1001, it allows full data interchange by means of such magnetic tape cartridges.*

INCITS/ISO/IEC 13549-1993 (R2004), Information Technology – Data Interchange on 130 mm Optical Disk Cartridges – Capacity: 1,3 Gigabytes Per Cartridge

*This International Standard specifies the conditions for conformance testing; the environments in which the cartridges are to be operated and stored; the mechanical, physical and dimensional characteristics of the case and of the cartridges, so as to provide mechanical interchangeability between the data processing systems; the format of the information on the disk, both embossed and user-written, including the physical disposition of the tracks and sectors, the error correction codes, and the modulation method used; the characteristics ofthe embossed information on the disk; the magneto-optical characteristics of the disk, enabling processing systems to write onto the di.*

INCITS/ISO/IEC 13568-2002, Information technology - Z formal specification notation - Syntax, type system and semantics

*The following are within the scope of this International Standard: the syntax of the Z notation; the type system of the Z notation; the semantics of the Z notation; a toolkit of widely used mathematical operators; L A T E X [10] and e-mail mark-up*

INCITS/ISO/IEC 13614-1995 (R2004), Information Technology – Interchange on 300 mm Optical Disk Cartridges of the Write Once, Read Multiple (WORM) Type Using the SSF Method

*This International Standard specifies the characteristics of 300 mm optical disk cartridges (ODC) of the WORM type providing for embossed information and for data to be written once and read multiple times. Together with the standard for Volume and File Structure, this International Standard provides for full data interchange between data processing systems. Interchange involves the ability to write and read data without introducing any error.*

INCITS/ISO/IEC 13660-2001, Information technology - Office equipment - Measurement of Image Quality attributes for Hardcopy Output - Binary monochrome text and graphic images

*This International Standard specifies device-independent image quality attributes, measurement methods, and analytical procedures to describe the quality of output images from hardcopy devices. This International Standard is applicable to human-readable documents composed of binary monochrome images produced from impact printers, non-impact printers, and copiers. The attributes, methods, and procedures rely on intrinsic properties of the image. Targets or reference images are not required. The International Standard is not applicable to images on media other than hardcopy (e.g. images on a VDT) or to images that are intended to be machine readable only (e.g. bar codes). This International Standard is not intended to apply to pictorial art. It is optimized for black colourant forming the image on a white substrate; it is not intended to be*

INCITS/ISO/IEC 13714-1995 (R2006), Information Technology - User Interface to Telephone-based Services: Voice Messaging Application

*This international Standard will provide users of voice messaging systems with a consistent mode of interaction in a way that is independent of the underlying system implementations. The interface is based on a set of design guidelines annexed to this International Standard.*

INCITS/ISO/IEC 13817-1-1996, Information technology - Programming languages, their environments and system software interfaces - Vienna Development Method - Specification Language - Part 1: Base language

*This part of ISO/IEC 13817 specifies the model based specification language VDM-SL (Vienna Development Method - Specification Language.*

INCITS/ISO/IEC 13818-1-2000 (R2006), Information Technology - Generic Coding of Moving Pictures and Associated Audio Information

*Specifies the system layer of the coding. It was developed principally to support the combination of the video and audio coding methods defined in Parts 2 and 3 of ISO/IEC 13818. The system layer supports five basic functions: 1) the synchronization of multiple compressed streams on decoding; 2) the interleaving of multiple compressed streams into a single stream; 3) the initialization of buffering for decoding start up; 4) continuous buffer management; and 5) time identification.*

INCITS/ISO/IEC 13818-1-2000/AM 1-2003, Information technology - Generic coding of moving pictures and associated audio information: Systems - Amendment 1: Carriage of metadata over ISO/IEC 13818-1 streams

*This first amendment modifies Part 1 of ISO/IEC 13818.*

INCITS/ISO/IEC 13818-10-1999 (R2005), Information Technology - Generic coding of moving pictures and associated audio information - Part 10: Conformance extensions for Digital Storage Media Command and Control (DSM-CC)

*This part of ISO/IEC 138 18 defines compliance to Data Storage Media Command and Control (DSMCC) standard in 2 steps: the static review and the dynamic review as defined in ISO/IEC 9646 Conformance Testing standard [ 1, 2, 3.*

INCITS/ISO/IEC 13818-2-2000, Information Technology - Generic Coding of Moving Pictures and Associated Audio Information: Video

*Specifies the coded representation of picture information for digital storage media and digital video communication and specifies the decoding process. The representation supports constant bitrate transmission, variable bitrate transmission, random access, channel hopping, scalable decoding, bitstream editing, as well as special functions such as fast forward playback, fast reverse playback, slow motion, pause and still pictures. This Recommendation | International Standard is forward compatible with ISO/IEC 11172-2 and upward or downward compatible with EDTV, HDTV, SDTV formats. This Recommendation | International Standard is primarily applicable to digital storage media, video broadcast and communication. The storage media may be directly connected to the decoder, or via communications means such as busses, LANs, or teleommunication links.*

INCITS/ISO/IEC 13818-2-2000/AM1-2001, Information Technology - Generic Coding of Moving Pictures and Associated Audio Information - Part 2: Video AMENDMENT 1: Content Description Data (corrected 2002 Version)

*This corrected 2002 version of Amendment 1 modifies Part 2 of ISO/IEC 13818.*

INCITS/ISO/IEC 13818-2:2000/AM1:2001, Information technology - Generic coding of moving pictures and associated audioinformation: Video - Amendment 1: Video elementary stream content description data

*ISO/IEC 13818-2:2000 AMENDMENT 1:2001 specifies Video elementary stream content description data of ISO/IEC 13818-2:2000*

INCITS/ISO/IEC 13818-3-1998, Information technology - Generic coding of moving pictures and associated audio information - Part 3: Audio

*Specifies the extension of ISO/IEC 11172-3 to lower sampling frequencies, the coded representation of multilingual high quality audio for broadcasting, transmission and storage media, and the method for decoding of multichannel and multilingual high quality audio signals. The input of the encoder and the output of the decoder are compatible with existing PCM standards.*

INCITS/ISO/IEC 13818-4-2004, Information technology - Generic coding of moving pictures and associated audio information - Part 4: Conformance testing

*This part of ISO/IEC 13818 specifies how tests can be designed to verify whether bitstreams and decoders meet requirements specified in parts 1, 2, 3 and 7 of ISO/IEC 13818.*

INCITS/ISO/IEC 13818-6-1998, AM2-2000 (R2005), Information technology - Generic coding of moving pictures and associated audio information - Part 6: Extensions for DSM-CC - Amendment 2: Additions to support synchronized downlaod services, opportunitistic data

*Specifies the additions to support synchronized lownload services, opportunistic data services and resources announcment in broadcast and interactive services for Extensions for DSM-CC in Generic coding of moving pictures and associated audio information.*

INCITS/ISO/IEC 13818-6-1998, Information technology - Generic coding of moving pictures and associated audio information - Part 6: Extensions for DSM-CC

*Provides the general capability to browse, select, download, and control a variety of bit stream types. DSM-CC also provides a mechanism to manage network and application resources through the concept of a Session, an associated collection of resources required to deliver a Service. The Session complements a "Service Domain", a collection of interfaces to browse and select services, and control the delivery of bit streams.*
*DSM-CC defines the syntax and semantics for a set of User-to-Network and User-to-User protocols:*
*DSM-CC Message Header*
*U-N Configuration messages*
*U-N Session messages and flow diagrams for Session and Resource management*
*U-N Download messages*
*U-N Switched Digital Broadcast Channel Change Protocol*

INCITS/ISO/IEC 13818-6-1998/AM1-2000 (R2006), Information Technology - Generic Coding of Moving Pictures and Associated Audio Information - Part 6: Extensions for DSM-CC - AMENDMENT 1: Additions to Support Data Broadcasting

*Specifies AMENDMENT 1:2000 to ISO/IEC 13818-6:1998.*

INCITS/ISO/IEC 13818-6-1998/AM3-2001, Information technology - Generic coding of moving pictures and associated audio information - Part 6: Extensions for DSM-CC AMENDMENT 3: Transport buffer model insupport of synchronized user-to-network download protocol

*Amends ISO/IEC 13818-6:1998.*

INCITS/ISO/IEC 13818-7-2004, Information technology - Generic coding of moving pictures and associated audio information - Part 7: Advanced Audio Coding (AAC)

*This International Standard describes the MPEG-2 audio non-backwards compatible standard called MPEG-2 Advanced Audio Coding, AAC [1], a higher quality multichannel standard than achievable while requiring MPEG-1 backwards compatibility. This MPEG-2 AAC audio standard allows for ITU-R ‘indistinguishable’ quality according to [2] at data rates of 320 kbit/s for five full-bandwidth channel audio signals. The AAC decoding process makes use of a number of required tools and a number of optional tools. Table 1 lists the tools and their status as required or optional. Required tools are mandatory in any possible profile. Optional tools may not be required in.*

INCITS/ISO/IEC 13818-9-1996, Information technology - Generic coding of moving pictures and associated audio information - Part 9: Extension for real time interface for systems decoders

*Indicates that the accuracy requirements in ISO/IEC 13818-1 for PCRs in Transport Streams is not changed by the requirements of this part of ISO/IEC 13818. All Transport Streams, whether or not they are delivered in accordance with the RTI shall comply with ISO/IEC 13818-1. Compliance with this part of ISO/IEC 13818 is not required for compliance with ISO/IEC 13818-1. This part of ISO/IEC 13818 does not change or supersede any of the requirements in ISO/IEC 13818-1.*

INCITS/ISO/IEC 13842-1995 (R2006), Information Technology – 130-mm Optical Disk Cartridges for Information Interchange – Capacity: 2 Gbytes per Cartridge

*Specifies (a) the conditions for conformance testing and the Reference Drive; (b) the environments in which the cartridges are to be operated and stored; (c) the mechanical, physical and dimensional characteristics of the cartridge, so as to provide mecha.*

INCITS/ISO/IEC 13888-1-2004, Information technology - Security techniques - Non-repudiation - Part 1: General

*This part of ISO/IEC 13888 serves as a general model for subsequent parts specifying non-repudiation mechanisms using cryptographic techniques. This multipart International Standard provides non-repudiation mechanisms for the following phases of non-repudiation: - Evidence generation, - Evidence transfer, storage and retrieval, and - Evidence verification. Dispute arbitration is outside the scope of this International Standard.*

INCITS/ISO/IEC 13923-1996 (R2002), Information Technology - 3,81 mm Wide Magnetic Tape Cartridge for Information Interchange - Helical Scan Recording - DDS-2 Format Using 120 m Length Tape

*Specifies the physical and magnetic characteristics of a 3,81 mm wide magnetic tape cartridge to enable physical interchangeability of such cartridges between drives. It also specifies the quality of the recorded signals, the recording method and the recorded format, thereby allowing data interchange between drives by means of such magnetic tape cartridges.*

*The recorded format, known as DDS-2, includes all the features of the DDS recorded format specified in ISO/IEC 12247 and of the DDS-DC recorded format specified in ISO/IEC 11557. The principal difference between this recorded format and those recorded formats is the use of a greater track density by this format.*

*Information interchange between systems*

INCITS/ISO/IEC 13963-1995 (R2004), Information Technology – Data Interchange on 90 mm Optical Disk Cartridges – Capacity: 230 Megabytes Per Cartridge

*This International Standard specifies the characteristics of 90 mm Optical Disk Cartridges (ODC) with a capacity of 230 Mbytes per Cartridge. The Standard specifies three related, but different implementations of such cartridges, viz, Type R/W, Type P-ROM, Type O-ROM. Type R/W, Type P-ROM and Type O-ROM are also referred to as "fully re-writable", "partially embossed" and "fully embossed", respectively. This International Standard provides for interchange between optical disk drives. Together with a standard for volume and file structure, it provides for full data interchange between data processing systems.*

INCITS/ISO/IEC 14169-1995 (R2002), Information Technology - 90 mm Flexible Disk Cartridges for Information Interchange - 21 Mbytes Formatted Capacity - ISO Type 305

*Specifies the characteristics of 90 mm flexible disk cartridges (FDC) of 21 Mbytes formatted capacity recorded at 31 831 ftprad in the Inner Zone and 47 747 ftprad in the Outer Zone with sector servo tracking on 326 data tracks on each side, using 2-7 RLL recording.*
*It specifies the mechanical, physical and magnetic characteristics of the cartridge, so as to provide physical interchangeability between data processing systems.*
*It also specifies the method of recording, the quality of recorded signals, the track layouts and the track formats of Data Tracks and Servo Tracks.*
*Such flexible disk cartridges are identified as ISO Type 305.*
*Together with a standard for volume and file structure, for instance ISO/IEC 9293, this International Standard provides for full data interchange between data processing systems.*

INCITS/ISO/IEC 14417-1999 (R2004), Information Technology - Data Recording Format DD-1 for Magnetic Tape Cassette Conforming to ISO/IEC 1016

*Specifies the media characteristics and the recorded tape format and file structure requirements to enable information interchange between information processing systems using 19.0 mm wide magnetic tape and cassette conforming to IEC 1016, Section 2.*

INCITS/ISO/IEC 14443-1-2000 (R2005), Identification Cards - Optical Memory Cards - Contactless integrated circuit(s) Cards - Proximity Cards - Part 1: Physical Characteristics

*Specifies the physical characteristics of proximity cards (PICC). It applies to identification cards of the card type ID-1 operating in proximity of a coupling device. This standard shall be used in conjunction with later parts of ISO/IEC 14443.*

INCITS/ISO/IEC 14443-2-2001 (R2006), Identification Cards - Contactless Integrated Circuit(s) Cards - Proximity Cards - Part 2: Radio Frequency Power and Signal Interface

*This part of ISO/IEC 14443 specifies the characteristics of the fields to be provided for power and bi-directional communication between proximity coupling devices (PCDs) and proximity cards (PICCs). This part of ISO/IEC 14443 is intended to be used in conjunction with other parts of ISO/IEC 14443.*

INCITS/ISO/IEC 14443-2-2001/AM1-2005, Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 2: Radio frequency power and signal interface - Amendment 1: Bit rates of fc/64, fc/32 and fc/16

*Amendment 1 to ISO/IEC 14443-2:2001.*

INCITS/ISO/IEC 14443-3-2001 (R2006), Identification Cards - Contactless Integrated Circuit(s) Cards - Proximity Cards - Part 3: Initialization and Anticollision

*This part of ISO/IEC 14443 describes: - polling for proximity cards (PICCs) entering the field of a proximity coupling device (PCD); - the byte format, the frames and timing used during the initial phase of communication between PCDs and PICCs; - the initial Request and Answer to Request command content; - methods to detect and communicate with one PICC among several PICCs (anticollision); - other parameters required to initialize communications between a PICC and PCD; - optional means to ease and speed up the selection of one PICC among several PICCs based on application criteria.*

INCITS/ISO/IEC 14443-3-2001/AM1-2005, Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 3: Initialization and anticollision - Amendment 1: Bit rates of fc/64, fc/32 and fc/16

*Amendment 1 to ISO/IEC 14443-3:2001.*

INCITS/ISO/IEC 14443-4-2001 (R2006), Identification Cards - Contactless Integrated Circuit(s) Cards - Proximity Cards - Part 4: Transmission Protocol

*This part of ISO/IEC 14443 specifies a half-duplex block transmission protocol featuring the special needs of a contactless environment and defines the activation and deactivation sequence of the protocol. This part of ISO/IEC 14443 is intended to be used in conjunction with other parts of ISO/IEC 14443 and is applicable to proximity cards of Type A and Type B.*

INCITS/ISO/IEC 14478-1-1998 (R2004), Information Technology - Computer Graphics and Image Processing - Presentation Environment for Multimedia Objects (PREMO) - Part 1: Fundamentals of PREMO

*ISO/IEC 14478 specifies techniques for supporting interactive single, and multiple media applications which recognize and emphasize the interrelationships among user interfaces, multimedia applications, and multimedia information interchange.*

INCITS/ISO/IEC 14478-2-1998 (R2004), Information Technology - Computer Graphics and Image Processing - Presentation Environment for Multimedia Objects (PREMO) - Part 2 - Foundation Component

*This part of ISO/IEC 14478 lists an initial set of object types and non-object types useful for the construction of, presentation of, and InteractIon with multimedia information. This part is dependent on the PREMO object model defined in clause 8 of ISOIIEC 14478-1. The foundation component does not depend on any other components.*

INCITS/ISO/IEC 14478-3-1998 (R2004), Information Technology - Computer Graphics and Image Processing - Presentation Environment for Multimedia Objects (PREMO) - Part 3 - Multimedia Systems Services

*This part of ISO/IEC 14478 defines a standard set of multimedia system services that can be used by multimedia application developers in a variety of computing environments. The focus is on enabling multimedia applications in a heterogeneous, distrib- uted computing environment. Throughout this part of ISO/IEC 14478, this component will also be referred to as “Multimedia Systems Services”, and abbreviated as MSS.*

INCITS/ISO/IEC 14478-4-1998 (R2004), Information Technology - Computer Graphics and Image Processing - Presentation Environment for Multimedia Objects (PREMO) - Part 4 - Modelling, Rendering and Interaction Component

*This part of ISO/IEC 14478 describes a set of object types and non-object types to provide the construction of, presentation of, and the interaction with Multimedia information. The multimedia information can be graphics, video, audio, or other types of presentable media. This information can be enhanced by time aspects. Throughout this document this part of ISO/IEC 14478 will also be referred to as “Modelling, Rendering and Interaction”, and abbreviated as MRI.*

INCITS/ISO/IEC 14492:2001, Information technology - Lossy/lossless coding of bi-level images

*This Recommendation | International Standard defines methods for coding bi-level images and sets of images (documents consisting of multiple pages). It is particularly suitable for bi-level images consisting of text and dithered (halftone) data. The methods defined permit lossless (bit-preserving) coding, lossy coding, and progressive coding. In progressive coding, the first image is lossy; subsequent images may be lossy or lossless. This Recommendation | International Standard also defines file formats to enclose the coded bi-level image data.*

INCITS/ISO/IEC 14495-1-2000 (R2006), Information Technology - Lossless and Near-Lossless Compression of Continuous-Tone Still Images: Baseline

*Defines a set of lossless (bit-preserving) and nearly lossless (where the error for each reconstructed sample is bounded by a pre-defined value) compression methods for coding continuous-tone, gray-scale, or color digital still images. This draft standard (a) specifies a process for converting source image data to compressed image data; (b) specifies processes for converting compressed image data to reconstructed image data; (c) specifies coded representations for compressed image data; and (d) provides guidance on how to implement these processes in practice.*

INCITS/ISO/IEC 14495-2-2003, Information Technology - Lossless and near-lossless compression of continuous-tone still images - Part 2: Extensions

*This Recommendation | International Standard defines a set of lossless (bit-preserving) and nearly lossless (where the error for each reconstructed sample is bounded by a predefined value) compression methods for coding continuous-tone (including bi-level), gray-scale, or colour digital still images.*

INCITS/ISO/IEC 14496-1-2001 AMENDMENT 4-2003, Information technology - Coding of audio-visual objects - Part 1: Systems AMENDMENT 4: SL extensions and AFX streams

*This International Standard amends ISO/IEC 14496-1:2001*

INCITS/ISO/IEC 14496-1-2001, Information technology - Coding of Audio-Visual Objects - Part 1: Systems

*This part of ISO/IEC 14496 specifies system level functionalities for the communication of interactive audio-visualscenes. More specifically:1. system level description of the coded representation of natural or synthetic, two-dimensional (2D) or three-dimensional(3D) objects that can be manifested audibly and/or visually (audio-visual objects);2. the coded representation of the spatio-temporal positioning of audio-visual objects as well as their behavior inresponse to interaction (scene description); and3. the coded representation of information related to the management of data streams (synchronization,identification, description and association of stream content).4. a system level description of an application engine (format, delivery, lifecycle, and behavior of downloadableJava byte code applications); and5. a system level interchange and storage format of interactive audio-visual*

INCITS/ISO/IEC 14496-1-2001/AM1-2001, Information technology - Coding of audio-visual objects - Part 1: Systems AMENDMENT 1: Extended BIFS

*Specifies system level functionalities for the communication of interactive audio-visual scenes. More specifically: 1.) system level description of the coded representation of natural or synthetic, two-dimensional (2D) or three-dimensional (3D) objects that can be manifested audibly and/or visually (audio-visual objects);2.) the coded representation of the spatio-temporal positioning of audio-visual objects as well as their behavior in response to interaction (scene description); and 3.) the coded representation of information related to the management of data streams (synchronization, identification, description and association of stream content).This part of ISO/IEC 14496 specifies system level functionalities for the communication of interactive audio-visual scenes. More specifically: 1. system level description of the coded representation of natural or synthetic,*

INCITS/ISO/IEC 14496-10-2003, Information technology - Coding of audio-visual objects - Part 10: Advanced video coding

*Specifies ITU-T Recommendation H.264 | ISO/IEC International Standard ISO/IEC 14496-10 video coding.*

INCITS/ISO/IEC 14496-14-2003, Information technology - Coding of audio-visual objects - Part 14: MP4 file format

*Defines the MP4 file format, as derived from the ISO Base Media File format.*

INCITS/ISO/IEC 14496-2-2001, Information technology - Coding of audio-visual objects - Part 2: Visual

*This part of ISO/IEC 14496 specifies the coded representation of picture information in the form of natural or synthetic visual objects like video sequences of rectangular or arbitrarily shaped pictures, moving 2D meshes, animated 3D face and body models and texture for synthetic objects. The coded representation allows for content based access for digital storage media, digital video communication and other applications. ISO/IEC 14496 specifies also the decoding process of the aforementioned coded representation. The representation supports constant bitrate transmission, variable bitrate transmission, robust transmission, content based random access (including normal random access), object based scalable decoding (including normal scalable decoding), object based bitstream editing, as well as special functions such as fast forward playback, fast reverse playback, slow motion,*

INCITS/ISO/IEC 14496-2-2001/AM1-2002, Information Technology -- Coding Of Audio-Visual Objects -- Part 2: Visual AMENDMENT 1: Studio Profile

*Amendment 1 modifies Part 2 of ISO/IEC 14496*

INCITS/ISO/IEC 14496-2-2001/Amd 3-2003 , Information technology - Coding of audio-visual objects - Part 2: Visual - Amendment 3: New levels and tools for MPEG-4 visual

*This International Standard specifies new levels and tools for MPEG-4 visual to Part 2 of ISO/IEC 14496*

INCITS/ISO/IEC 14496-2:2001/AM2:2002, Information Technology - Coding Of Audio-Visual Objects - Part 2: Visual AMENDMENT 2: Streaming Video Profile

*Specifies AMENDMENT 2 to ISO/IEC 14496-2:2001.*

INCITS/ISO/IEC 14496-3-1999, Information Technology - Coding of Audio-Visual Objects - Part 3: Audio

*This part of ISO/IEC 14496 (MPEG-4 Audio) is a new kind of audio standard that integrates many different types of audio coding: natural sound with synthetic sound, low bitrate delivery with high-quality delivery, speech with music, complex soundtracks with simple ones, and traditional content with interactive and virtual-reality content. By standardizing individually sophisticated coding tools as well as a novel, flexible framework for audio synchronization, mixing, and downloaded post-production, the developers of the MPEG-4 Audio standard have created new technology for a new, interactive world of digital audio. MPEG-4, unlike previous audio standards created by ISO/IEC and other groups, does not target a single application such as real-time telephony or high-quality audio compression. Rather, MPEG-4 Audio is a standard that applies to everyapplication requiring the use of*

INCITS/ISO/IEC 14496-3-2001, Information technology - Coding of audio-visual objects - Part 3: Audio

*ISO/IEC 14496-3 (MPEG-4 Audio) is a new kind of audio standard that integrates many different types of audio coding: natural sound with synthetic sound, low bitrate delivery with high-quality delivery, speech with music, complex soundtracks with simple ones, and traditional content with interactive and virtual-reality content. By standardizing individually sophisticated coding tools as well as a novel, flexible framework for audio synchronization, mixing, and downloaded post-production, the developers of the MPEG-4 Audio standard have created new technology for a new, interactive world of digital audio. MPEG-4, unlike previous audio standards created by ISO/IEC and other groups, does not target a single application such as real-time telephony or high-quality audio compression. Rather, MPEG-4 Audio is a standard that applies to every application requiring the use of*

INCITS/ISO/IEC 14496-4-2004, Information technology - Coding of audio-visual objects - Part 4: Conformance testing

*This part of ISO/IEC 14496 specifies how tests can be designed to verify whether bitstreams and decoders meet requirements specified in parts 1, 2 and 3 of ISO/IEC IEC 14496 and for part 6 of ISO/IEC 14496 it specifies how tests can be designed for bitstream delivery over various delivery technologies in an interoperable transparent manner to parts 1, 2 and 3. In this part of ISO/IEC 14496, encoders are not addressed specifically. An encoder may be said to be an ISO/IEC 14496 encoder if it generates bitstreams compliant with the syntactic and semantic bitstream requirements specified in parts 1, 2 and 3 of ISO/IEC 14496.*

INCITS/ISO/IEC 14496-5-2001 AMENDMENT 1-2002, Information technology - Coding of audio-visual objects - Part 5: Reference software - Amendment 1: Reference software for MPEG-4

*Amends the reference software for MPEG-4 to ISO/IEC 14496-5:2001.*

INCITS/ISO/IEC 14496-5-2001, Information technology - Coding of audio-visual objects - Part 5: Reference software

*Reference software is normative in the sense that any conforming implementation of the software, taking the same conformant bitstreams, using the same output file format, will output the same file. Complying ISO/IEC 14496 implementations are not expected to follow the algorithms or the programming techniques used by the reference software. Although the decoding software is considered normative, it cannot add anything to the textual technical description included in parts 1, 2, 3 and 6 of ISO/IEC 14496.*

INCITS/ISO/IEC 14496-5-2001/Amd 2-2003, Information technology - Coding of audio-visual objects - Part 5: Reference software - Amendment 2: MPEG-4 reference software extensions for XMT and media nodes

*This part of ISO/IEC 14496-5 amends Part 5 of ISO/IEC 14496.*

INCITS/ISO/IEC 14496-6-2000 (R2006), Information Technology - Coding of Audio-Visual Objects - Part 6: Delivery Multimedia Integration Framework (DMIF)

*Specifies the Delivery Layer of ISO/IEC 14496, which allows applications to transparently access and view multimedia streams whether the source of the streams is located on an interactive remote end-system, the streams are available on broadcast media or they are on storage media. In this part of ISO/IEC 14496, the following aspects are covered: DMIF communication architecture DMIF-Application Interface (DAI) definition URL semantic to locate and make available the multimedia streams DMIF Default Signalling Protocol (DDSP) for remote interactive scenarios, and its related variations using existing native network signalling protocols Information flows for player access to.*

INCITS/ISO/IEC 14517-1996 (R1997), Information Technology - 130-mm Optical Disk Cartridges - Capacity: 2,6 Gbyte per Cartridge

*This International Standard defines a series of related 130 mm optical dick cartridges (ODCs) by using a number of Type designations.*

INCITS/ISO/IEC 14651-2001 (R2006), Information Technology - International String Ordering and Comparison - Method for Comparing Character Strings and Description of the Common Template Tailorable Ordering

*Defines: - A reference comparison method. This method is applicable to two character strings to determine their relative order. - A reference format. The format is described using the Backus-Naur Form (BNF). This format is used to describe the Common Template Table. - A Common Template Table. A given tailoring of the Common Template Table is used by the reference comparison method.. name. The reference name refers to this particular version of the Common Template Table, for use as a reference when tailoring - Requirements for a declaration of the differences (delta) between the collation table and the Common Template Table.*

INCITS/ISO/IEC 14651:2001/AM1: 2003, Information Technology - International String Ordering and Comparison - Method for Comparing Character Strings and Description of the Common Template Taillorable Ordering - Amendment 1

*Amendment 1 to ISO/IEC 14651:2001*

INCITS/ISO/IEC 14750-1999 (R2006), Information Technology - Open Distributed Processing - Interface Definition Language

*This Recommendation | International Standard is intended to provide the ODP Reference Model (see ITU-T Rec. X.902 | ISO/IEC 10746-2 and ITU-T Rec. X.903 | ISO/IEC 10746-3) with a language and environment neutral notation to describe computational operation interface signatures. Use of this notation does not imply use of specific supporting mechanisms and protocols.*

INCITS/ISO/IEC 14752-2000 (R2006), Information Technology - Open Distributed Processing - Protocol Support For Computational Interactions

*This Recommendation | International Standard is based on the framework of abstractions and concepts developed in the Reference Model for Open Distributed Processing (ITU-T Rec. X.902 | ISO/IEC 10746-2 and ITU-T Rec. X.903 | ISO/IEC 10746-3). This Recommendation | International Standard defines how interactions between computational objects in a computational specification of a system relate to protocol support for those interactions in an engineering specification of that system.*

INCITS/ISO/IEC 14753-1999 (R2006), Information Technology - Open Distributed Processing - Interface References and Binding

*Presents interface references crucial to interworking between ODP systems and federation of groups of ODP systems. An interface reference embodies the information needed to establish bindings, including binding to objects at nodes that support several different communication protocols and binding to objects in different management domains. An interface reference further embodies the information required for the engineering mechanism to maintain bindings between computational objects in the presence of distribution transparencies such as migration transparency. They are the foundation of ODP location and relocation transparency.*

INCITS/ISO/IEC 14769-2001 (R2006), Information Technology - Open Distributed Processing - Type Repository Function

*Defines a framework for describing types of interest in ODP systems by determining what entities need to be typed and what needs to be said about the identified types. The primary focus of this work is the computational interface type system; identifies and characterises type languages sufficient to describe the types identified above in an informative annex; provides enterprise, information, and computational specifications of a generic type repository function within the type description framework which can be specialised to select a specific type system or type notation.*

INCITS/ISO/IEC 14771-1999 (R2006), Information Technology - Open Distributed Processing - Naming Framework

*Defines a general framework for context-relative naming, refining and elaborating on the naming concepts defined in Part 2 of the ODP-RM; Identifies and characterizes functions necessary to handle names in the context of a federation of different naming systems; and clarifies the relationship between the concepts of name management (i.e. federation and naming) in distributed computing systems. It provides a general framework for the naming of entities of interest in ODP systems, which includes naming in the infrastructure of an ODP system, naming in the applications built on the infrastructure, and naming in the enterprise the system serves.*

INCITS/ISO/IEC 14772-1-1997 (R2004), Information Technology - Computer Graphics and Image Processing - The Virtual Reality Modeling Language - Part 1: Functional Specification and UTF-8 Encoding

*ISO/IEC 14772, the Virtual Reality Modeling Language (VRML), defines a file format that integrates 3D graphics and multimedia. Conceptually, each VRML file is a 3D time-based space that contains graphic and aural objects that can be dynamically modified through a variety of mechanisms.*

INCITS/ISO/IEC 14772-1-1997/AM1-2004, Information technology - Computer graphics and image processing - The Virtual Reality Modeling Language - Part 1: Functional specification and UTF-8 encoding - Amendment 1: Enhanced interoperability

*Amendment 1 to ISO/IEC 14772-1:1997.*

INCITS/ISO/IEC 14772-2-2004, Information technology - Computer graphics and image processing - The Virtual Reality Modeling Language (VRML) - Part 2: External authoring interface (EAI)

*SO/IEC 14772-1, the Virtual Reality Modeling Language (VRML), defines a file format that integrates 3D graphics and multimedia. Conceptually, each VRML file is a 3D time-based space that contains graphic and aural objects that can be dynamically modified through a variety of mechanisms. This part of ISO/IEC 14772 defines the interface that applications external to the VRML browser may use to access and manipulate the objects defined in ISO/IEC 14772-1.*

INCITS/ISO/IEC 14882-2003, Programming languages - C++

*This International Standard specifies requirements for implementations of the C + + programming language. The first such requirement is that they implement the language, and so this International Standard also defines C + +. Other requirements and relaxations of the first requirement appear at various places within this International Standard.*

INCITS/ISO/IEC 14888-1-1998 (R2005), Information Technology - Security techniques - Digital signatures with appendix - Part 1: General

*ISO/IEC 14888 specifies several digital signature mechanisms with appendix for messages of arbitrary length. This part of ISO/IEC 14888 contains general principles and requirements for digital signatures with appendix. It also contains definitions and symbols common to all parts of ISO/IEC 14888.*

INCITS/ISO/IEC 14888-3-1998 (R2005), Information Technology - Security techniques - Digital signatures with appendix - Part 3: Certificate-based mechanisms

*Specifies digital signature mechanisms with appendix for messages of arbitrary length and is applicable for providing data origin authentication, non-repudiation, and integrity of data. This part of ISO/IEC 14888 specifies certificate-based digital signat.*

INCITS/ISO/IEC 15041-1997 (R2002), Information Technology - Data Interchange on 90 mm Optical Disk Cartridges - Capacity: 640 Mbytes per Cartridge

*This International Standard defines the characteristics of 90 mm Optical Disk Cartridges (ODC) with a capacity of 640 Mbytes per Cartridge.*

INCITS/ISO/IEC 15286-1999 (R2006), Information Technology - 130 mm Optical Disk Cartridges for Information Interchange - Capacity: 5,2 Gbytes per Cartridge

*Defines ACSE services for ASO-association control in an open systems interconnection environment. ACSE supports two modes of communication service: connection-mode and connectionless-mode. The ACSE connection-mode service is provided by the use of the con.*

INCITS/ISO/IEC 15292:2001, Information technology - Security techniques - Protection Profile registration procedures

*This International Standard defines the procedures to be applied by the JTC 1 Registration Authority appointed by the ISO and IEC councils to maintain a register of Protection Profiles and packages for the purposes of IT security evaluation. These Protection Profiles and packages are specified in accordance with criteria given in ISO/IEC 15408.*

INCITS/ISO/IEC 1539-1-1997 (R2003), Information Technology - Programming Languages - FORTRAN - Part 1: Base Language

*Comprises the specification of the Fortran language. With the limitations noted in 1.5.1, and the deletions described in Annex B, the syntax and semantics of Fortran 90 are contained entirely within Fortran 95.*

INCITS/ISO/IEC 1539-2-1994 (R2004), Information Technology – Programming Languages – FORTRAN – Part 2: Varying Length Character Strings

*This part of ISO IEC 1539 defines facilities for use in Fortran for the manipulation of character strings of dynamically variable length.*

INCITS/ISO/IEC 15408-1-1999 (R2005), Information Technology - Security techniques - Evaluation criteria for IT security - Part 1: Introduction and general model

*Defines criteria, which for historical and continuity purposes are referred to herein as the Common Criteria (CC), to be used as the basis for evaluation of security properties of IT products and systems.*

INCITS/ISO/IEC 15408-2-1999 (R2005), Information Technology - Security techniques - Evaluation criteria for IT security - Part 2: Security functional requirements

*Security functional components, as defined in this part of ISO/IEC 15408, are the basis for the TOE IT security functional requirements expressed in a Protection Profile (PP) or a Security Target (ST). These requirements describe the desired security beha.*

INCITS/ISO/IEC 15408-3-1999 (R2005), Information Technology - Security Techniques - Evaluation Criteria for IT Security - Part 3: Security Assurance Requirements

*This part of ISO/IEC 15408 defines the assurance requirements of the standard. It includes the evaluation assurance levels (EALs) that define a scale for measuring assurance, the individual assurance components from which the assurance levels are composed, and the criteria for evaluation of PPs and STs.*

INCITS/ISO/IEC 15414-2002, Information technology - Open distributed processing - Reference model Enterprise language

*This Recommendation | International Standard provides: a) a language (the enterprise language) comprising concepts, struct r developing, representing, and reasoning about a specification of an ODP system from the enterprise viewpoint (as defined in ITU-T Rec. X.903 | ISO/IEC 10746-3); b) rules which establish correspondences between the enterprise language and the other viewpoint languages (defined in ITU-T Rec. X.903 | ISO/IEC 10746-3) to ensure the overall consistency of a specification.*

INCITS/ISO/IEC 15444-1-2000, Information technology - JPEG 2000 image coding system - Part 1: Core coding system

*This Recommendation | International Standard defines a set of lossless (bit-preserving) and lossy compression methods for coding bi-level, continuous-tone grey-scale, palletized color, or continuous-tone colour digital still images. This Recommendation | International Standard - specifies decoding processes for converting compressed image data to reconstructed image data - specifies a codestream syntax containing information for interpreting the compressed image data - specifies a file format - provides guidance on encoding processes for converting source image data to compressed image data - provides guidance on how to implement these processes in practice*

INCITS/ISO/IEC 15444-1-2000/AM1-2002 , Information technology - JPEG 2000 image coding system - Part 1: Core coding system Amd 1: Codestream restrictions

*This part of ISO/IEC 15444-1:2000/Amd 1:2002 amends ISO/IEC 15444-1:2000.*

INCITS/ISO/IEC 15444-1-2000/Amd 1-2002 , Information technology - JPEG 2000 image coding system - Part 1: Core coding system Amd 1: Codestream restrictions (Corrected 2002 Version)

*This corrected 2002 version of Amendment 1 modifies Part 1 of ISO/IEC 15444.*

INCITS/ISO/IEC 15444-1-2004 , Information technology - JPEG 2000 image coding system: Core coding system

*This Recommendation | International Standard defines a set of lossless (bit-preserving) and lossy compression methods for coding bi-level, continuous-tone grey-scale, palletized color, or continuous-tone colour digital still images.*

INCITS/ISO/IEC 15444-1-2004 , Information technology - JPEG 2000 image coding system: Core coding system

*This Recommendation | International Standard defines a set of lossless (bit-preserving) and lossy compression methods for coding bi-level, continuous-tone grey-scale, palletized color, or continuous-tone colour digital still images.*

INCITS/ISO/IEC 15444-3-2002, Information technology - JPEG 2000 image coding system - Part 3: Motion JPEG 2000

*This document specifies the use of the wavelet-based JPEG2000 codec for the coding and display of timed sequences of images (motion sequences), possibly combined with audio, and composed into an overall presentation. In this specification, a file format is defined, and guidelines for the use of the JPEG2000 codec for motion sequences are supplied.*

INCITS/ISO/IEC 15444-4-2002, Information technology - JPEG 2000 image coding system - Part 4: Conformance testing

*This Recommendation |International Standard specifies the framework,concepts,methodology for testing,and criteria to be achieved to claim compliance to ITU-T Recommendation T.800 |ISO/IEC 15444-1. It provides a framework for specifying abstract test suites and for defining the procedures to be followed during compliance testing.*

INCITS/ISO/IEC 15444-5-2003, Information technology - JPEG 2000 image coding system: Reference software

*ITU-T Rec. T.800 ISO/IEC 15444-1 defines a set of lossless and lossy compression methods for coding continuoustone, bi-level, greyscale or colour digital still images. This Recommendation International Standard provides two independently created software reference implementations of ITU-T Rec. T.800 ISO/IEC 15444-1, in order to assist implementers of ITU-T Rec. T.800 ISO/IEC 15444-1 in testing and understanding its content.*

INCITS/ISO/IEC 15444-6-2003, Information technology - JPEG 2000 image coding system - Part 6: Compound image file format

*This International Standard defines a normative but optional file format for storing compound images using the JPEG 2000 file format family architecture. This format is an extension of the JP2 file format defined in ITU-T Rec T.800 | ISO/IEC 15444-1 Annex I and uses boxes defined for both the JP2 file format and the JPX file format defined in ITU-T Rec T.801 | ISO/IEC 15444-2 Annex M. This standard is useful for applications storing multiple pages, images with mixed content, and/or images that need more structure than provided in JP2. Applications that implement this file format shall implement it as described in this International Standard.*

INCITS/ISO/IEC 15457-1-2001, Identification Cards - Thin Flexible Cards - Physical Characteristics, Magnetic Recording Techniques, Test Methods - Part 1: Physical Characteristics

*Thin flexible cards, the subject of this International Standard, are used to automate the controls for access to goods or services such as mass transit, highway toll systems, car parks, vouchers, stored value, etc. For these applications, data can be written and/or read by machines using various recording techniques such as magnetic stripe, optical character recognition (OCR), bar code, etc. This part of ISO/IEC 15457 specifies the physical characteristics of thin flexible cards at two points in the card life cycle: 1. at the point of loading into the card issuing equipment; 2. at the point of issue to the public. It takes into consideration both human and machine aspects and states the minimum requirements. The principal card sizes are identified and the characteristics and dimensions are specified. Guidance concerning the storage and use of cards under various environmental conditions*

INCITS/ISO/IEC 15457-2-2001, Identification Cards - Thin Flexible Cards - Physical Characteristics, Magnetic Recording Techniques, Test Methods - Part 2: Magnetic Recording Techniques

*Thin flexible cards, the subject of this International Standard, are used to automate the controls for access to goods or services such as mass transit, highway toll systems, car parks, vouchers, stored value, etc. For these applications, data can be written and/or read by machines using various recording techniques such as magnetic stripe, optical character recognition (OCR), bar code, etc. This part of ISO/IEC 15457 specifies the magnetic stripe and encoding characteristics of thin flexible cards at two points in the card life cycle: 1. at the point of loading into the card issuing equipment; 2. at the point of issue to the public. Guidance concerning the storage and usage of finished cards (including magnetic stripe cards) under various environmental conditions is given in ISO/IEC 15457-1.*

INCITS/ISO/IEC 15457-3-2002, Identification cards - Thin flexible cards - Part 3: Test methods

*Thin flexible cards, the subject of this International Standard, are used to automate the controls for access to goods or services such as mass transit, highway toll systems, car parks, vouchers, stored value, etc. For these applications, data can be written and/or read by machines using various recording techniques such as magnetic stripe, optical character recognition (OCR), bar code, etc.*
*This part of ISO/IEC 15457 specifies the test methods and procedures required to carry out measurements of the magnetic stripe and encoding characteristics of thin flexible cards.*

INCITS/ISO/IEC 15486-1998 (R2005), Information Technology - Data Interchange on 130 mm Optical Disk Cartridges of Type WORM (Write Once Read Many) using Irreversible Effects - Capacity: 2,6 Gbytes per Cartridge (formerly ANSI/ISO/IEC 15486-1998)

*This International Standard specifies the characteristics of a 130 mm Optical Disk Cartridge (ODC) of the Type WORM (Write Once Read Many) with a capacity of 2,6 Gbytes. Type WORM ODCs use writing effects that are inherently irrevers.*

INCITS/ISO/IEC 15521-1998 (R2005), Information Technology - 3,81 mm Wide Magnetic Tape Cartridge - Helical Scan Recording - DDS 3 Format

*ISO/IEC 15521:1998 - This International Standard specifies the physical and magnetic characteristics of a 3, 81 mm wide magnetic tape cartridge to enable physical interchangeability of such cartridges between drives.*

INCITS/ISO/IEC 15693-1-2000 (R2006), Identification Cards - Contactless Integrated Circuit(s) Cards - Vicinity Cards - Part 1: Physical Characteristics

*This part of ISO/IEC 15693 specifies the physical characteristics of vicinity cards (VICC). It applies to identification cards of the card type ID-1 operating in vicinity of a coupling device. This part of ISO/IEC 15693 shall be used in conjunction with later parts of ISO/IEC 15693.*

INCITS/ISO/IEC 15693-2-2000 (R2006), Identification Cards - Contactless Integrated Circuit(s) Cards - Vicinity Cards - Part 2: Air Interface and Initialization

*This part of ISO/IEC 15693 specifies the nature and characteristics of the fields to be provided for power and bidirectional communications between vicinity coupling devices (VCDs) and vicinity cards (VICCs.*

INCITS/ISO/IEC 15693-3-2001 (R2006), Identification Cards - Contactless Integrated Circuit(s) Cards - Vicinity Cards - Part 3: Anticollision and Transmission Protocol

*This part of ISO/IEC 15693 describes: - protocol and commands, - other parameters required to initialize communications between a VICC and a VCD, - methods to detect and communicate with one card among several cards ("anticollision"), - optional means to ease and speed up the selection of one among several cards based on application criteria.*

INCITS/ISO/IEC 15731-1998 (R2005), Information Technology - 12,65 mm Wide Magnetic Tape Cassette for Information Interchange - Helical Scan Recording - DTF-1 Format

*Specifies the physical and magnetic characteristics of magnetic tape cassettes, using magnetic tape 12,65 mm wide so as to provide physical interchange of such cassettes between drives. Also specifies the quality of the recorded signals, the recording method and the recorded format, called Digital Tape Format-1 (DTF-1), thereby allowing data interchange between drives by means of such cassettes. The format supports variable length Logical Records, high speed search, and the use of a registered algorithm for data compression. This International Standard specifies two sizes of cassette.*

INCITS/ISO/IEC 15757-1998 (R2005), Information Technology - 8 mm Wide Magnetic Tape Cartridge for Information Interchange - Helical Scan Recording - DA-2 Format

*Specifies the physical and magnetic characteristics of magnetic tape cassettes, using magnetic tape 12,65 mm wide so as to provide physical interchange of such cassettes between drives. Also specifies the quality of the recorded signals, the recording method and the recorded format, called Digital Tape Format-1 (DTF-1), thereby allowing data interchange between drives by means of such cassettes. The format supports variable length Logical Records, high speed search, and the use of a registered algorithm for data compression. This International Standard specifies two sizes of cassette.*

INCITS/ISO/IEC 15780-1998 (R2005), Information Technology - 8 mm Wide Magnetic Tape Cartridge for Information Interchange - Helical Scan Recording - AIT-1 Format

*Specifies the physical and magnetic characteristics of an 8 mm wide magnetic tape cartridge to enable physical interchange of such cartridges between drives. Also specifies the quality of the recorded signals, the recording method and the recorded format - called Advanced Intelligent Tape No. 1 (AIT-1) - thereby allowing data interchange between drives by means of such magnetic tape cartridges. Information interchange between systems also requires, at a minimum, agreement between the interchange parties upon the interchange code(s) and the specifications of the structure and labelling of the information on the interchanged cartridge.*

INCITS/ISO/IEC 15816-2002, Information Technology - Security Techniques - Security Information Objects For Access Control

*Provides definition of guidelines for specifying the abstract syntax of generic and specific Security Information Objects (SIOs) for Access Control; the specification of generic SIOs for Access Control; the specification of specific SIOs for Access Control. The scope of this Recommendation | International Standard covers only the "statics" of SIOs through syntactic definitions in terms of ASN.1 descriptions and additional semantic explanations. It does not cover the "dynamics" of SIOs, for example rules relating to their creation and deletion. The dynamics of SIOs are a local implementation issue.*

INCITS/ISO/IEC 15898-1998, Information Technology - 356 Optical Disk Cartridges, Extended Capacity, Using Phase Change Technology for Information Interchange

*Specifies the characteristics of 356 mm Optical Disk Cartridges (ODCs) of the type providing for information to be written once and read many times. It specifies: definitions of essential concepts, the environment in which the characteristics shall be tested, the environments in which the cartridge shall be operated and stored, the mechanical, physical and dimensional characteristics of the case and of the optical disk, the optical characteristics and the recording characteristics for recording the information once and for reading it many times, so as to provide physical interchangeability between data processing systems, the format for the physical disposition of the tracks and sectors, the error correction codes, the modulation methods used for recording and the quality of the recorded signals. Together with a standard for volume and file structure, this standard provides for full*

INCITS/ISO/IEC 15938-1-2002, Information technology - Multimedia content description interface - Part 1: Systems

*Defines a Multimedia Content Description Interface, specifying a series of interfaces from system to application level to allow disparate systems to interchange information about multimedia content. It describes the architecture for systems, a language for extensions and specific applications, description tools in the audio and visual domains, as well as tools that are not specific to audio-visual domains.*
*This part of ISO/IEC 15938 specifies system level functionalities for the communication of multimedia content descriptions. ISO/IEC 15938-1 provides a specification which will:*
*•enable development of ISO/IEC 15938 receiving sub-systems, called ISO/IEC 15938 Terminal, or Terminal in short, to receive and assemble possibly partitioned and compressed multimedia content descriptions*
*•provide rules for the preparation of multimedia*

INCITS/ISO/IEC 15938-2-2002, Information Technology - Multimedia Content Description Interface - Part 2: Description Definition Language

*Specifies a metadata system for describing multimedia content. It specifies the Description Definition Language (DDL) that comprises part 2 of the standard (ISO/IEC 15938-2). The goal of this part of the MPEG-7 International Standard is to specify a language that will enable MPEG-7 users and developers to: create valid MPEG-7 description schemes and descriptors; develop tools such as editors and parsers for processing descriptions, description schemes and descriptors; generate refinements, extensions and modifications to the DDL. Describes the features of the DDL. It defines the syntax of the DDL constructs and datatypes and provides optional (informative) examples that illustrate the application of the DDL to the specification and instantiation of MPEG-7 descriptions.*

INCITS/ISO/IEC 15938-3-2002, Information technology - Multimedia content description interface - Part 3: Visual

*Specifies tools for description of visual content, including still images, video and 3D models. These tools are defined by their syntax in DDL and binary representations and semantics associated with the syntactic elements. They enable description of the visual features of the visual material, such as color, texture, shape and motion, as well as localization of the described objects in the image or video sequence. An overview of the visual description tools is shown in Figure 1.*

INCITS/ISO/IEC 15938-4-2002, Information technology - Multimedia content description interface - Part 4: Audio

*Defines a Multimedia Content Description Interface, specifying a series of interfaces from system to application level to allow disparate systems to interchange information about multimedia content. It describes the architecture for systems, a language for extensions and specific applications, description tools in the audio and visual domains, as well as tools that are not specific to audio-visual domains. As a whole, this International Standard encompassing all of the aforementioned components is known as "MPEG-7."*

INCITS/ISO/IEC 15938-5-2003, Information technology - Multimedia content description interface - Part 5: Multimedia description schemes

*Specifies a metadata system for describing multimedia content. This document specifies the Multimedia Description Schemes (MDS) description tools (Description Schemes, Descriptors, and datatypes) that comprise ISO/IEC 15938-5.*

INCITS/ISO/IEC 15938-6-2003, Information technology - Multimedia content description interface - Part 6: Reference software

*Operates on and generates conformant bit streams. This International Standard provides a specific implementation that behaves in a conformant manner. In general, other implementations that conform toISO/IEC 15938 are possible that do not necessarily use the algorithms or the programming techniques of the reference software.*

INCITS/ISO/IEC 15938-7-2003, Information technology - Multimedia content description interface - Part 7: Conformance testing

*Part of ISO/IEC 15938*
*specifies how tests can be designed to verify whether descriptions and description consuming terminals meet the specifications of parts 1, 2, 3, 4 and 5 of ISO/IEC 15938.*

INCITS/ISO/IEC 15945-2002, Information Technology - Security Techniques - Specification of TTP Services to Support the Application of Digital Signatures

*Define those TTP services needed to support the application of digital signatures for the purpose of non-repudiation of creation of documents.*
*This document will also define interfaces and protocols to enable interoperability between entities associated with these TTP services.*
*Definitions of technical services and protocols are required to allow for the implementation of TTP services and related commercial applications.*
*This standard focuses on (1) implementation and interoperability, (2) service specifications, and (3) technical requirements.*

INCITS/ISO/IEC 15946-1-2002, Information technology - Security techniques - Cryptographic techniques based on elliptic curves - Part 1: General

*International Standard ISO/IEC 15946 specifies public-key cryptographic techniques based on elliptic curves. They include the establishment of keys for secret-key systems, and digital signature mechanisms. This part of ISO/IEC 15946 describes the mathematical background and general techniques necessary for implementing any of the mechanisms described in other parts of ISO/IEC 15946.*

INCITS/ISO/IEC 15946-2-2002, Information technology — Security techniques - Cryptographic techniques based on elliptic curves - Part 2: Digital signatures

*This part of ISO/IEC 15946 specifies public-key cryptographic techniques based on elliptic curves. They include the establishment of keys for secret-key systems, and digital signature mechanisms.*
*This part of ISO/IEC 15946 describes mechanisms for digital signatures. The mathematical background and general techniques necessary for implementing the mechanisms are described in part 1 of ISO/IEC 15946.*

INCITS/ISO/IEC 15946-3-2002, Information technology - Security techniques - Cryptographic techniques based on elliptic curves - Part 3: Key establishment

*International Standard ISO/IEC 15946 specifies public key cryptographic techniques based on elliptic curves. The standard is split into four parts and includes the establishment of keys for secret key systems and digital signature mechanisms. This part of ISO/IEC 15946 specifies techniques for key establishment, which includes key agreement and key transport, that use elliptic curves.*

INCITS/ISO/IEC 16262-2002, Information Technology - ECMAScript Language Specification

*This Standard defines the ECMAScript scripting language.*

INCITS/ISO/IEC 16448-2002, Information Technology - 120 mm DVD - Read-only Disk

*Specifies the mechanical, physical and optical characteristics of a 120 mm, read-only optical disk to enable the interchange of such disks.*

INCITS/ISO/IEC 16449-2002, Information Technology - 80 mm DVD - Read-only Disk

*Specifies the mechanical, physical and optical characteristics of a 80 mm, read-only optical disk to enable the interchange of such disks.*

INCITS/ISO/IEC 16485-2000 (R2006), Information Technology - Mixed Raster Content (MRC)

*Defines a means to efficiently represent raster-oriented pages that contain a mixture of multi-level and bi-level images. Any of the many ITU-T recommended encoding schemes, such as T.81 (JPEG) for the encoding of multi-level images and T.6 (MMR) for the encoding of bi-level images, may be combined within the context of this Recommendation. Similarly, ITU-T spatial and colour resolutions may be combined within a page. This Recommendation does not define new encodings or resolutions. The method of image segmentation is beyond the scope of this Recommendation, segmentation is left to manufacturers' implementation.*

INCITS/ISO/IEC 17462-2000 (R2006), Information Technology - 3,81 mm Wide Magnetic Tape Cartridge for Information Interchange - Helical Scan Recording - DDS-4 Format

*This International Standard specifies the physical and magnetic characteristics of a 3,81 .::m wide magnetic tape cartridge to enable physical interchangeability of such cartridges between drives. It also specifies the quality of the recorded signals, the recording method and the recorded format - called Digital Data Storage 4 (DDS-4) - thereby allowing data interchange between drives by means of such magnetic tape cartridges.*

INCITS/ISO/IEC 17799-2005, Information technology - Security techniques - Code of practice for information security management

*This International Standard establishes guidelines and general principles for initiating, implementing, maintaining, and improving information security management in an organization. The objectives outlined in this International Standard provide general guidance on the commonly accepted goals of information security management.*

INCITS/ISO/IEC 18013-1-2005, Information technology - Personal identification - ISO-compliant driving licence - Part 1: Physical characteristics and basic data set

*This part of ISO/IEC 18013 establishes guidelines for the design format and data content of an ISO compliant driving licence (IDL) in regard to both visual human-readable features and ISO machine-readable technologies. It creates a common basis for international use and mutual recognition of the IDL without impeding individual national/community/regional motor vehicle authorities in taking care of their specific needs.*

INCITS/ISO/IEC 18014-1-2002, Information technology - Security techniques - Time-stamping services - Part 1: Framework

*This part of ISO/IEC 18014:*
*1. identifies the objective of a time-stamping authority;*
*2. describes a general model on which time-stamping*
*services are based;*
*3. defines time-stamping services;*
*4. defines the basic protocols of time-stamping;*
*5. specifies the protocols between the involved entities.*

INCITS/ISO/IEC 18014-2-2002, Information technology - Security techniques - Time-stamping services - Part 2: Mechanisms producing independent tokens

*A time-stamping service provides evidence that a data item existed before a certain point in time. Time-stamp services produce time-stamp tokens, which are data structures containing a verifiable cryptographic binding between a data item$^{a}$s representation and a time-value. This part of ISO/IEC 18014 defines time-stamping mechanisms that produce independent tokens, which can be verified one by one.*

INCITS/ISO/IEC 18014-3-2004, Information technology - Security techniques - Time-stamping services - Part 3: Mechanisms producing linked tokens

*This part of ISO/IEC 18014 • describes a general model for time-stamping services producing linked tokens; • describes the basic components used to construct a time-stamping service of this type; • defines the data structures used to interact with a time-stamping service of this type; • describes specific instances of such time-stamping services.*

INCITS/ISO/IEC 18028-4-2005, Information technology - Security techniques - IT network security - Part 4: Securing remote access

*This part of ISO/IEC 18028 provides guidance for securely using remote access - a method to remotely connect a computer either to another computer or to a network using public networks and its implication for IT security. In this it introduces the different types of remote access including the protocols in use, discusses the authentication issues related to remote access and provides support when setting up remote access securely. It is intended to help network administrators and technicians who plan to make use of this kind of connection or who already have it in use and need advice on how to set it up securely and operate it securely.*

INCITS/ISO/IEC 18032-2005, Information technology - Security techniques - Prime number generation

*Specifies methods for generating and testing prime numbers as required in cryptographic protocols and algorithms. Firstly, this International Standard specifies methods for testing whether a given number is prime. The testing methods included in this International Standard can be divided into two groups: • Probabilistic primality tests, which have a small error probability. All probabilistic tests described here may declare a composite to be a prime. One test described here may declare a prime to be composite. • Deterministic methods, which are guaranteed to give the right verdict. These methods use so-called primality certi.*

INCITS/ISO/IEC 18033-1-2005, Information technology - Security techniques - Encryption algorithms - Part 1: General

*This part of ISO/IEC 18033 is general in nature, and provides definitions that apply in subsequent parts of ISO/IEC 18033. The nature of encryption is introduced, and certain general aspects of its use and properties are described. The criteria used to select the algorithms specified in subsequent parts of ISO/IEC 18033 are defined in Annex A.*

INCITS/ISO/IEC 18033-3:2005, Information technology - Security techniques - Encryption algorithms - Part 3: Block ciphers

*This part of ISO/IEC 18033 specifies block ciphers. A block cipher maps blocks of n bits to blocks of n bits, under the control of a key of k bits.*

INCITS/ISO/IEC 18033-4:2005, Information technology - Securit techniques - Encryption algorithms - Part 4: Stream ciphers

*This part of ISO/IEC 18033 specifies stream cipher algorithms. A stream cipher is an encryption mechanism that uses a keystream to encrypt a plaintext in bitwise or block-wise manner. There are two types of stream cipher: a synchronous stream cipher, in which the keystream is only generated from the secret key (and an initialization vector) and a self-synchronizing stream cipher, in which the keystream is generated from the secret key and some past ciphertexts (and an initialization vector.*

INCITS/ISO/IEC 18035-2003, Information technology - Icon symbols and functions for controlling multimedia software applications

*ISO/IEC 18035 applies to icons that are shown on a computer screen, that users can manipulate and interact with and that represent computer system functions.*

INCITS/ISO/IEC 18093-1999 (R2006), Information Technology - Data Interchange on 130 mm Optical Disk Cartridges of Type WORM (Write Once Read Many) Using Irreversible Effects - Capacity: 5,2 Gbytes per Cartridge

*Specifies the characteristics of a 130 mm optical disk cartridge (ODC) of Type WORM (Write Once Read Many) with a capacity of 5,2 Gbytes. Type WORM ODCs use writing effects that are inherently irreversible. Written marks cannot be erased and attempted mod.*

INCITS/ISO/IEC 1860-1988 (R2005), Information Processing – Precision Reels for Magnetic Tape Used in Interchange Instrumentation Applications

*Specifies the recorder/reproducer interface or envelope requirements for metal- and glass-flanged precision reels with 76 mm (3 in) centerhole, for magnetic tape used in interchange instrumentation applications.*

INCITS/ISO/IEC 18809-2000 (R2006), Information Technology - 8 mm Wide Magnetic Tape Cartridge for Information Interchange - Helical Scan Recording AIT-1 with MIC Format

*This International Standard specifies the physical and magnetic characteristics of an 8 mm wide magnetic tape cartridge containing a memory chip to enable physical interchange of such cartridges between drives. It also specifies the quality of the recorded signals, the recording method and the recorded format - called Advanced Intelligent Tape No. 1 with Memory In Cartridge (AIT-1 with MIC) - thereby allowing data interchange between drives by means of such magnetic tape cartridges. The System Log is recorded in the MIC. This International Standard specifies two types of cartridge depending on the thickness of the magnetic tape contained in the case.*

INCITS/ISO/IEC 18810-2001 (R2006), Information Technology - 8 mm Wide Magnetic Tape Cartridge for Information Interchange - Helical Scan Recording AIT-2 with MIC Format

*This International Standard specifies the physical and magnetic characteristics of an 8 mm wide magnetic tape cartridge containing a memory chip to enable physical interchange of such cartridges between drives. It also specifies the quality of the recorded signals, the recording method and the recorded format - called Advanced Intelligent Tape No.2 with Memory In Cartridge (AIT-2 with MIC) - thereby allowing data interchange between drives by means of such magnetic tape cartridges. The System Log are recorded in the MIC.*

INCITS/ISO/IEC 18836-2001 (R2006), Information Technology - 8 mm Wide Magnetic Tape Cartridge for Information Interchange - Helical Scan Recording - Mammoth Tape-2 Format

*This International Standard specifies the physical and magnetic characteristics of an 8 mm wide magnetic tape cartridge to enable physical interchange of such cartridges between drives. It also specifies the quality of the recorded signals, the recording method and the recorded format called MammothTape-2, and thereby allowing data interchange between drives by means of such magnetic tape cartridges. Information interchange between systems also requires, at a minimum, agreement between the interchange parties upon the interchange code(s) and the specifications of the structure and labelling of the information on the interchanged cartridge.*

INCITS/ISO/IEC 19105-2000 (R2006), Geographic Information - Conformance and Testing

*Specifies the framework, concepts and methodology for testing and criteria to be achieved to claim conformance to the family of ISO geographic information standards. It provides a framework for specifying abstract test suites (ATS) and for defining the procedures to be followed during conformance testing. Conformance may be claimed for data or software products or services or by specifications including any profile or functional standard.*

INCITS/ISO/IEC 19113-2002, Geographic information - Quality principles

*This International Standard establishes the principles for describing the quality of geographic data and specifies components for reporting quality information. It also provides an approach to organizing information about data quality.*

INCITS/ISO/IEC 19118-2005, Geographic information - Encoding

*This International Standard specifies the requirements for defining encoding rules to be used for interchange of geographic data within the ISO 19100 series of International Standards.*

INCITS/ISO/IEC 19123-2005, Geographic information - Schema for coverage geometry and functions

*This International Standard defines a conceptual schema for the spatial characteristics of coverages. Coverages support mapping from a spatial, temporal or spatiotemporal domain to feature attribute values where feature attribute types are common to all geographic positions within the domain.*

INCITS/ISO/IEC 19133-2005, Geographic information - Location-based services - Tracking and navigation

*This International Standard describes the data types, and operations associated with those types, for the implementation of tracking and navigation services. This International Standard is designed to specify web services that can be made available to wireless devices through web-resident proxy applications, but is not restricted to that environment.*

INCITS/ISO/IEC 19135-2005, Geographic information - Procedures for item registration

*This International Standard specifies procedures to be followed in establishing, maintaining and publishing registers of unique, unambiguous and permanent identifiers and meanings that are assigned to items of geographic information. In order to accomplish this purpose, this International Standard specifies elements of information that are necessary to provide identification and meaning to the registered items and to manage the registration of these items.*

INCITS/ISO/IEC 19752-2005, Information technology - Method for the determination of toner cartridge yield for monochromatic electrophotographic printers and multi-function devices that may contain printer components

*The scope of this International Standard is limited to evaluation of toner cartridge yield for toner containing cartridges (i.e. all-in-one toner cartridges and toner cartridges without a photoconductor) for monochrome electrophotographic printers. This International Standard could also be applied to the printer component of any multifunctional device that has a digital input-printing path (i.e. multi-function devices that contain printer components). This International Standard is only intended for the measurement of toner cartridge yield. No other claims can be made from this testing regarding quality, reliability, etc.*

INCITS/ISO/IEC 1989-2002, Information Technology - Programming Languages - COBOL

*This International Standard specifies the syntax and semantics of COBOL. Its purpose is to promote a high degree of machine independence to permit the use of COBOL on a variety of data processing systems.*

INCITS/ISO/IEC 20061:2001, Information technology - 12,65 mm wide magnetic tape cassette for information interchange - Helical scan recording DTF-2

*This International Standard specifies the physical and magnetic characteristics of magnetic tape cassettes, using magnetic tape 12,65 mm wide so as to provide physical interchange of such cassettes between drives. It also specifies the quality of the recorded signals, the recording method and the recorded format, called Digital Tape Format-2 (DTF-2), thereby allowing data interchange between drives by means of such cassettes. The format supports variable length Logical Records, high-speed search, and the use of a registered algorithm for data compression. This International Standard specifies two sizes of cassette. For the purposes of this International Standard the larger cassette is referred to as Type L, and the smaller as Type S. Together with a standard for volume and file structure, e.g. International Standard ISO 1001, this International Standard provides for full data*

INCITS/ISO/IEC 20062:2001, Information technology - 8 mm wide magnetic tape cartridge for information interchange - Helical scan recording VXA-1 format

*This International Standard specifies the physical and magnetic characteristics of an 8 mm wide magnetic tape cartridge to enable physical interchange of such cartridges between drives. It also specifies the quality of the recorded signals, the recording method and the recorded format called VXA-1, and thereby allowing data interchange between drives by means of such magnetic tape cartridges. This International Standard specifies three types depending on the length of magnetic tape contained in the case, referred to as Type A, Type B and Type C. Information interchange between systems also requires, at a minimum, agreement between the interchange parties upon the interchange code(s) and the specifications of the structure and labelling of the information on the interchanged cartridge. If compression is used with this format, it shall be according to International Standard ISO/IEC*

INCITS/ISO/IEC 20162:2001, Information technology - Data interchange on 300 mm optical disk cartridges of type WORM (Write Once Read Many) using irreversible effects - Capacity: 30Gbytes per cartridge

*This International Standard specifies the characteristics of a 300 mm optical disk cartridge (ODC) of Type WORM (Write Once Read Many) using irreversible effects, with a capacity of 30 Gbytes. This WORM ODC's uses writing effects that are inherently irreversible. Written marks cannot be erased and attempted modifications of the written marks are detectable. This International Standard specifies •the conditions for conformance testing and the Reference Drive; •the environments in which the cartridges are to be operated and stored; •the mechanical, physical and dimensional characteristics of the cartridge, so as to provide mechanical interchange ability between data processing systems; •the format of the information on the disk, both pre-written and user-written, including the physical disposition of the tracks and sectors, the error correction codes, the*

INCITS/ISO/IEC 2022-1994 (R2004), Information Technology – Character Code Structure and Extension Techniques

*This International Standard specifies the structure of 8-bit codes and 7-bit codes which provide for the coding of character sets. The code elements used in the structure are common to both the 8-bit and 7-bit codes. The codes use a variety of techniques for extending the capabilities of elementary 8-bit and 7-bit codes. Greater emphasis is given to 8-bit codes in this edition of the Standard than in previous editions because they are now more widely used.*

INCITS/ISO/IEC 20563-2001, Information technology - 80 mm (1,23 Gbytes per side) and 120 mm (3,95 Gbytes per side) DVD-recordable disk (DVD-R)

*Specifies the mechanical, physical and optical characteristics of an 80 mm and a 120 mm DVD -Recordable disk to enable the interchange of such disks. It specifies the quality of the pre-recorded, unrecorded and the recorded signals, the format of the data, the format of the information zone, the format of the unrecorded zone, and the recording method, thereby allowing for information interchange by means of such disks. This disk is identified as a DVD -Recordable (DVD-R) disk. Once data has been recorded on a DVD-R disk it cannot be modified. It can be read many times.Further data may be appended.This International Standard specifies: 80 mm and 120 mm nominal diameter disks that may be either single or double sided, the conditions for conformance, the environments in which the disk is to be operated and stored, the mechanical and physical characteristics of the*

INCITS/ISO/IEC 20970:2002, Information technology - Programming languages, their environments and system software interfaces - JEFF file format

*This International Standard's most immediate interest is for deploying portable applications on small footprint devices. This International Standard provides dramatic savings of dynamic memory and execution time without sacrificing any of the flexibilit*

INCITS/ISO/IEC 21000-2-2003, Information technology - Multimedia framework (MPEG-21) - Part 2: Digital Item Declaration

*This document describes the MPEG-21 Digital Item Declaration technology, which is part 2 of the MPEG-21 standard.*

INCITS/ISO/IEC 21000-3-2003, Information technology - Multimedia framework (MPEG-21) - Part 3: Digital Item Identification

*This third part of MPEG-21 (ISO/IEC 21000-3), entitled Digital Item Identification (DII), specifies how to uniquely identify Digital items (and parts thereof); IP related to the Digital Items; Description Schemes, etc.*

INCITS/ISO/IEC 21000-7-2004, Information technology - Multimedia framework (MPEG-21) - Part 7: Digital Item Adaptation

*This part of ISO/IEC 21000 specifies the syntax and semantics of tools that may be used to assist the adaptation of Digital Items, i.e., the Digital Item Declaration and resources referenced by the declaration. The tools could be used to satisfy transmission, storage and consumption constraints, as well as Quality of Service management by the various Users. It is important to emphasize that the adaptation engines themselves are non-normative tools of this part of ISO/IEC 21000.*

INCITS/ISO/IEC 22050-2002, Information technology - Data interchange on 12,7 mm, 384-track magnetic tape cartridges - Ultrium-1 format

*This International Standard specifies the physical and magnetic characteristics of magnetic tape cartridges, using magnetic tape 12,65 mm wide so as to provide physical interchange of such cartridges between drives. It also specifies the quality of the recorded signals, the recording method and the recorded format, thereby allowing data interchange between drives by means of such cartridges. The format supports variable length Logical Records, high speed search, and the use of a registered algorithm for data compression.*

INCITS/ISO/IEC 22051-2002, Information technology - Data interchange on 12,7 mm, 448-track magnetic tape cartridges - SDLT1 format

*This International Standard specifies the physical and magnetic characteristics of a 12,7 mm wide, 448-track magnetic tape cartridge, to enable physical interchangeability of such cartridges between drives. It also specifies the quality of the recorded signals, a format - called Super Digital Linear Tape 1 (SDLT 1) - and a recording method, thereby allowing data interchange between drives. Together with a labelling standard, for instance ISO 1001 for Magnetic Tape Labelling, it allows full data interchange by means of such magnetic tape cartridges.*

INCITS/ISO/IEC 22091-2002, Information technology - Streaming Lossless Data Compression algorithm (SLDC)

*Specifies a lossless compression algorithm to reduce the number of 8-bit bytes required to represent data records and File Marks. The algorithm is known as Streaming Lossless Data Compression algorithm (SLDC).*
*One buffer size (1 024 bytes) is specified.*
*The numerical identifier according to ISO/IEC 11576 allocated to this algorithm is 6.*

INCITS/ISO/IEC 22092-2002, Information Technology - Data Interchange on 130 mm Magneto-Optical Disk Cartridges - Capacity: 9,1 Gbytes Per Cartridge

*Specifies the mechanical, physical, and optical characteristics of a 130 mm optical disk cartridge (ODC) that employs thermo-magnetic and magneto-optical effects to enable data interchange between such disks. This International Standard specifies two Types, viz. Type R/W provides for data to be written, read and erased many time over the recording surface(s) of the disk. Type WO provides for data once written to be read a multiplicity of times. Data shall not be erased nor amended. Multisession (incremental write operations) recording may be performed on type WO disks. The disk shall be of the same Type if recorded on both sides, A and B. Each side shall have a nominal capacity of 4,58 Gbytes, irrespective of the Type. The format specifies two sector sizes and allows for emulation of two further sizes.*

INCITS/ISO/IEC 23270-2003, Information technology - C# Language Specification

*This International Standard specifies the form and establishes the interpretation of programs written in the C# programming language. It specifies • The representation of C# programs; • The syntax and constraints of the C# language; • The semantic rules for interpreting C# programs; • The restrictions and limits imposed by a conforming implementation of C#.*

INCITS/ISO/IEC 23271-2003, Information technology - Common Language Infrastructure

*This International Standard defines the Common Language Infrastructure (CLI) in which applications written in multiple high-level languages may be executed in different system environments without the need to rewrite the applications to take into consideration the unique characteristics of those environments.*

INCITS/ISO/IEC 23651-2003, Information technology - 8 mm wide magnetic tape cartridge for information interchange - Helical scan recording - AIT-3 format

*Specifies the physical and magnetic characteristics of an 8 mm wide magnetic tape cartridge containing a memory chip to enable physical interchange of such cartridges between drives. It also specifies the quality of the recorded signals, the recording method and the recorded format - called Advanced Intelligent Tape No. 3 (AIT-3 format) - thereby allowing data interchange between drives by means of such magnetic tape cartridges.*

INCITS/ISO/IEC 2375-2003, Data Processing - Procedure for Registration of Escape Sequences

*This International Standard specifies the procedures to be followed for preparing, maintaining, and publishing a register of escape sequences and of the coded character sets they identify. ISO/IEC 2022: 1994, Information technology – Character code structure and extension techniques.*

INCITS/ISO/IEC 2382-1-1993 (R2004), Information Technology – Vocabulary – Part 1: Fundamental Terms

*This part of ISO/IEC 2382 is intended to facilitate international communication in information technology. It presents, in two languages, terms and definitions of selected concepts relevant to the field of information technology and identifies relationships among the entries.*

INCITS/ISO/IEC 2382-10-1979 (R2004), Information Processing Systems - Vocabulary - Part 10: Operating Techniques and Facilities

*The Vocabulary is intended to facilitate international communication in data processing. It presents in two languages terms and definitions of selected concepts relevant to the field of data processing and identifies relationships between the entries.*

INCITS/ISO/IEC 2382-12-1988 (R2004), Information Processing Systems - Vocabulary - Part 12: Peripheral Equipment

*This International Standard is intended to facilitate international communication in information processing. It presents, in two languages, terms and definitions of selected concepts relevant to the field of information processing and identifies relation- ships between the entries.*

INCITS/ISO/IEC 2382-13-1996 (R2006), Information Processing Systems -- Vocabulary – Part 13: Computer Graphics

*This part of ISO/IEC 2382 is intended to facilitate international communication in computer graphics. It presents, in two languages, terms and definitions of selected concepts relevant to the field of information technology and identifies relationships among the entries.*

INCITS/ISO/IEC 2382-17-1996 (R2006), Information Processing Systmes – Vocabulary – Part 17: Databases

*This part of ISO/IEC 2382 is intended to facilitate international communication in information technology. It presents, in two languages, terms and definitions of selected concepts relevant to the field of information technology and identifies relationships among the entries.*

INCITS/ISO/IEC 2382-19-1989 (R2006), Information Processing Systems - Vocabulary - Part 19: Analog Computing

*This part of IS0 2382 is intended to facilitate international communication in information processing. It presents, in two languages, terms and definitions of selected concepts relevant to the field of information processing and identifies relationships between the entries.*

INCITS/ISO/IEC 2382-2-1976 (R2004), Data Processing - Vocabulary - Part 02: Arithmetic and Logic Operations

*The Vocabulary is intended to facilitate international communcation in data processing. It presents, two languages, terms and definitions of selected concepts relevant to the field of data processing and identifies relationships between the entries.*

INCITS/ISO/IEC 2382-20-1990 (R2006), Information Processing Systems – Vocabulary – Part 20: System Development

*This part of ISO/IEC 2382 is intended to facilitate international communication in information processing. lt presents, in two languages, terms and definitions of selected concepts relevant to the field of information processing and identifies relationships between the entries.*

INCITS/ISO/IEC 2382-23-1994 (R2006), Information Proccessing Systems - Vocabulary – Part 23: Text Processing

*This part of ISO/IEC 2382 is intended to facilitate international communication in information processing. lt presents, in two languages, terms and definitions of selected concepts relevant to the field of information processing and identifies relationships between the entries.*

INCITS/ISO/IEC 2382-24-1995 (R2006), Information Processing Systems – Vocabulary – Part 24: Computer-Integrated Manufacturing

*This part of ISO/IEC 2382 is intended to facilitate international communication in computer-integrated manufacturing. lt presents,*

*in two languages, terms and definitions of selected concepts relevant to this field of information technology and identifies relationships among the entries.*

INCITS/ISO/IEC 2382-25-1992 (R2006), Information Processing Systems – Vocabulary – Part 25: Local Area Networks

*This part of ISO/IEC 2382 is intended to facilitate international communication in information processing. It presents, in two languages, terms and definitions of selected concepts relevant to the field of information processing and identifies relation ships between the entries.*

INCITS/ISO/IEC 2382-26-1993 (R2006), Information Processing Systems - Vocabulary – Part 26: Open Systems Interconnection

*This part of ISO/IEC 2382 is intended to facilitate international communication in open Systems interconnection. lt presents, in two languages, terms and definitions of selected concepts relevant to the field of information technology and identifies relationships among the entries.*

INCITS/ISO/IEC 2382-27-1994 (R2006), Information Processing Systems – Vocabulary – Part 27: Office Automation

*This part of ISO/IEC 2382 is intended to facilitate international communication in office automation. lt presents, in two languages, terms and definitions of selected concepts relevant to the field of office automation and identifies relationships between the entries.*

INCITS/ISO/IEC 2382-28-1995 (R2006), Information Processing Systems – Vocabulary – Part 28: Artificial Intelligence – Basic Concepts and Expert Systems

*This part of ISO/IEC 2382 is intended to facilitate international communication in information technology. lt presents, in two languages, terms and definitions of selected concepts relevant to this field of information technology and identifies relationships among the entries.*

INCITS/ISO/IEC 2382-3-1987 (R2004), Information Processing Systems - Vocabulary - Part 03: Equipment Technology

*The International standard is intended to facilitate international communcation in information processing. It presents, two languages, terms and definitions of selected concepts relevant to the field of information processing and identifies relationships between the entries.*

INCITS/ISO/IEC 2382-4-1987 (R2004), Information Processing Systems - Vocabulary - Part 04: Organization of Data

*This part of ISO/IEC 2382 is intended to facilitate international communication in information technology. It presents, in two languages, terms and definitions of selected concepts relevant to the field of information technology and identifies relationships among the entries.*

INCITS/ISO/IEC 2382-5-1989 (R2004), Information Processing Systems - Vocabulary - Part 05: Representation of Data

*This part of ISO/IEC 2382 is intended to facilitate international communication in information technology. It presents, in two languages, terms and definitions of selected concepts relevant to the field of information technology and identifies relationships among the entries.*

INCITS/ISO/IEC 2382-7-1989 (R2004), Information Technology – Vocabulary – Part 07: Computer Programming

*This part of ISO/IEC 2382 is intended to facilitate international communication in computer programming. It presents, in two languages, terms and definitions of selected concepts relevant to the field of information technology and identifies relationships among the entries.*

INCITS/ISO/IEC 2382-9-1995 (R2004), Information Processing Systems – Vocabulary – Part 9: Data Communication

*This part of ISO/IEC 2382 is intended to facilitate international communication in data communication. It presents, in two languages, terms and definitions of selected concepts relevant to the field of data communication and identifies relationships among the entries.*

INCITS/ISO/IEC 25062-2006, Software engineering - Software product Quality Requirements and Evaluation

*This International Standard is intended to be used to report the measures obtained from a test of usability as defined in ISO 9241-11: effectiveness, efficiency and satisfaction in a specified context of use. NOTE Metrics for other more-detailed usability requirements can be found in ISO/IEC 9126 parts 2 and 3.*

INCITS/ISO/IEC 27001-2005, Information technology - Security techniques - Information security management systems - Requirements

*This International Standard covers all types of organizations (e.g. commercial enterprises, government agencies, non-profit organizations). This International Standard specifies the requirements for establishing, implementing, operating, monitoring, reviewing, maintaining and improving a documented ISMS within the context of the organization's overall business risks. It specifies requirements for the implementation of security controls customized to the needs of individual organizations or parts thereof.*

INCITS/ISO/IEC 4232-2-1980 (R2004), Office Machines - Minimum Information to be Included in Specifications Sheets - Part 2: Document Copying Machines

*This International Standard specifies the minimum information that shall be included in the specification sheets of document copying machines so that users may compare directly the characteristics of different machines. It does not apply to microcopying equipment.*

INCITS/ISO/IEC 4232-3-1984 (R2004), Office Machines - Minimum Information to be Included in Specification Sheets - Part 3: Postal Franking Machines

*This part of ISO 4232 specifies the minimum information to be included in specification sheets for postal franking machines so that users may compare directly the characteristics of different machines.*

INCITS/ISO/IEC 4873-1991 (R2003), Information Processing – Bit Code for Information Interchange – Structure and Rules for Implementation

*Specifies an 8-bit code derived from, and compatible with, the 7-bit coded character set specified in ISO/IEC 646. The characteristics of this code are also in conformance with the code extension techniques specified in ISO 2022. Also specifies an 8-bit code with a number of options. It also provides guidance on how to exercise the options to define specific versions. This code is primarily intended for general information interchange with an 8-bit environment among data processing systems and associated equipment, and within data communication systems.*

INCITS/ISO/IEC 5138-1-1978 (R2004), Office Machines - Vocabulary - Part 01: Dictation Equipment

*The Vocabulary is intended to facilitate international exchanges in the field of office machines. It presents, in two languages, terms and definitions of selected concepts relevant to this field and identifies relationships between the entries. This section of the Vocabulary deals with dictation equipment. It concerns the main operating processes and types of machines used, their functions and technical parts.*

INCITS/ISO/IEC 5138-2-1980 (R2004), Office Machines - Vocabulary - Part 02: Duplicators

*The Vocabulary is intended to facilitate international exchanges in the field of office machines. It presents, in two languages, terms and definitions of selected concepts relevant to this field and identifies relationships between the entries. This section of the Vocabulary deals with duplicators. It concerns the main operating processes and types of machines used, their functions and technical parts.*

INCITS/ISO/IEC 5138-4-1981 (R2004), Information technology - Office Machines Vocabulary - Part 4: Letter Opening Machines

*The Vocabulary is intended to facilitate international exchanges in the field of office machines. It presents, in two languages, terms and definitions of selected concepts relevant to this field and identifies relationships between the entries. This section of the Vocabulary deals with letter opening machines. It concerns the main operating processes and types of machines used, their functions and technical parts.*

INCITS/ISO/IEC 5138-5-1981 (R2004), Information technology - Office Machines Vocabulary - Part 5: Letter Folding Machines

*The Vocabulary is intended to facilitate international exchanges in the field of office machines. It presents, in two languages, terms and definitions of selected concepts relevant to this field and identifies relationships between the entries. This section of the Vocabulary deals with letter folding machines. It concerns the main operating processes and types of machines used, their functions and technical parts.*

INCITS/ISO/IEC 5138-7-1986 (R2004), Information technology - Office Machines Vocabulary - Part 7: Postal Franking Machines

*The Vocabulary is intended to facilitate international exchanges in the field of office machines. It presents, in two languages, terms and definitions of selected concepts relevant to this field and identifies relationships between the entries. This section of the Vocabulary deals with postal franking machines. It concerns the main operating processes and types of machines used, their functions and technical parts.*

INCITS/ISO/IEC 5138-9-1984 (R2004), Information technology - Office Machines Vocabulary - Part 9: Typewriters

*This International Standard is intended to facilitate international exchanges in the field of office machines. It presents, in two languages, terms and definitions of selected concepts relevant to this field and identifies relationship between the entries. This part of ISO 5138 deals with typewriters. It concerns the main operating processes and types of machines used, their functions and technical parts.*

INCITS/ISO/IEC 5218-2004, Information Interchange - Representation of Human Sexes

*This International Standard specifies a uniform representation of human sexes for the interchange of information. It is intended to • reduce the time required to record and/or format the representation of sexes and transmit the corresponding data; • improve clarity and accuracy of interchange; • minimize the amount of human intervention required for communicating the representation of sexes; and • reduce costs.*

INCITS/ISO/IEC 6329-1989, Duplicators and Document Copying Machines – Symbols

INCITS/ISO/IEC 6429-1992, Information Technology – Control Functions for Coded Character Sets

INCITS/ISO/IEC 646-1991 (R2004), Information Technology – ISO 7-Bit Coded Character Set for Information Interchange

*This International Standard specifies a 7-bit coded character set with a number of options. It also provides guidance on how to exercise the options to define specific national versions and application-oriented versions. Furthermore it specifies the International Reference Version (IRV) in which such options have been exercised.*

INCITS/ISO/IEC 6937-2001, Information technology - Coded graphic character set for text communication - Latin alphabet

*This International Standard a) specifes the coded representation of the character; b)specifies a repertoire of the Lating alphabetic and non-alphabetic characters for the communication of text in many European languages using the Lating script; c) specifies rules for the definitions and use of graphic character subrepertoires, i.e., subsets of the specified character repertoire.*

INCITS/ISO/IEC 7185-1990 (R2003), Programming Language PASCAL

*This standard specifies the semantics and syntax of the computer programming language Pascal by specifying requirements for a processor and for a conforming program. Two levels of compliance are defined for both processors and programs.*

INCITS/ISO/IEC 7350-1991 (R2004), Information Technology – Registration of Repertoires of Graphic Characters from ISO/IEC 10367

*This International Standard specifies the procedures to be followed in preparing, publishing, and maintaining a register of graphic character repertoires which are composed entirely of graphic characters from 1SO 10367. The coded representation of the characters of such repertoires is not prescribed by the entries in the register.*

INCITS/ISO/IEC 7501-1-1997 (R2004), Identification Cards - Machine Readable Travel Documents - Part 1: Machine Readable Passport

*This International Standard specifies the form and provides guidance on the construction of machine readable passports, in particular in relation to the sections of the document containing details of the holder in a form which is both visual and machine readable.*

INCITS/ISO/IEC 7501-2-1997 (R2004), Identification Cards - Machine Readable Travel Documents - Part 2: Machine Readable Visa

*This International Standard specifies the form and provides guidance on the construction of machine readable passports, in particular in relation to the sections of the document containing details of the holder in a form which is both visual and machine readable.*

INCITS/ISO/IEC 7501-3-1997 (R2004), Identification Cards - Machine Readable Travel Documents - Part 3: Machine Readable Official Travel Document

*This International Standard specifies generic formats and minimum data elements for visual inspection and machine reading of official travel documents in the ID-1 and ID-2 card formats containing a single form of machine readable data which may at the option of Governments, be accepted in lieu of a passport as defined in Annex 9.*

INCITS/ISO/IEC 7810-2003, Identification Cards – Physical Characteristics

*One of a series of standards describing the characteristics for identification cards as defined in the definitions clause and the use of such cards for international interchange. This International Standard specifies the physical characteristics of identification cards including card materials, construction, characteristics, and dimensions for four sizes of cards.*

INCITS/ISO/IEC 7811-1-2002, Identification cards - Recording technique - Part 1: Embossing

*This part of ISO/IEC 7811 is one of a series of standards describing the parameters for identification cards as defined in the definitions clause and the use of such cards for international interchange. This part of ISO/IEC 7811 specifies requirements for embossed characters on identification cards. The embossed characters are intended for transfer of data either by use of imprinters or by visual or machine reading. It takes into consideration both human and machine aspects and states minimum requirements.*

INCITS/ISO/IEC 7811-3-1995 (R2002), Identification Cards – Recording Technique – Part 3: Location of Embossed Characters on lD-1 Cards

*This part of ISO/IEC 7811 specifies the location of embossed characters on identification cards of ID-1 size, the dimensions of which are specified in ISO/IEC 7810. The embossed characters are intended for transfer of data either by use of imprinters or by visual or machine reading. ISO/IEC 10373 specifies the test procedures used to check cards against the parameters specified in this part of ISO/IEC 7811. This part of ISO/IEC 7811 specifies the requirements for cards used for identification. It takes into consideration both human and machine aspects and states minimum requirements. Note - Numeric values in the SI and/or Imperial measurement system in this part of ISO/IEC 7811 may have been rounded off and therefore are consistent with, but not exactly equal to, each other. Either system may be used, but the two should not be intermixed or reconverted. The original design*

INCITS/ISO/IEC 7811-6-2001 (R2006), Identification Cards - Recording Technique - Part 6: Magnetic Stripe - High Coercivity

*This part of ISO/IEC 7811 is one of a series of standards describing the characteristics for identification cards as defined in the definitions clause and the use of such cards for international interchange. This part of ISO/IEC 7811 specifies requirements for a high coercivity magnetic stripe (including any protective overlay) on an identification card, the encoding technique and coded character sets. It takes into consideration both human and machine aspects and states minimum requirements.*

INCITS/ISO/IEC 7811-7-2004, Identification cards - Recording technique - Part 7: Magnetic stripe - High coercivity, high density

*This part of ISO/IEC 7811 is one of a series of standards describing the characteristics for identification cards as defined in the definitions clause and the use of such cards for international interchange.*

INCITS/ISO/IEC 7812-1-2000 (R2006), Identification Cards - Identification of Issuers - Part 1: Numbering System

*This part of ISO/IEC 7812 specifies a numbering system for the identification of issuers of identification cards used in international and/or inter-industry interchange.*

INCITS/ISO/IEC 7812-2-2000, Identification Cards - Identification of Issuers - Part 2: Application and Registration Procedures

*Describes the application and registration procedures for numbers issued in accordance with ISO/IEC 7812-1. ISO/IEC 7812-1 specifies the numbering system for the identification of issuers of identification cards used in international and/or inter-industry interchange.*

INCITS/ISO/IEC 7812-2-2000 (R2006), Identification Cards – Identification of Issuers – Part 2: Application and Registration Procedures

*This part of ISO/IEC 7812 describes the application and registration procedures for numbers issued in accordance with ISO/IEC 7812-1. ISO/IEC 7812-1 specifies the numbering system for the identification of issuers of identification cards used in international and/or inter-industry interchange.*

INCITS/ISO/IEC 7813-2001 (R2006), Identification Cards – Financial Transaction Cards

*This International Standard specifies the physical characteristics, data structure and data content of ID-1 type cards used in financial transactions. It takes into consideration both human and machine aspects and states minimum requirements of conformity. It references layout, recording techniques, numbering systems, registration procedures, but not security requirements.*

INCITS/ISO/IEC 7816-1-1998 (R2005), Identification Cards - Optical Memory Cards - Integrated Circuit(s) Cards with Contacts - Part 1: Physical Characteristics

*This part of ISO/IEC 7816 specifies the physical characteristics of integrated circuit(s) cards with contacts. It applies to identification cards of the ID-1 card type which may include embossing and/or a magnetic stripe as specified in ISO/IEC 7811-1 to ISO/IEC 7811-6.*

INCITS/ISO/IEC 7816-1-1998/AM1-2003, Identification cards - Integrated circuit(s) cards with contacts - Part 1: Physical characteristics - Amendment 1: Maximum height of the IC contact surface

*Amendment 1 to ISO/IEC 7816-1:1998.*

INCITS/ISO/IEC 7816-10-1999 (R2005), Identification Cards - Integrated Circuit(s) Cards with Contacts - Part 10: Electronic Signals and Answer to Reset for Synchronous Cards

*This part of ISO/IEC 7816 specifies the power, signal structures, and the structure for the answer to reset between an integrated circuit(s) card with synchronous transmission and an interface device such as a terminal.*

INCITS/ISO/IEC 7816-11-2004, Identification cards - Integrated circuit cards - Part 11: Personal verfication through biometric methods

*This part of ISO/IEC 7816 specifies security related interindustry commands to be used for personal verification with biometric methods in integrated circuit(s) cards. It also defines the data structure and data access methods for use of the card as a carrier of the biometric reference data and/or as the device to perform the verification of a personal biometric (on-card matching). Identification of persons using biometric methods is outside the scope of this standard.*

INCITS/ISO/IEC 7816-15-2004, Identification cards - Integrated circuit cards with contacts - Part 15: Cryptographic information application

*This part of ISO/IEC 7816 specifies an application in a card. This application contains information on cryptographic functionality. This part of ISO/IEC 7816 defines a common syntax and format for the cryptographic information and mechanisms to share this information whenever appropriate.*

INCITS/ISO/IEC 7816-2-1999 (R2005), Information Technology - Identification Cards - Optical Memory Cards - Integrated Circuit(s) Cards with Contacts - Part 2: Dimensions and Location of the Contacts

*This part of ISO/IEC 7816 specifies the dimensions, locations and assignment for each of the contacts on integrated circuit(s) cards of an ID-1 card type.*

INCITS/ISO/IEC 7816-2-1999/AM1-2004, Identification cards - Integrated circuit cards - Part 2: Cards with contacts - Dimensions and location of the contacts AMENDMENT 1: Assignment of contacts C4 and C8

*Amendment 1 to ISO/IEC 7816-2:1999.*

INCITS/ISO/IEC 7816-3-1997 (R2004), Information Technology - Identification Cards - Integrated Circuit(s) Cards with Contacts - Part 3: Electronic Signals and Transmission Protocols

*This part of ISO/IEC 7816 specifies the power and signal structures, and information exchange between an integrated circuit(s) card and an interface device such as a terminal. It also covers signal rates, voltage levels, current values, parity convention, operating procedure, transmission mechanisms and communication with the card. It does not cover information and instruction content, such as identification of issuers and users, services and limits, security features, journaling and instruction definitions.*

INCITS/ISO/IEC 7816-3-1997/AM1-2002, Identification cards - Integrated circuit(s) cards with contacts - Part 3: Electronic signals and transmission protocols - Amendment 1: Electrical characteristics and class indication for integrated circuit(s) cards operating at 5 V, 3 V and

*Amendment 1 modifies Part 3 of ISO/IEC 7816-3.*

INCITS/ISO/IEC 7816-4-1995 (R2004), Information Technology – Identification Cards – Integrated Circuit(s) Cards with Contacts – Part 4: Interindustry Commands for Interchange

*This part of ISO/IEC 7816 specifies the content of the messages, commands and responses, transmitted by the interface device to the card and conversely, the structure and content of the historical bytes sent by the card during the answer to reset, the structure of files and data as seen at the interface when processing interindustry commands for interchange, etc. It does no cover the internal implementation within the card and/or the outside world. It allows further standardization of additional interindustry commands and security architecture.*

INCITS/ISO/IEC 7816-4-1995/AM1-1997 (R2004), Information Technology - Identification Cards - Integrated Circuit(s) Cards with Contacts - Part 4: Interindustry Commands for Interchange AMENDMENT 1: Impact of Secure Messaging on the Structures of APDU

*Amendment 1 published in 1997 modifies the 1995 edition of Part 4 of ISO/IEC 7816.*

INCITS/ISO/IEC 7816-5-2004, Identification cards - Integrated circuit cards - Part 5: Registration of application providers

*This part of ISO/IEC 7816 specifies a registration procedure for application providers, and establishes the authorities and procedures to ensure and optimize the reliability of this registration.*

INCITS/ISO/IEC 7816-6-1996, AM1-2000 (R2005), Identification Cards - Integrated Circuit(s) Cards with Contacts - Part 6: Interindustry Data Elements - AMENDMENT 1: IC Manufacturer's Register

*Specifies the numbering system, the rules for assignment, and the assigned values to identify manufacturers of integrated circuits used in contact and/or contactless integrated circuit cards.*

INCITS/ISO/IEC 7816-6-2004, Identification cards - Integrated circuit cards - Part 6: Interindustry data elements for interchange

*This document specifies, directly or by reference, data elements, including composite data elements, that may be used in interindustry interchange.*

INCITS/ISO/IEC 7816-7-1999 (R2005), Identification Cards - Integrated Circuit(s) Cards with Contacts - Part 7: Interindustry Commands for Structured Card Query Language (SCQL)

*Specifies the concept of a SCQL database (SCQL = Structured Card Query Language based on SQL, see ISO 9075) and the related interindustry enhanced commands.*

INCITS/ISO/IEC 7816-8-2004, Identification Cards - Integrated Circuit(s) Cards with Contacts - Part 8: Security Related Interindustry Commands

*This document specifies interindustry commands that may be used for cryptographic operations. The choice and conditions of use of cryptographic mechanisms may affect card exportability. The evaluation of the suitability of algorithms and protocols is outside the scope of this document. It does not cover the internal implementation within the card and/or the outside world.*

INCITS/ISO/IEC 7816-9-2004, Identification cards - Integrated circuit cards - Part 9: Commands for card management

*This document specifies interindustry commands for card and file management. These commands cover the entire life cycle of the card and therefore some commands may be used before the card has been issued to the cardholder or after the card has expired. It does not cover the internal implementation within the card and/or the outside world.*

INCITS/ISO/IEC 8484-1987 (R2004), Magnetic Stripes on Savings Books

*This International Standard specifies certain basic parameters for location, dimensions, electromagnetic properties, and recording characteristics of magnetic stripes on savingsbooks. Other parameters such as contents of recording and use of certain control characters are not specified in this document and should be subject of separate application standards.*

INCITS/ISO/IEC 8632-1-1999, Information Technology – Computer Graphics – Metafile for the Storage and Transfer of Picture Description Information – Part 1: Functional Specification

*ISO/IEC 8632 provides a file format suitable for the storage and retrieval of picture description information. The file format consists of an ordered set of elements that may be used to describe pictures in a way that is compatible between systems of different architectures, compatible with devices of differing capabilities and design, and meaningful to application constituencies. This picture description includes the capability for describing static images. This part of ISO/IEC 8632 describes the format using an abstract syntax.*

INCITS/ISO/IEC 8632-1-1999 (R2005), Information Technology – Computer Graphics – Metafile for the Storage and Transfer of Picture Description Information – Part 1: Functional Specification

*ISO/IEC 8632 provides a file format suitable for the storage and retrieval of picture description information. The file format consists of an ordered set of elements that may be used to describe pictures in a way that is compatible between systems of different architectures, compatible with devices of differing capabilities and design, and meaningful to application constituencies. This picture description includes the capability for describing static images. This part of ISO/IEC 8632 describes the format using an abstract syntax.*

INCITS/ISO/IEC 8632-3-1999 (R2005), Information Technology – Computer Graphics – Metafile for the Storage and Transfer of Picture Description Information – Part 3: Binary Encoding

*This part of ISO/IEC 8632 specifies a binary encoding of the Computer Graphics Metafile. For each of the elements specified in ISO/IEC 8632-1, this part specifies an encoding in terms of data types. For each of these data types, an explicit representation in terms of bits, octets and words is specified. For some data types, the exact representation is a function of the precisions being used in the metafile, as recorded in the Metafile Descriptor. This encoding of the Computer Graphics Metafile will, in many circumstances, minimize the effort required to generate and interpret the metafile.*

INCITS/ISO/IEC 8632-4-1999 (R2005), Information Technology – Computer Graphics – Metafile for the Storage and Transfer of Picture Description Information – Part 4: Clear Text Encoding

*This part of ISO/IEC 8632 specifies a clear text encoding of the Computer Graphics Metafile. For each of the elements specified in ISO/IEC 8632-1, a clear text encoding is specified. Allowed abbreviations are specified. The overall format of the metafile and the means by which comments may be interspersed in the metafile is specified. This encoding of the CGM allows metafiles to be created and maintained in a form which is simple to type, easy to edit and convenient to read.*

INCITS/ISO/IEC 8824-1-2004, Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation

*This Recommendation | International Standard provides a standard notation called Abstract Syntax Notation One (ASN.1) that is used for the definition of data types, values, and constraints on data types.*

INCITS/ISO/IEC 8824-2-2004, Information technology - Abstract Syntax Notation One (ASN.1): Information object specification

*This Recommendation | International Standard is part of Abstract Syntax Notation One (ASN.1) and provides notation for specifying information object classes, information objects and information object sets.*

INCITS/ISO/IEC 8824-3-2004, Information Technology - Abstract Syntax Notation One (ASN.1): Constraint Specification

*This Recommendation | International Standard is part of Abstract Syntax Notation One (ASN.1) and provides notation for specifying user-defined constraints, table constraints, and contents constraints.*

INCITS/ISO/IEC 8824-4-2004, Information Technology - Abstract Syntax Notation One (ASN.1): Parameterization of ASN.1 Specifications

*This Recommendation | International Standard is part of Abstract Syntax Notation One (ASN.1) and defines notation for parameterization of ASN.1 specifications.*

INCITS/ISO/IEC 8825-1-2004, Information technology - ASN.1 encoding rules: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)

*This Recommendation | International Standard specifies a set of basic encoding rules that may be used to derive the specification of a transfer syntax for values of types defined using the notation specified in ITU-T Rec. X.680 | ISO/IEC 8824-1, ITU-T Rec. X.681 | ISO/IEC 8824-2, ITU-T Rec. X.682 | ISO/IEC 8824-3, and ITU-T Rec. X.683 | ISO/IEC 8824-4, collectively referred to as Abstract Syntax Notation One or ASN.1.*

INCITS/ISO/IEC 8825-2-2004, Information technology - ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)

*This Recommendation | International Standard specifies a set of Packed Encoding Rules that may be used to derive a transfer syntax for values of types defined in ITU-T Rec. X.680 | ISO/IEC 8824-1. These Packed Encoding Rules are also to be applied for decoding such a transfer syntax in order to identify the data values being transferred.*

INCITS/ISO/IEC 8825-3-2004, Information technology - ASN.1 encoding rules: Specification of Encoding Control Notation (ECN)

*This Recommendation | International Standard defines a notation for specifying encodings of ASN.1 types or of parts of types.*

INCITS/ISO/IEC 8825-4-2004, Information technology - ASN.1 encoding rules: XML Encoding Rules (XER

*This Recommendation | International Standard specifies a set of Basic XML Encoding Rules (XER) that may be used to derive a transfer syntax for values of types defined in ITU-T Rec. X.680 | ISO/IEC 8824-1 and ITU-T Rec. X.681 | ISO/IEC 8824-2.*

INCITS/ISO/IEC 8859-1-1998 (R2004), Information Processing – 8-Bit Single Byte Coded Graphic Character Sets – Part 1: Latin Alphabet No. 1

*Specifies a set of 191 coded graphic characters identified as Latin alphabet No. 1. This set of coded graphic characters is intended for use in data and text processing applications and also for information interchange.*

INCITS/ISO/IEC 8859-10-1998 (R2004), Information Technology - 8-bit Single-Byte Coded Graphic Character Sets - Part 10: Latin Alphabet No. 6

*Specifies a set of 191 coded graphic characters identified as Latin alphabet No. 6. This set of coded graphic characters is intended for use in data and text processing applications and also for information interchange. The set contains graphic characters used for general purpose applications in typical office environments in at least the following languages: Danish, English, Estonian, Faroese, Finnish, German, Greenlandic, Icelandic, Irish, Latin, Lithuanian, Norwegian, Sami (but see note 3 of Annex A), Slovene and Swedish.*

INCITS/ISO/IEC 8859-2-1999 (R2005), Information Technology - 8-Bit Single-Byte Coded Graphic Character Sets - Part 2: Latin Alphabet No. 2

*This part of ISO/IEC 8859 specifies a set of 191 coded graphic characters identified as Latin alphabet No. 2.*

INCITS/ISO/IEC 8859-3-1999 (R2005), Information Technology - 8-Bit Single-Byte Coded Graphic Character Sets - Part 3: Latin Alphabet No. 3

*This part of ISO/IEC 8859 specifies a set of 184 coded graphic characters identified as Latin alphabet No. 3.*

INCITS/ISO/IEC 8859-4-1998 (R2004), Information Technology - 8-bit Single-byte Coded Graphic Character Sets - Part 4: Latin Alphabet No. 4

*Specifies a set of 191 coded graphic characters identified as Latin alphabet No. 4. This set of coded graphic characters is intended for use in data and text processing applications and also for information interchange. The set contains graphic characters used for general purpose applications in typical office environments in at least the following languages:Danish, English, Estonian, Finnish, German, Greenlandic, Latin, Latvian, Lithuanian, Norwegian, Sami, Slovene and Swedish.*

INCITS/ISO/IEC 8859-5-1999 (R2005), Information Technology - 8-Bit Single-Byte Coded Graphic Character Sets - Part 5: Latin/Cyrillic Alphabet

*This part of ISO/IEC 8859 specifies a set of 191 coded graphic characters identified as the Latin/Cyrillic alphabet.*

INCITS/ISO/IEC 8859-6-1999 (R2005), Information Technology - 8-Bit Single-Byte Coded Graphic Character Sets - Part 6: Latin/Arabic Alphabet

*This part of ISO/IEC 8859 specifies a set of 146 coded graphic characters identified as Latin/Arabic alphabet.*

INCITS/ISO/IEC 8859-8-1999 (R2005), Information Technology - 8-Bit Single-Byte Coded Graphic Character Sets - Part 8: Latin/Hebrew Alphabet

*This part of ISO/IEC 8859 specifies a set of 155 coded graphic characters identified as Latin/Hebrew alphabet.*

INCITS/ISO/IEC 9069-1988 (R2004), Information Processing - SGML Support Facilities - SGML Document Interchange Format (SDIF)

*This International Standard specifies a data structure known as the SGML Document Interchange Format (SDIF). SDIF enables a document conforming to ISO 8879, which might be stored in several entities, to be packed intoa data stream for interchange in a manner that will permit the recipient to reconstitute the separate entities. SDIF also allows related documents to be included in the data stream, such as covering letters, transmittal forms, catalog cards, formatting procedures, or the "document profile" required by a document architecture.*

INCITS/ISO/IEC 9070-1991 (R2004), Information Technology – SGML Support Facilities – Registration Procedures for Public Text Owner Identifiers

*This International Standard applies to the assignment of unique owner prefixes to owners of public text conforming to ISO 8879. It describes the procedures whereby such assignments are made, and the method of constructing registered owner names from them. Procedures for self-assignment of owner prefixes by standards bodies and other organizations are also specified.*

INCITS/ISO/IEC 9075-1-2003, Information technology - Database languages - SQL - Part 1: Framework (SQL/Framework)

*This part of ISO/IEC 9075 describes the conceptual framework used in other parts of ISO/IEC 9075 to specify the grammar of SQL and the result of processing statements in that language by an SQL-implementation. This part of ISO/IEC 9075 also defines terms and notation used in the other parts of ISO/IEC 9075.*

INCITS/ISO/IEC 9075-10-2003, Information Technology - Database Languages - SQL - Part 10: Object Language Binding (SQL/OLB)

*This part of ISO/IEC 9075 defines extensions of Database language SQL to support embedding of SQL statements into programs written in the Java; programming language (Java is a registered trademark of Sun Microsystems, Inc.). The embedding of SQL into Java is commonly known as SQLJ.*

INCITS/ISO/IEC 9075-11-2003, Information technology - Database languages - SQL - Part 11: Information and Definition Schemas (SQL/Schemata)

*Specifies an Information Schema and a Definition Schema that describes: - The SQL object identifier of ISO/IEC 9075. - The structure and integrity constraints of SQL-data. - The security and authorization specifications relating to SQL-data. - The features, subfeatures, and packages of ISO/IEC 9075, and the support that each of these has in an SQL implementation. - The SQL implementation information and sizing items of ISO/IEC 9075 and the values supported by an SQL implementation.*

INCITS/ISO/IEC 9075-13-2003, Information technology - Database languages - SQL - Part 13: SQL Routines and Types Using the Java TM Programming Language (SQL/JRT)

*Specifies the the ability to invoke static methods written in the Java; programming language as SQL-invoked routines and to use classes defined in the Java programming language as SQL structured user-defined types. (Java is a registered trademark of Sun Microsystems, Inc.)*

INCITS/ISO/IEC 9075-14-2003, Information technology - Database languages - SQL - Part 14: XML-Related Specifications (SQL/XML)

*Defines ways in which Database Language SQL can be used in conjunction with XML.*

INCITS/ISO/IEC 9075-2-2003, Information technology - Database languages - SQL - Part 2: Foundation (SQL/Foundation)

*This part of ISO/IEC 9075 defines the data structures and basic operations on SQL-data. It provides functional capabilities for creating, accessing, maintaining, controlling, and protecting SQL-data.*

INCITS/ISO/IEC 9075-3-2003, Information technology - Database languages - SQL - Part 3: Call-Level Interface (SQL/CLI)

*This part of ISO/IEC 9075 defines the structures and procedures that may be used to execute statements of the database language SQL from within an application written in a standard programming language in such a way that procedures used are independent of the SQL statements to be executed.*

INCITS/ISO/IEC 9075-4-2003, Information Technology - Database languages - SQL - Part 4: Persistent Stored Modules (SQL/PSM)

*This part of International Standard ISO/IEC 9075 specifies the syntax and semantics of a database language for declaring and maintaining persistent database language routines in SQL-server modules.*

INCITS/ISO/IEC 9075-9-2003, Information Technology - Database Languages - SQL - Part 9: Management of External Data (SQL/MED)

*This part of ISO/IEC 9075 defines extensions to Database Language SQL to support management of external data through the use of foreign-data wrappers and datalink types.*

INCITS/ISO/IEC 9160-1988 (R2004), Information Processing - Data Encipherment - Physical Layer Interoperability Requirements

*Applies to systems for encipherment of ADP information in the physical layer of data communications.*

INCITS/ISO/IEC 9171-1-1990 (R2004), Information Technology – 130 mm Optical Disk Cartridge, Write Once, for Information Interchange – Part 1: Unrecorded Optical Disk Cartridge

*This part of ISO/IEC 9171 specifies definitions of essential concepts, the environment in which the characteristics are to be tested, the environments in which the cartridge is to be operated and stored, the mechanical, physical and dimensional characteristics of the case and of the optical disk, the optical characteristics and the recording characteristics for recording the information once and for reading it many times, so as to provide physical interchangeability between data processing systems.*

INCITS/ISO/IEC 9171-2-1990 (R2004), Information Technology – 130 mm Optical Disk Cartridge, Write Once, for Information Interchange – Part 2: Recording Format

*This part of ISO/IEC 9171 specifies two formats for the physical disposition of hte tracks and sectors, the error correction codes, the modulation methods used for recording and the quality of the recorded signals.*

INCITS/ISO/IEC 9281-1-1990 (R2004), Information Technology – Picture Coding Methods – Part 1: Identification

*This part of ISO/IEC 9281 specifies the identification methods for coding of pictorial information in digital form. It does not specify the contents of the data field of a picture entity. For instance, this field may also contain audio and/or animation data associated with the data specifying the picture(s.*

INCITS/ISO/IEC 9281-2-1990 (R2004), Information Technology – Picture Coding Methods – Part 2: Procedure for Registration

*This part of ISO/IEC 9281 specifies the procedures to be followed by a Registration Authority in preparing, maintaining and publishing a register of identifiers allocated to picture coding methods.*

INCITS/ISO/IEC 9282-1-1988 (R2004), Information Processing – Coded Representation of Pictures – Part 1: Encoding Principles for Picture Representation in a 7-Bit or 8-Bit Environment

*This part of ISO 9282 defines the coding principles to be used in interchanging pictures consisting of graphic images ina 7-bit or 8-bit environment, the data structures to be used to represent the primitive describing a picture, the general datatypes which can be used as operands within a primitive. This part of ISO 9282 does not deal with the presentation semantics of pictures. These are defined in the related International Standards. This part of ISO 9282 applies to the data streams containing data structured in accordance with picture coding methods defined in ISO 9281.*

INCITS/ISO/IEC 9293-1994 (R2006), Information Technology – Volume and File Structure of Disk Cartridges for Information Interchange

*This International Standard specifies the volume and file structure of disk cartridges for the interchange of information between users of information processing systems. It also specifies an optional record structure. All the descriptions (except those in annex B)of Flexible Disk Cartridges (FDC) can be applied to Optical Disk Cartridges (ODC) as well This International Standard is applicable to various types of disk cartridges including those identified in clause 3, and other types which may be the subject of future International Standards.*

INCITS/ISO/IEC 9541-1-1991 (R2004), Information Technology – Font Information Interchange – Part 1: Architecture

*ISO/IEC 9541 defines a method of naming glyphs and glyph collections, independent of any document encoding technique; it assumes that one or more methods of associating document encoding techniques with glyph identifiers used in font resources will be provided by text processing systems. This part of ISO/IEC 9541 specifies the architecture of a font resource, i.e., the font description, font metrics, glyph description and glyph metrics properties required for font references and the interchange of font resources.*

INCITS/ISO/IEC 9541-1-1991/AM1-2000 (R2006), Information Technology - Font Information Interchange - Part 1: Architecture - Amendment 1: Typeface Design Grouping

*ISO/IEC 9541 defines a method of naming glyphs and glyph collections, independent of any document encoding technique; it assumes that one or more methods of associating document encoding techniques with glyph identifiers used in font resources will be provided by text processing systems. This part of ISO/IEC 9541 specifies the architecture of a font resource, i.e., the font description, font metrics, glyph description and glyph metrics properties required for font references and the interchange of font resources.*

INCITS/ISO/IEC 9541-2-1991 (R2004), Information Technology – Font Information Interchange – Part 2: Interchange Format

*ISO/IEC 9541 as a hole specifies the architecture of font resources, as well as the formats for font interchange amongst information processing systems. It also specifies the architecture and formats that can be used to construct font references in general electronic document interchange. This part of ISo/IEC 9541 specifies the interchange formats for font information, and the minimum subsets of that information required for interchange. This part of ISO/IEC 9541 requires the property definitions as defined in ISO/IEC 9541-1.*

INCITS/ISO/IEC 9541-3-1994 (R2004), Information Technology – Font Information Interchange – Part 3: Glyph Shape Representation

*ISO/IEC 9541 as a whole specifies the architecture of font resources, as well as the formats for font interchange amongst information processing systems. It also specifies the architecture and formats that can be used to construct font references in general electronic document interchange. This part of ISO/IEC 9541 specifies the architecture and interchange formats of glyphs shape representations.*

INCITS/ISO/IEC 9542-2002, Information Processing Systems - Telecommunications and Information Exchange Between Systems - End System to Intermediate System Routeing Exchange Protocol for Use In Conjunction with the Protocol for Providing the

*Specifies a protocol which is used bv Network Layer entities operating IS0 8473 in End Systems and Iniermediate Systems (referred to herein as ES and IS respectivelv) to maintain routeing information. The Protocol herein described relies upon the provision of a connectionless-mode underlying service.*

INCITS/ISO/IEC 9592-1-1989 (R2004), Information Processing Systems – Computer Graphics – Programmer's Hierarchical Interactive Graphics System (PHIGS) (Part 1: Functional Description)

*This part of ISO/IEC 9592 specifies a set of functions for computer graphics programming, the Programmer’s Hierarchical Interactive Graphics System (PHIGS.*

INCITS/ISO/IEC 9592-1-1997, Information Technology - Computer Graphics and Image Processing - Programmer's Hierarchical Interactive Graphics System (PHIGS) - Part 1: Functional Description

*Specifies a set of functions for computer graphics programming, the Programmer's Hierarchical Interactive Graphics Systems (PHIGS). PHIGS is a graphics system for application programs that produce computer generated pictures on output devices.*

INCITS/ISO/IEC 9592-2-1997 (R2004), Information Technology - Computer Graphics and Image Processing - Programmer's Hierarchical Interactive Graphics System (PHIGS) - Part 2: Archive File Format

*This part of ISO/IEC 9592 specifies a file format suitable for the storage and retrieval of PHIGS structure definitions.*

INCITS/ISO/IEC 9592-3-1997 (R2004), Information Technology - Computer Graphics and Image Processing - Programmer's Hierarchical Interactive Graphics System (PHIGS) - Part 3: Specification for Clear-Text Encoding of Archive File

*This part of ISO/IEC 9592 specifies a clear-text encoding of the PHIGS archive file. For each of the archive file elements specified in ISO/IEC 9592-2, a clear text encoding is specified. This part of ISO/IEC 9592 specifies the overall format of the archive file and the means by which comments may be interspersed in the archive file.*

INCITS/ISO/IEC 9593-1-1990 (R2002), Information Processing Systems – Computer Graphics – Programmer's Hierarchical Interactive Graphics System (PHIGS) Language Bindings (Part 1: FORTRAN)

*Specifies a language-independent nucleus of a graphics system. For integration into a programming language, PHIGS is embedded in a language-dependent layer obeying the particular conventions of that language. This standard specifies such a language-depe*

INCITS/ISO/IEC 9593-1-1990/AM1-1995 (R2006), Information Processing Systems – Computer Graphics – Programmer's Hierarchical Interactive Graphics System (PHIGS) Language Bindings – Part 1: FORTRAN – Amendment 1

*ISO/IEC 9592-l specifies a language independent nucleus of a graphics system. For integration into a programming language, PHIGS is embedded in a language dependent layer obeying the particular conventions of that language. This part of ISO/IEC 9593 specifies such a language dependent layer for the FORTRAN language.*

INCITS/ISO/IEC 9593-3-1990 (R2003), Information Technology – Computer Graphics – Programmer's Hierarchical Interactive Graphics System (PHIGS) Language Bindings (Part 3: Ada)

*ISO/IEC 9592 specifies a language independent nucleus of a graphics system. For integration into a programming language, PHIGS is embedded in a language dependent layer obeying the particular conventions of that language. This part of ISO/IEC 9593 specifies such a language dependent layer for the Ada computer programming language.*

INCITS/ISO/IEC 9593-3-1990/AM1-1994 (R2004), Information Technology – Computer Graphics – Programmer's Hierarchical Interactive Graphics System (PHIGS) Language Bindings – Part 3: Ada – Amendment 1: Incorporation of PHIGS PLUS

*Specifies a language dependent layer for the Ada computer programming language.*

INCITS/ISO/IEC 9593-4-1991 (R2002), Information Technology – Computer Graphics – Programmer's Hierarchical Interactive Graphics System (PHIGS) Language Bindings (Part 4: C)

*Specifies a language-independent nucleus of a graphics system. For integration into a programming language, PHIGS is embedded in a language-dependent layer obeying the particular conventions of that language. This standard specifies such a language-depe*

INCITS/ISO/IEC 9593-4-1991/AM1-1994 (R2004), Information Technology – Computer Graphics – Programmer's Hierarchical Interactive Graphics System (PHIGS) Language Bindings – Part 4: C -- Amendment 1

*Specifies a language-dependent layer for the C language.*

INCITS/ISO/IEC 9594-1-2001, Information Technology – Open Systems Interconnection – The Directory: Overview of Concepts, Models and Services

*The Directory provides the directory capabilities required by OSI applications, OSI management processes, other OSI layer entities, and telecommunications services. Among the capabilities which it provides are those of "user-friendly naming", whereby objects can be referred to by names which are suitable for citing by human users (though not all objects need have user-friendly names); and "name-to-address mapping" which allows the binding between objects and their locations to be dynamic.*

INCITS/ISO/IEC 9594-10-2001, Information technology - Open Systems Interconnection - The Directory: Use of systems management for administration of the Directory

*This Specification describes the requirements for Directory management, and analyses these requirements to identify those that may be realized by OSI Systems Management services (and protocols), those that are realized by Directory services (and protocols), and those that are realized by local means. Based on the requirements, this Directory Specification defines a model for Directory management that encompasses all of the requirements.*

INCITS/ISO/IEC 9594-2-2001, Information Technology – Open Systems Interconnection – The Directory: Models

*The models defined in this Recommendation | International Standard provide a conceptual and terminological framework for the other ITU-T X.500-series Recommendations | parts of ISO/IEC 9594 which define various aspects of the Directory.*

INCITS/ISO/IEC 9594-3-2001, Information Technology – Open Systems Interconnection – The Directory: Abstract Service Definition

*This Recommendation | International Standard defines in an abstract way the externally visible service provided by the Directory. This Recommendation | International Standard does not specify individual implementations or products.*

INCITS/ISO/IEC 9594-4-2001, Information Technology – Open Systems Interconnection – The Directory: Procedures for Distributed Operation

*This Recommendation | International Standard specifies the behaviour of DSAs taking part in the distributed Directory application. The allowed behaviour has been designed so as to ensure a consistent service given a wide distribution of the DIB across many DSAs. The Directory is not intended to be a general purpose database system, although it may be built on such systems. It is assumed that there is a considerably higher frequency of queries than of updates.*

INCITS/ISO/IEC 9594-5-2001, Information Technology – Open Systems Interconnection – The Directory: Protocol Specifications

*This Recommendation | International Standard specifies the Directory Access Protocol, the Directory System Protocol, the Directory Information Shadowing Protocol, and the Directory Operational Binding Management Protocol fulfilling the abstract services specified in ITU-T Rec. X.511 | ISO/IEC 9594-3, ITU-T Rec. X.518 | ISO/IEC 9594-4, and ITU-T Rec. X.525 | ISO/IEC 9594-9.*

INCITS/ISO/IEC 9594-6-2001, Information Technology – Open Systems Interconnection – The Directory: Selected Attribute Types

*This Recommendation | International Standard defines a number of attribute types and matching rules which may be found useful across a range of applications of the Directory.*

INCITS/ISO/IEC 9594-7-2001, Information technology - Open Systems Interconnection - The Directory: Selected object classes

*This Recommendation | International Standard defines a number of object classes and name forms which may be found useful across a range of applications of the Directory. The definition of an object class involves listing a number of attribute types which are relevant to objects of that class. The definition of a name form involves naming the object class to which it applies and listing the attributes to be used in forming names for objects of that class. These definitions are used by the administrative authority which is responsible for the management of the directory information.*

INCITS/ISO/IEC 9594-8-2001, Information Technology – Open Systems Interconnection – The Directory: Authentication Framework

*This Recommendation | International Standard addresses some of the security requirements in the areas of authentication and other security services through the provision of a set of frameworks upon which full services can be based. Specifically, this Recommendation | International Standard defines frameworks for: - Public-key certificates; - Attribute certificates; - Authentication services.*

INCITS/ISO/IEC 9594-9-2001, Information Technology – Open Systems Interconnection – The Directory: Replication

*This Recommendation | International Standard specifies a shadow service which DSAs may use to replicate Directory information. The service allows Directory information to be replicated among DSAs to improve service to Directory users. The shadowed information is updated, using the defined protocol, thereby improving the service provided to users of the Directory.*

INCITS/ISO/IEC 9636-1-1991 (R2002), Information Technology – Computer Graphics – Interfacing Techniques for Dialogues with Graphical Devices (CGI) – Functional Specification – Part 1: Overview, Profiles and Conformance

*This part of ISO/IEC 9636 establishes the conceptural model, functional capability, and minimum conformance requirements of the Computer Graphics Interface (CGI). It specifies design requirements for encodings of the CGI.*

INCITS/ISO/IEC 9636-2-1991 (R2002), Information Technology – Computer Graphics – Interfacing Techniques for Dialogues with Graphical Devices (CGI) – Functional Specification – Part 2: Control

*This part of ISO/IEC 9636 establishes those functions of the Computer Graphics Interface concerned with Virtual Device Management, coordinate space control, and error control.*

INCITS/ISO/IEC 9636-3-1991 (R2002), Information Technology – Computer Graphics – Interfacing Techniques for Dialogues with Graphical Devices (CGI) – Functional Specification – Part 3: Output

*This part of 9636 establishes those functions of the Computer Graphics Interface concerned with output primitives and associated attributes and controls for creating graphical pictures.*

INCITS/ISO/IEC 9636-4-1991 (R2002), Information Technology – Computer Graphics – Interfacing Techniques for Dialogues with Graphical Devices (CGI) – Functional Specification – Part 4: Segments

*This part of 9636 defines those functions of the Computer Graphics Interface concerned with the creation, modification, and manipulation of graphic pictures using segments.*

INCITS/ISO/IEC 9636-5-1991 (R2002), Information Technology – Computer Graphics – Interfacing Techniques for Dialogues with Graphical Devices (CGI) – Functional Specification – Part 5: Input and Echoing

*This part of 9636 defines those functions of the Computer Graphics Interface concerned with obtaining graphical and non-graphical input from a Virtual Device of device class INPUT or OUTIN. This part of 9636 also defines functions to support echoing of*

INCITS/ISO/IEC 9636-6-1991 (R2002), Information Technology – Computer Graphics – Interfacing Techniques for Dialogues with Graphical Devices (CGI) – Functional Specification – Part 6: Raster

*This part of 9636 defines those functions of the Computer Graphics Interface concerned with creating, modifying, retrieving, and displaying protions of an image stored as pixel data. It includes functionality for combining such images.*

INCITS/ISO/IEC 9637-1-1994 (R2004), Information Technology – Computer Graphics – Interfacing Techniques for Dialogues with Graphical Devices (CGI) – Data Stream Binding – Part 1: Character Encoding

*Specifies a character encoding of the Computer Graphics Interface. For each of the functions specified in ANSI/ISO/IEC 9637 an encoding is specified. Provides a highly compact representation of the data, suitable for applications that require the data to be of minimum size and suitable for transmission with character-oriented transmission services.*

INCITS/ISO/IEC 9637-2-1992 (R2004), Information Technology – Computer Graphics – Interfacing Techniques for Dialogues with Graphical Devices (CGI) – Data Stream Binding – Part 2: Binary Encoding

*This part of ISO/IEC 9637 specifies a Binary Encoding of the Computer Graphics Interface (CGI) data stream. For each of the function syntaxes in clause 5 and clause 6 of ISO/IEC 9636-2, ISO/IEC 9636-3, ISO/IEC 9636-4, ISO/IEC 9636-5, and ISO/IEC 9636-6, an encoding is specified in terms of an opcode and a sequence of parameters of specified data types.*

INCITS/ISO/IEC 9638-3-1994 (R2005), Information Technology - Computer Graphics - Interfacing techniques for dialogues with graphical devices (CGI) - Language binding Part 2: ADA

*The Computer Graphics Interface (CGI) (ISO/IEC 9636), specifies a language independent standard interface between device-independent and device-dependent parts of a graphics system. For integration into a programming language, CGI is embedded in a language dependent layer obeying the particular conventions of that language. This part of ISO/IEC 9638 specifies such a language dependent layer for the Ada programming language.*

INCITS/ISO/IEC 9796-2-2002, Information technology - Security techniques - Digital signature schemes giving message recovery Part 2: Integer factorization based mechanisms

*Specifies three digital signature schemes giving message recovery, two of which are deterministic (non-randomized) and one of which is randomized. The security of all three schemes is based on the difficulty of factorizing large numbers. All three schemes can provide either total or partial message recovery.*

INCITS/ISO/IEC 9796-3-2000 (R2005), Information Technology - Security Techniques - Digital Signature Schemes Giving Message Recovery - Part 3: Discrete Logarithm Based Mechanisms

*Specifies two randomized digital signature schemes giving message recovery. The security of both schemes is based on the difficulty of the discrete logarithm problem. The first scheme is defined on a prime field and the second one on an elliptic curve. Also defines a redundancy scheme using hash-codes and specifies how the basic signature schemes are to be combined with the redundancy scheme. Also defines an optional control field in the hash-token, which can provide added security to the signature.*

INCITS/ISO/IEC 9797-1-1999 (R2005), Information Technology - Security techniques - Message Authentication Codes (MACs) - Part 1: Mechanisms using a block cipher

*This part of ISO/IEC 9797 specifies six MAC algorithms that use a secret key and an n-bit block cipher to calcu- late an m-bit MAC. These mechanisms can be used as data integrity mechanisms to verify that data has not been altered in an unauthorised manner. They can also be used as message authentication mechanisms to pro- vide assurance that a message has been originated by an entity in possession of the secret key.*

INCITS/ISO/IEC 9797-2-2002, Information technology - Security techniques - Message Authentication Codes (MACs) - Part 2: Mechanisms using a dedicated hash-function

*Specifies three MAC algorithms that use a secret key and a hash-function (or its round function) with an n-bit result to calculate an m-bit MAC. These mechanisms can be used as data integrity mechanisms to verify that data has not been altered in an unauthorised manner. They can also be used as message authentication mechanisms to provide assurance that a message has been originated by an entity in possession of the secret key.*

INCITS/ISO/IEC 9798-2-1994 (R2005), Information Technology – Security Techniques – Entity Authentication – Part 2: Mechanisms Using Symmetric Encipherment Algorithms

*This part of ISO/IEC 9798 specifies entity authentication mechanisms using symmetric encipherment algorithms. Four of the mechanisms provide entity authentication between two entities where no trusted third party is involved; two of these are mechanisms t.*

INCITS/ISO/IEC 9798-2-1999, Information Technology - Security techniques - Entity authentication - Part 2: Mechanisms using symmetric encipherment algorithms

*This part of ISO/IEC 9798 specifies entity authentication mechanisms using symmetric encipherment algorithms. Four of the mechanisms provide entity authentication between two entities where no trusted third party is involved; two of these are mechanisms to unilaterally authenticate one entity to another, while the other two are mechanisms for mutual authentication of two entities. The remaining mechanisms require a trusted third party for the establishment of a common secret key, and realize mutual or unilateral entity authentication. The mechanisms specified in this part of ISO/IEC 9798 use time variant parameters such as time stamps, sequence numbers, or random numbers, to prevent valid authentication information from being accepted at a later time or more than once. If no trusted third party is involved and a time stamp or sequence number is used, one pass is needed*

INCITS/ISO/IEC 9798-4-1999 (R2005), Information Technology - Security techniques - Entity authentication - Part 4: Mechanisms using a cryptographic check function

*This part of ISO/IEC 9798 specifies entity authentication mechanisms using a cryptographic check function. Two mechanisms are concerned with the authentication of a single entity (unilateral authentication), while the remaining are mechanisms for mutual a.*

INCITS/ISO/IEC 9798-5-2004, Information technology - Security techniques - Entity authentication - Part 5: Mechanisms using zero-knowledge techniques

*This part of ISO/IEC 9798 specifies entity authentication mechanisms using zero-knowledge techniques.  Clause 5 specifies mechanisms (already present in the first edition, ISO/IEC 9798-4:1999) based on identities and providing unilateral authentication. They have been repaired after the withdrawal of ISO/IEC 9796:1991.  Clause 6 specifies mechanisms (inserted in this second edition) based on integer factorization and providing unilateral authentication, etc.*

INCITS/ISO/IEC 9804-1998, Information technology - Open Systems Interconnection - Service definition for the Commitment, Concurrency and Recovery service element

*This standard is intended for reference by other specifications when the functionality of commitment, concurrency and recovery is required.*

INCITS/ISO/IEC 9805-1-1998, Information technology - OSI - Protocol for the Commitment, Concurrency and Recovery service element: Protocol specification - Part 1

*This standard is to be applied by reference from other specifications. This is done within such specifications by reference to the CCR services defined in ITU-T Rec. X.8511/ISO/IEC 9804.*

INCITS/ISO/IEC 9805-2-1996, Information technology - OSI - Protocol for the Commitment, Concurrency and Recovery service element: Protocol Implementation Conformance Statement (PICS) proforma

*This standard is one of a set of International standards produced to facilitate the interconnection of information processing systems.*

INCITS/ISO/IEC 9899-1999 (R2005), Programming Languages – C

*Specifies the form and establishes the interpretation of programs written in the C programming language.*

INCITS/ISO/IEC 9973-1994 (R2004), Information Technology – Computer Graphics and Image Processing – Procedures for Registration of Graphical Items

*This International Standard specifies procedures to be followed in preparing, maintaining, and publishing a register of identifiers and meanings that, under the direction of ISO/IEC JTCUSC24, are assigned to graphical items.*

INCITS/ISO/IEC 9983-1995 (R2003), Information Technology - Designation of Unrecorded Flexible Disk Cartridges

*Specifies an identifier to appear on each flexible disk cartridge (FDC) and the minimum information to appear on packages of unrecorded flexible disk cartridges. The information according to this International Standard shall appear on cartridges and on packages of unrecorded flexible disk cartridges available to end uses.*

INCITS/ISO/IEC 9995-1-1994, Information Technology – Keyboard Layouts for Text and Office Systems – Part 1: General Principles Governing Keyboard Layouts

INCITS/ISO/IEC 9995-2-1994, Information Technology – Keyboard Layouts for Text and Office Systems – Part 2: Alphanumeric Section

INCITS/ISO/IEC 9995-3-1994, Information Technology – Keyboard Layouts for Text and Office Systems – Part 3: Complementary Layouts of the Alphanumeric Zone of the Alphanumeric Section

INCITS/ISO/IEC 9995-3-1994/AM1-1998, Information Technology - Keyboard Layouts for Text and Office Systems - Part 3: Complementary Layouts of the Alphanumeric Zone of the Alphanumeric Section - Amendment 1

*Specifies changes to Table 1 on Page 2 of ISO/IEC 9995-3:1994.*

INCITS/ISO/IEC 9995-4-1994, Information Technology – Keyboard Layouts for Text and Office Systems – Part 4: Numeric Section

INCITS/ISO/IEC 9995-5-1994, Information Technology – Keyboard Layouts for Text and Office Systems – Part 5: Editing Section

INCITS/ISO/IEC 9995-6-1994, Information Technology – Keyboard Layouts for Text and Office Systems – Part 6: Function Section

INCITS/ISO/IEC 9995-7-1994, Information Technology – Keyboard Layouts for Text and Office Systems – Part 7: Symbols Used to Represent Functions

INCITS/ISO/IEC 9995-8-1994, Information Technology – Keyboard Layouts for Text and Office Systems – Part 8: Allocation of Letters to the Keys of a Numeric Keypad

INCITS/ISO/IEC TR 13335-1-1996, Information Technology - Guidelines for the Management of IT Security - Part 1: Concepts and Models for IT Security

*ISO/IEC TR 13335 contains guidance on the management of IT security.*
*Presents the basic management concepts and models that are essential for an introduction into the management of IT security. These concepts and models are further discussed and developed in the remaining parts to provide more detailed guidance. Together these parts can be used to help identify and manage all aspects of IT security. Part 1 is necessary for a complete understanding of the subsequent parts of ISO/IEC TR 13335.*

INCITS/ISO/IEC TR 13335-2-1997, Information Technology - Guidelines for the Management of IT Security - Part 2: Managing and Planning IT Security

*Addresses subjects essential to the management of IT security, and the relationship between those subjects. These guidelines are useful for the identification and the management of all aspects of IT security. Familiarity with the concepts and models introduced in Part 1 is essential for a complete understanding of this part.*

INCITS/ISO/IEC TR 13335-3-1998, Information Technology - Guidelines for the Management of IT Security - Part 3: Techniques for the Management of IT Security

*Provides techniques for the management of IT security. The techniques are based on the general guidelines laid out in ISO/IEC TR 13335-1 and ISO/IEC TR 13335-2. These guidelines are designed to assist the implementation of IT security. Familiarity with the concepts and models introduced in ISO/IEC TR 13335-1 and the material concerning the management and planning of IT security in ISO/IEC TR 13335-2 is important for a complete understanding of this part of ISO/IEC TR 13335.*

INCITS/ISO/IEC TR 13335-4-2000, Information Technology - Guidelines for the Management of IT Security - Part 4: Selection of Safeguards

*Provides guidance on the selection of safeguards, taking into account business needs and security concerns. It describes a process for the selection of safeguards according to security risks and concerns and the specific environment of an organization. It shows how to achieve appropriate protection, and how this can be supported by the application of baseline security. An explanation is provided on how the approach outlined in this part of ISO/IEC TR 13335 supports the techniques for the management of IT security laid out in ISO/IEC TR 13335-3.*

INCITS/ISO/IEC TR 13335-5-2001, Information Technology - Guidelines for the Management of IT Security - Part 5: Management Guidance on Network Security

*ISO/IEC TR 13335-5 provides guidance with respect to networks and communications to those responsible for the management of IT security. This guidance supports the identification and analysis of the communications related factors that should be taken into account to establish network security requirements. This part of ISO/IEC TR 13335 builds upon Part 4 of this Technical Report by providing an introduction on how to identify appropriate safeguard areas with respect to security associated with connections to communications networks. It is not within the scope of this TR to provide advice on the detailed design and implementation aspects of the technical safeguard areas. That advice will be dealt with in future ISO documents.*

ISO/IEC 14776-452-2005(E), Information technology - Small Computer System Interface (SCSI) Part 452: Primary Commands (SPC-2

*This part of ISO/IEC 14776 defines the SCSI commands that are mandatory and options for all SCSI devices. It also defines the SCSI commands that may apply to any device model. Since a host processor is a part of any SCSI domain, the processor device model is defined in this standard. The commands that may be implemented by a SCSI processor device are also define in this standard. Some target SCSI devices may implement an initiator subset of the processor device model to support the Asynchronous Event Reporting capability defined in the SCSI-3 Architecture Model.*

## ITSDF (Industrial Truck Standards Development Foundation, Inc.)

ANSI/ITSDF B56.1-2005, Low Lift and High Lift Trucks

*This Standard defines the safety requirements relating to the elements of design, operation, and maintenance of low lift and high lift powered industrial trucks controlled by a riding or walking operator, and intended for use on compacted, improved surfaces.*

ANSI/ITSDF B56.10-2006, Manually Propelled High Lift Industrial Trucks, Safety Standard for

*This Standard defines the safety requirements relating to the elements of design, operation, and maintenance of manually propelled high lift industrial trucks controlled by a walking operator, and intended for use on level, improved surfaces.*

ANSI/ITSDF B56.11.1-2005, Double Race or Bi-Level Swivel and Rigid Industrial Casters

*This standard establishes dimensional standards for double race of bi-level swivel and rigid industrial casters in order to provide for the overall interchangeability of a complete caster.*

ANSI/ITSDF B56.11.4-2005, Hook-Type Forks and Fork Carriers for Powered Industrial Forklift Trucks

*The scope of this Standard encompasses standards relative to hook-type fork carriers and the attaching elements of fork arms and load handling attachments for forklift trucks, in relation to manufacturers' rated capacities of trucks up to and including 11, 000 kg (24, 000 lb).*

ANSI/ITSDF B56.11.5-2005, Measurement of Sound Emitted by Low Lift, High Lift, and Rough Terrain Powered Industrial Trucks

*This standard establishes the conditions, test procedures, environment, and instrumentation for the determination and reporting of the A-weighted sound pressure level of electric battery and internal combustion engine powered, low lift, high lift, and rough terrain industrial trucks. It excludes earthmoving machinery, industrial cranes, and vehicles intended primarily for use on public roads.*

ANSI/ITSDF B56.11.6-2005, Evaluation of Visibility from Powered Industrial Trucks

*This standard establishes the conditions, procedures, equipment, and acceptability criteria for evaluating visibility from powered industrial trucks. It applies to internal combustion powered and electric high lift, counterbalanced, sit-down rider industrial trucks up to and including 10, 000 kg (22, 000 lb) capacity.*

ANSI/ITSDF B56.11.7-2005, Liquid Propane Gas (LPG) Fuel Cylinders (Horizontal or Vertical) Mounting - Liquid Withdrawal for Powered Industrial Trucks

*This standard establishes dimensions for LPG fuel cylinders used on powered industrial trucks.*

ANSI/ITSDF B56.5-2005, Safety Standard for Guided Industrial Vehicles and Automated Functions of Manned Industrial Vehicles

*This Standard defines the safety requirements relating to the elements of design, operation, and maintenance of powered, not mechanically restrained, unmanned automatic guided industrial vehicles and automated functions of manned industrial vehicles. It also applies to vehicles originally designed to operate exclusively in a manned mode but which was subsequently modified to operate in an unmanned, automatic mode, or in a semiautomatic, manual, or maintenance mode.*

*This Standard applies to guided industrial vehicles in automatic mode of operation in nonrestricted areas. Portions of this Standard, when designated, also apply to semiautomatic, manual, and maintenance modes and restricted areas of vehicle operation. It is recognized that restricted areas may exist, and require the user and/ or manufacturer to*

ANSI/ITSDF B56.6-2005, Rough Terrain Forklift Trucks

*This standard defines the safety requirements relating to the elements of design, operation, and maintenance of rough terrain forklift trucks. These trucks are intended for operation on unimproved natural terrain as well as the disturbed terrain of construction sites*

ANSI/ITSDF B56.8-2006, Safety Standard for Personnel and Burden Carriers

*This Standard defines safety requirements relating to the elements of design, operation, and maintenance of powered personnel and burden carriers having three or more wheels, a maximum speed not exceeding 40 km/h (25 mph), and a load capacity not exceeding 4536 kg (10,000 lb). This Standard does not include vehicles intended primarily for earth moving or over-the-road hauling, or unmanned automatic guided vehicles.*

ANSI/ITSDF B56.9-2006, Safety Standard for Operator Controlled Industrial Tow Tractors

*This Standard defines the safety requirements relating to the elements of design, operation, and maintenance of operator controlled industrial tow tractors up to and including 66750 N (15,000 lb) maximum rated drawbar pull.*

ASME B56.1a-2001, Low Lift and High Lift Trucks

*Defines the safety requirements relating to the elements of design, operation, and maintenance of low-lift and high-lift powered industrial trucks controlled by a riding or walking operator, and intended for use on compacted, improved surfaces.*

ASME B56.1b-2003, Low Lift and High Lift Trucks

*Defines the safety requirements relating to the elements of design, operation, and maintenance of low lift and high lift powered industrial trucks controlled by a riding or walking operator, and intended for use on compacted, improved surfaces.*

## IWCA (International Window Cleaning Association)

ANSI/IWCA I 14.1-2001, Window Cleaning Safety

*Identifies accepted safe practices for window cleaning. This standard was listed for public review in the 11/3/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

## JCSEE (Joint Committee on Standards for Educational

ANSI/JCSEE SES-2002, The Student Evaluation Standards

*Provides a guide to evaluation of students to ensure that classroom-based evaluations are conducted properly and feasibly and provide accurate and useful information to serve in student decision situations. These standards are intended for use by a wide array of persons including: teachers, students, parents, education administrators, school board members, evaluators, curriculum specialists, legislators, counselors, community leaders, educational associations, and others. The standards guide teachers and inform students, parents, and others, regarding the characteristics of sound student evaluations. The twenty-eight standards are categorized into four groups corresponding to four attributes of sound and fair student evaluation-propriety, utility, feasibility, and accuracy.*

## JEDEC (JEDEC Solid State Technology Association)

## KCMA (Kitchen Cabinet Manufacturers Association)

ANSI A161.2-1998, Decorative Laminate Countertops, Performance Standards for Fabricated High Pressure

*Establishes generally accepted quality performance standards for high pressure decorative laminate (HPDL) countertops. It covers physical requirements and test methods pertaining to resistance to loads, water, impact, and high temperature.*

ANSI/KCMA A161.1-2000 (R2005), Performance and Construction Standard for Kitchen and Vanity Cabinets

*This standard establishes a nationally recognized performance standard for factory-manufactured and factory-finished kitchen and vanity cabinets. This standard may also be used to evaluate cabinet quality when using new construction methods and/or materials. These cabinets may be factory assembled or ready to assemble. This is a performance and construction standard only. There is no intent to specify cabinet design (mechanics or appearance), or materials. This standard is intended to be used to measure how well a completed cabinet can be expected to perform when properly installed in accordance with manufacturers instructions, normally used and maintained.*

## LA (Leonardo Academy, Inc.)

## LEO (Leonardo Academy, Inc.)

## LIA (Laser Institute of America)

ANSI Z136.1-2000, Safe Use of Lasers

*Provides guidance for the safe use of lasers and laser systems by defining control measures for each of the four laser classes. This standard was first listed in the September 24, 1999 issue of Standards Action. It is being resubmitted due to substantive changes.*

ANSI Z136.2-1997, Safe Use of Optical Fiber Communication Systems Utilizing Laser Diode and LED Sources

*This Standard provides guidance for the safe use, maintenance, and service of optical fiber communications systems (OFCS) utilizing laser diodes or light emitting diodes (LED) with average output powers of less than 500 MW and wavelengths between 0.4 um and 1 mm. This standard applies only to systems where the radiant energy is confined to an optical fiber during intended use. For OFCS that do not meet these criteria, ANSI Z136.1 should be consulted.*

ANSI Z136.3-2005, Safe Use of Lasers in Health Care Facilities

*This standard provides guidance for the safe use of lasers for diagnostic, cosmetic, preventive, and therapeutic applications in health care facilities.*

ANSI Z136.4-2005, American National Standard Recommended Practice for Laser Safety Measurements for Hazard Evaluation

*This document provides adequate, practical guidance for necessary measurement procedures used for classification and hazard evaluation of lasers. This document is intended to provide guidance for manufacturers, laser safety officers (LSOs), and trained laser users.*

ANSI Z136.5-2000, Safe Use of Lasers in Educational Institutions

*control measures for each of the four laser classes. Institutions ranging from elementary schools through colleges and universities are addressed by this Standard.*

ANSI Z136.6-2005, Safe Use of Lasers Outdoors

*This standard provides guidance for the safe use of potentially hazardous lasers and laser systems in an outdoor environment. It also provides guidance for controlling disability glare from exposure to non-injurious levels of visible laser light, which might interfere with sensitive or critical tasks, and guidance for the manufacturers of these open-beam laser systems.*

## MedBiq (MedBiquitous Consortium)

## MHI (Material Handling Industry)

ANSI MH10.1M-1980 (R1997), Unit-Load and Transport Package Sizes

*Unit load/filled transport package sizes and the efficient utilization of available area in triller trucks, freight containers and railroad boxcars*

ANSI MH10.1Ma-1983 (R1997), Unit-Load and Transport Package Sizes

*Gives information for net unit-load size of 1410 x 1100 mm and plan-view size of 1466 x 1144-mm*

ANSI MH10.6M-1990 (R1997), Surface Vehicles – Unit-Load Heights for Palletized Loads

*Establishes five unit-load heights for surface mode of transportation and three heights for the air mode of transportation in the U.S. Distribution Environment.*

ANSI MH10.8.1-2005, Materials Handling – Unit Loads and Transport Packages – Bar Code Symbols

*Specifies minimum requirements for design of labels containing linear bar code and two-dimensional (2D) symbols on transport units to convey data between trading partners; provides for traceability of transported units via a Unique Transport Unit Identifier (license plate); provides guidance for formatting data; provides specific symbology recommendations; specifies quality requirements; makes recommendations as to label placement, size, free text and graphics; provides label material guidance.*

ANSI MH10.8.2-2006, Data Identifier and Application Identifier Standard

*This standard provides a comprehensive dictionary of MH 10/SC 8 Data Identifiers and GS1 Application Identifiers, provides for the assignment of new Data Identifiers, as required, and provides a document detailing the correlation, or mapping, of Data Identifiers to Application Identifiers, where a correlation exists.*

ANSI MH10.8.3-2002, Material Handling – Unit Loads and Transport Packages – Two-Dimensional Symbols

*Specifies a transfer structure, syntax, and coding of messages and data formats when using high capacity ADC media between trading partners. The data encoded pursuant to this standard includes: that which may be used in the shipping, receiving, and inventory of transport units; that which may be contained within supporting documentation, in paper or electronic form, related to unit loads or transport packages; that which may be used in the sortation and tracking of transport units. This standard does not supersede or replace any applicable safety or regulatory marking or labeling requirements. The standard is to be applied in addition to any other mandated labeling requirements. This standard addresses the syntax contained within ANSI MH10.8.3M. Symbology recommendations and requirements for the 2D symbols contained in ANSI MH10.8.3M are now contained in another*

ANSI MH10.8.4-2002, Radio Frequency Identification (RFID) Tags for Returnable Containers

*Intended to support applications of Radio Frequency Identification (RFID) for returnable containers, such as cable reels, pallets, gas cylinders, unit load devices, dollies, and special containers. This standard is intended to allow for compatibility and to encourage interoperability of products for the growing RFID market in the United States. This standard defines a single Application Programming Interface (API), which will be shared by all compliant RFID implementations and provide a common interface to application programs. The applications for returnable containers addressed by this standard typically require ranges greater than one meter. The goal of this standard is to serve current and future users and manufacturers by encouraging the development of open, dynamic systems. This standard supports national and international standards for data semantics, data*

ANSI MH10.8.6-2003, Bar Codes and Two-Dimensional (2D) Symbols for Product Packaging

*Develop application standard for the marking of product packages with linear bar code and two-dimensional symbols. Defines minimum requirements for identifying product packages that are distributed outside the originating location. Specifies label data content and requirements, including data element requirements; data representation; rules for encoding of mandatory and optional data elements in machine readable symbols; human readable information; data carriers.*

ANSI MH10.8.7-2005, Material Handling - Labeling and Direct Product Marking with Linear Bar Code and Two-Dimensional Symbols

*This standard establishes the machine-readable (linear, two dimensional, and composite symbols) and human readable content for direct marking and labeling of items, parts, and components. This standard provides a means for items, parts and components to be marked, and read in either fixtured or handheld scanning environments at any manufacturer's facility and then read by customers purchasing items for subsequent manufacturing operations or for final end use.*

ANSI MH10.8.8-2006, Radio Frequency Identification for Packages, Parcels, and Flat Mail

*Provides guidance for the use of radio frequency identification (RFID) for the handling and tracking of packages, parcels, and flat mail. Identifies minimum data requirements as well as semantic and syntactical recommendations. Further provides specific recommendations for the air interface communications of RFID devices based on the application requirements identified by the carriers.*

ANSI MH16.1-2004, Specification for the Design, Testing, and Utilization of Industrial Steel Storage Racks

*Applies to industrial pallet racks, movable shelf racks and stacker racks made of cold formed or hot-rolled steel structural members.*

ANSI MH24.1-2005, Safety Standard for Horizontal Carousel Material Handling and Associated Equipment

*Provides for safe operation and maintenance of horizontal carousel equipment by guiding carousel system design, construction, installation, operation, and maintenance. Intended for use by manufacturers, purchasers, and users of horizontal carousels and related equipment. Designed to protect workers by guiding owners, employers, and supervisors; who have the final responsibility for carousel equipment safety; in the proper use of the equipment and safety features incorporated in the system.*

ANSI MH26.1-2004, For Industrial Metal Containers - Specifications

*Provides definitive guidelines for engineering design, construction and testing procedures for industrial metal containers. It applies to welded-wire containers and corrugated and non-corrugated steel containers used for the storage and movement of goods and materials through interplant and intraplant material-handling systems. Does not apply to special purpose containers or to bulk cargo conveyance units for large unit loads as described in ANSI MH5.1.1.5.*

ANSI MH26.2-2004, Specification for the Design, Testing, and Utilization of Welded-Wire Rack Decking

*Applies to uniformly loaded rack decking fabricated from welded-wire mesh, with permanently attached reinforcements, for use in storage racks. The purpose for such rack decking is to provide storage capability by creating a surface, in conjunction with a superstructure or framework hereinafter referred to as rack, upon which to place materials that may be on pallets, in containers, or in some other form.*

ANSI MH27.1-2003, Patented Track Underhung Cranes and Monorail Systems - Specifications

*Applies to underhung cranes whose end trucks operate on the lower flange of a patented-track runway section; and to carriers (trolleys) operating on single-track patented-track monorail systems, including all curves, switches, transfer devices, lift and drop sections, and associated equipment. Does not apply to systems used for transporting personnel or to enclosed-track runway sections, enclosed-track monorail systems, structural-shape runway sections, or structural-shape monorail systems. Hoist(s) and carrier(s) shall comply with ASME/ANSI B30.16, ASME B30.11, and ASME HST standards.*

ANSI MH27.2-2003, Specifications for Enclosed-Track Underhung Cranes and Monorail Systems

*The intent of the proposed standard is to provide improved uniformity of enclosed track underhung crane and monorail performance and encourage better communication between the manufacturer and the user. Applies to underhung cranes whose end trucks operate on the internal flange of a runway using enclosed track section; and to trolleys (carriers) operating on single-track monorail systems, including all curves, switches transfer devices, lift and drop sections, and associated equipment. Systems for transporting personnel are not included in these specifications.*

ANSI MH28.1-1997 and Commentary, Industrial Grade Steel Shelving, Specification for the Design, Testing, Utilization, and Application of

*Covers industrial shelving, manufactured from cold formed or hot rolled steel, procedures for design, test methods and applications information.*

ANSI MH28.2-2003, Design and Testing of Metal - Wood Shelving - Specification

*Applies to Boltless Metal-Wood Shelving exclusively used for the storage by hand of small to bulky type material. The shelving framing is composed of boltless connections.*

*Units consist of cold-formed steel members supporting a surface of particleboard, mat-formed wood particleboard, plywood or other wood products.*

ANSI MH29.1-2003, Safety Requirements for Industrial Scissors Lifts

*Industrial scissors lifts raising and lowering materials by hydraulic, pneumatic, mechanical or electro-mechanical means. Stationary or movable lifts used to position, feed, transfer, load or unload materials. Does not apply to aerial work platforms for building maintenance and construction, elevators type covered in ANSI/ASME A17-1, vertical reciprocating conveyors covered in ANSI/ASME B20.1, steerable self-propelled lifts, vehicle mounted lifts, disabled persons lifts in ANSI/ASME A17.1, or automotive vehicle service lifts covered in A153.1.*

ANSI MH29.2-2000, Safety Requirements for Industrial Tilters

*Applies to designs of industrial tilters that are designed to position materials. They are generally activated by means of hydraulic, pneumatic, mechanical or electro/mechanical means. Industrial tilters can be stationary or moveable and are generally used to position, feed, transfer, and load or unload materials. They are available in a range of capacities, sizes and angular travels of less than 110 degrees. Industrial tilters are considered to be material handling equipment.*

ANSI MH30.1-2000, Safety, Performance, and Testing of Dock Leveling Devices – Specifications

*Defines safety, performance, and testing requirements with regard to design, use, and maintenance of dock leveling devices. A dock leveling device is a manufactured structure designed to span and compensate for space and height differentials between a loading dock and a transport vehicle to facilitate safe and efficient freight transfers.*

ANSI MH30.2-2005, Portable Dock Leveling Devices: Safety, Performance, and Testing

*Defines safety, performance and testing requirements for the design, use, and maintenance of portable dock leveling devices of the type generally referred to as dockboards and dockplates. Provides definitions of dockboard and dockplate types and component parts, safety requirements and considerations, and owner responsibilities. Buyers and specifiers may use this standard to ensure equal comparison of various manufacturers’ representations as to features, performance and safety features.*

ANSI MH30.3-2005, Vehicle Restraining Devices: Safety, Performance, and Testing

*Defines safety, performance and testing requirements with regard to the design, use, and maintenance of trailer restraining devices. Provides definitions of trailer restraining device types and component parts. Safety requirements are considered and owner responsibilities are discussed. Buyers and specifiers of loading dock trailer restraint devices may use this standard to ensure equal comparison of various manufacturers’ representations as to features, performance and safety features.*

ANSI MH5.1.1.5-1990 (R1997), Road/Rail Closed Dry Van Containers

*Facilitates the handling and securing methods necessary for the interchange of containers, primarily but not limited to the continental United States activities within rail and highway modes.*

ANSI/MHI/ICWM-2004, The North American Performance Standard for Casters and Wheels

*Provides manufacturers, specifiers and users with a common basis for evaluating the safety, durability, structural adequacy, and technical requirements for group specific casters and wheels. The standard defines industry terms, specific tests, equipment/methods that can be used, the condition of tests, and minimum acceptance levels to be used in evaluating these products.*

ASME MH1(b) Part IX-2000, Wood Pallets for U.S. Government Use

ASME MH1(b) Part X-2000, Performance Specificaiton for Pallets To Be Used in Automated Unit-Load Material Handling Equipment

ASME MH1-2005, Pallets, Slip Sheets, and Other Bases for Unit Loads

*This Standard provides the following information: definitions and terminology covering pallets and related structures, sizes of wood pallets, wood pallets, export pallets, driven fasteners for assembly of pallets and related structures, protocol for measuring quality of pallet nails and staples, determination of durability of wood pallets and related structures, testing procedures for pallets and related structures, slip sheets, wood pallets for military use, and performance specification for pallets to be used in automated unit-load material handling equipment.*

ASME MH1a-Part II-1998, Pallet Sizes

*Provides a series of the most common sizes of wood pallets recommended as bases for assembling, storing, stacking, handling, and transporting goods as unit loads. This revision of ANSI/ASME MH1.2.2M-1989 (R1996) will be redesignated, consolidated, and published at a later date under the designation ASME MH1.*

ASME MH1a-Part III-1998, Wood Pallets

*Applies to all lumber-deck pallets either new or repaired. This standard is also in three parts. Part I is the Prescriptive Standard, which concerns the manufacture of the pallet. Part II is the Performance Standard, which concerns the functionality of the pallet. Part III covers the Quality Assurance Auditing Program. All parts of the MH1 standard will be merged at a later date and will be given the designation of ASME*

*MH1.*

ASME MH1a-Part IV-1998, Export Pallets

*This standard presents background information which provides minimum phytosanitary requirements for wood and wood-based products used in the manufacture of pallets.*

ASME MH1a-Part IX-1999, Wood Pallets for U.S. Government Use

*Applies to light- and heavy-duty, limited- and multiple-use wood pallets used by the Department of Defense and DOD-contractors. ASME MH1a-Part VIIII will be redesignated, consolidated and published at a later date under the designation ASME MH1.*

ASME MH1a-Part VIII-1998, Slip Sheets

*Defines terms, sizes, materials, testing and specific characteristics relevant to slip sheets. This revision of ANSI/ASME MH1.5M-1993 will be redesignated, consolidated, and published at a later date under the designation ASME MH1.*

## MSS (Manufacturers Standardization Society)

ANSI/MSS SP-69-2003, Pipe Hangers and Supports - Selection and Application

*This Standard presents the recommended practice for the selection and application of pipe hangers and supports for all service requirements.*

## MTS (Institute for Market Transformation to Sustainability)

## NAAMM (National Association of Architectural Metal Manufacturers)

ANSI/NAAMM AMP 521-2001, Pipe Railing Systems Manual Including Round Table

*Includes data on appropriate materials, guidance in structural design, graphic representations of commonly used construction details, installation, and specification guidelines for pipe railing systems. Information provided represents recommendations from manufacturers of pipe railing systems and/or suppliers of component parts.*

ANSI/NAAMM FP 1001-1997, Guide Specifications for Design of Metal Flagpoles

*Sets forth the procedures for determining the design loads for metal flagpoles of hollow circular cross section including the wind speed and resulting wind load on the pole, the wind load on the flag and the resulting load imposed on the pole. Methods of analysis are given with sample calculations on a typical flagpole.*

ANSI/NAAMM HMMA 801-2005, Glossary of Terms for Hollow Metal Doors and Frames

*Definitions of some terms commonly used in connection with Hollow Metal Work, defined as they apply specifically to hollow metal, may be defined differently by other industries.*

ANSI/NAAMM HMMA 861-2006, Guide Specifications for Commercial Hollow Metal Doors and Frames

*Materials and fabrication methods for commercial hollow metal products, including doors, panels, frames, and windows.*

ANSI/NAAMM HMMA 862-2003, Guide Specifications for Commercial Security Hollow Metal Doors and Frames

*Specification for hollow metal doors and frames for use in commercial, industrial, and government projects, where security is of paramount concern. Typical applications include office buildings, warehouses, industrial buildings, embassies, convention centers, and government buildings. Performance criteria is established to frustrate forced entry, ballistic penetration, and blast resistance.*

ANSI/NAAMM HMMA 863-2004, Guide Specifications for Detention Security Hollow Metal Doors and Frames

*Establishes steel door and frame specifications for applications such as jails, prisons, detention centers, secured areas in hospitals and courthouses, and other correctional institutions where occupied restraint is required. It references ASTM tests necessary to evaluate resistance to extreme treatment which may be received under riot conditions and establishes performance requirements. Materials, construction, hardware, and performance requirements are specified.*

ANSI/NAAMM HMMA 865-2003, Guide Specifications for Swinging Sound Control Hollow Metal Doors and Frames

*Specification for swinging sound control hollow metal doors and frames for use in commercial, industrial, and government projects. Typical applications include sound studios, office buildings, and industrial structures. Sound doors are heavier than conventional hollow metal doors with varying weight dependent on STC rating and thickness of door. Frames are also made of thicker material.*

ANSI/NAAMM HMMA 866-2001, Guide Specifications for Stainless Steel Hollow Metal Doors and Frames

*Provides specifications for stainless steel hollow metal doors and frames for use in commercial, industrial, government and monumental projects. Typical applications include office buildings, hospitals, hotels, industrial structures, museums, and convention centers. Materials and fabrication methods are specified. Testing, performance, and quality requirements are included.*

ANSI/NAAMM HMMA 867-2006, Guide Specifications for Commercial Laminated Core Hollow Metal Doors and Frames

*Recommended materials, fabrication methods, testing, and performance criteria for commercial laminated core hollow metal doors, panels, and frame products.*

ANSI/NAAMM MBG 531-00, Metal Bar Grating Manual

Provides current technical data on bar gratings and stair treads of steel, stainless steel, and aluminum, including load tables, installation details, dimensions, and tolerances. Standard specifications, ordering information, and code of standard practice are provided. This standard was listed for public review in the 8/11/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text. **[see email for text of chgns to be published 30-day]**

ANSI/NAAMM MBG 532-00, Heavy Duty Metal Bar Grating Manual

*Provides current technical data on heavy-duty bar gratings of steel and stainless steel, including load tables, installation details, dimensions, and tolerances. Standard specifications, ordering information and code of standard practice are provided. Information is concerned primarily with bar gratings capable of supporting heavy loads.*

## NACE (NACE International, the Corrosion Society)

ANSI/NACE MR0175-2003, Sulfide Stress Cracking Resistant Metallic Materials for Oilfield Equipment

*This standard presents metallic material requirements to provide resistance to sulfide stress cracking (SSC) and/or stress corrosion cracking (SCC) for petroleum production, drilling, gathering and flow line equipment, and field processing facilities to be used in hydrogen sulfide (H2S)-bearing hydrocarbon service. This standard does not include and is not intended to include design specifications. Other forms of corrosion and other modes of failure, although outside the scope of this standard, should also be considered in design and operation of equipment. Severely corrosive conditions may lead to failures by mechanisms other than SSC and/or SCC and should be mitigated by corrosion inhibition or materials selection, which are outside the scope of this standard. For example, some lower-strength steels used for pipelines and vessels may be subjected to failure by*

ANSI/NACE RP0104-2004, The Use of Coupons for Cathodic Protection Monitoring Applications

*Addresses applications for cathodic protection (CP) coupons attached to buried pipelines to determine the level of corrosion protection provided by a CP system. Appendices cover coupons attached to other structures such as underground storage tanks, aboveground (on-grade) storage tank bottoms, and steel in reinforced concrete structures. CP coupons may also be used to evaluate compliance with CP criteria, including considering the IR drop.*

ANSI/NACE RP0204-2004, Stress Corrosion Cracking (SCC) Direct Assessment Methodology

*Addresses the situation in which a portion of a pipeline has been identified as an area of interest with respect to SCC based on its history, operations, and risk assessment process and it has been decided that direct assessment is an appropriate approach for integrity assessment. The standard provides guidance for managing SCC by selecting potential pipeline segments, selecting dig sites within those segments, inspecting the pipe and collecting and analyzing data during the dig, establishing a mitigation program, defining the reevaluation interval, and evaluating the effectiveness of the SCCDA process.*

ANSI/NACE RP0300-2003, Pilot-Scale Evaluation of Corrosion and Fouling Control Additives for Open Recirculating Cooling Water Systems

*RP0300-2000 is the text of Part 1 of ISO/DIS 16784-1. The 2003 edition includes minor revisions. NACE will want to adopt as an identical standard when it is published. Covers criteria that must be defined and implemented in a pilot-scale testing program to select water treatment programs for use in specific recirculating cooling water systems. It covers only open recirculating cooling water systems. Closed cooling systems and once-through cooling water systems are specifically excluded. It applies only to systems incorporating shell-and-tube heat exchangers with standard uncoated smooth tubes and cooling water on the tube side. Heat exchangers with shell-side water, plate and frame and/or spiral heat exchangers, and other heat-exchange devices are specifically excluded. The test criteria are not intended to govern bench and pilot-scale testing normally*

ANSI/NACE RP0502-2003, Pipeline External Corrosion Direct Assessment Methodology

*External corrosion direct assessment is a structured process that is intended to improve safety by assessing and reducing the impact of external corrosion on pipeline integrity. By identifying and addressing corrosion activity and repairing corrosion def*

ANSI/NACE TM0177-2006, Laboratory Testing of Metals for Resistance to Specific Forms of Environmental Cracking H2S Environments

*This standard addresses testing of metals subjected to tensile stresses for resistance to cracking failure in low-pH aqueous environments containing H2S. The test method covers sulfide stress cracking (room temperature, atmospheric pressure) and stress corrosion cracking (elevated temperatures and pressures). Four test methods are described.*

ANSI/NACE TM0284-2003, Evaluation of Pipeline Steel for Resistance to Stepwise Cracking

*This standard establishes a test method for evaluating the resistance of pipeline and pressure vessel plate steels to HIC caused by hydrogen absorption from aqueous sulfide corrosion. The test method consists of exposing unstressed test specimens to one of two stndard test solutions. After a specified time the test specimens shall be removed and evaluated.*

## NAESB (North American Energy Standards Board)

## NAHBRC (NAHB Research Center, Inc.)

ANSI Z765-2003, Single-Family Residential Buildings – Square Footage – Method for Calculating

*The changes that are the subject of this public review are substantive changes to the body of the standard that resulted from the 1st public review. These substantive changes provide for another calculation method that allows measurement of a structure by indirect methods. This standard describes the procedures to be followed in measuring and calculating the square footage of detached and attached single-family houses.*

## NALFA (North American Laminate Flooring Association)

ANSI/NALFA LF 01-2003, Laminate Flooring, Specifications and Test Methods

*The product standard shall apply to the performance of residential and commercial use laminate flooring. The standard will be useful in guiding manufacturers and educating suppliers and consumers about the minimum performance requirements of laminate flooring in residential, light commercial and commercial use settings.*

## NASPO (North American Security Products Organization)

ANSI/NASPO-SA v3.0P-2005, Security Assurance Standards for the Document and Product Security Industries

*Defines risks that must be managed by high, medium and basic security product or service providers to obtain, respectively, NASPO Class I, II or III certification. Standard defines requirements for security infrastructure, systems, equipment and procedures that are mandatory for each Class. A method of quantifying the "amount" of security assurance delivered is provided for use as a self assessment score sheet. Audit procedures that verify compliance with the NASPO requirements are also defined.*

## NBBPVI (National Board of Boiler and Pressure Vessel Inspectors)

ANSI/NB 23-2006, National Board Inspection Code

*NB-23 provides rules and guidelines for the in-service, inspection, installation, repair and alteration of pressure retaining items and in-service inspection and repair of pressure relief valves.*

## NBFAA (National Burglar & Fire Alarm Association)

## NCMA (National Concrete Masonry Association)

## NCPDP (National Council for Prescription Drug Programs)

ANSI/NCPDP BUS V2.0-2005, Billing Unit Standard Implementation Guide Version 2.0

*This is the NCPDP Billing Unit Standard Format that provides guidelines for consistent implementation of drug/product packaging for use in all applicable NCPDP Standards.*

ANSI/NCPDP FB V1.0-2005, Formulary and Benefit Standard Version 1.0

*Formulary and Benefit Standard provides a standard means for pharmacy benefit payers (including health plans and Pharmacy Benefit Managers) to communicate formulary and benefit information to prescribers via technology vendor systems.*

ANSI/NCPDP MR V3.01-2001, Manufacturer Rebate Utilization, Plan, Formulary, and Market Basket Standard Format Version 2.01

*Supports submission of Product Utilization transactions, Plan and Sub-Plan hierarchical structures, Formulary definitions, and Market Basket definitions from Pharmacy Management Organizations (PMOs) to Pharmaceutical Industry Contracting Organizations (PICOs) in support of the rebate process. The NCPDP Manufacturer Rebate Utilization, Plan, Formulary, and Market Basket Flat File Standard provides a standardized format for the electronic submission of rebate information from Pharmacy Management Organizations (PMOs) to Pharmaceutical Industry Contracting Organizations (PICOs). The four (4) file formats are intended to be used in an integrated manner, with the utilization file being supported by the plan, formulary, and market basket files. However, any of the four (4) files may be used independently. The NCPDP Manufacturer Rebate Utilization, Plan,*

ANSI/NCPDP Post Adj V1.0-2006, Post Adjudication Standard Version 1.0

*Client Groups, Pharmacy Benefit Managers (PBM's), Fiscal Agents, Vendors, and Administrative Oversight Organizations need the ability to share post-adjudicated pharmacy claim data. The data is used to support 1. Auditing of services 2. Retrospective DUR review 3. Statistical reporting 4. Evaluate Health Care 5. Evaluate Contractor performance 6. Develop and evaluate Capitation rates 7. Pay reinsurance (stop loss) to contractors, and 8. Develop fee for service payment rates. In the current environment, data is shared in an inefficient manner because a common industry-wide format does not exist.*

ANSI/NCPDP SC V9.0-2005, SCRIPT Standard Implementation Guide Version 9.0

*The standard provides general guidelines for developers of pharmacy or physician management systems who wish to provide prescription transmission functionality to their clients. The standard addresses the electronic transmission of new prescriptions, prescription refill requests, prescription fill status notifications, and cancellation notifications.*

ANSI/NCPDP TC VC.0-2005, Telecommunication Standard Version B.0

*The standard supports the format for electronic communication of pharmacy service-related billing, prior authorization processing, and information reporting between pharmacies and other responsible parties. This standard addresses the data format and content and other appropriate telecommunication requirements.*

ANSI/NCPDP TC VC.3-2006, Telecommunication Standard Version C.3

*The standard supports the format for electronic communication of pharmacy service-related billing, prior authorization processing, and information reporting between pharmacies and other responsible parties. This standard addresses the data format and content and other appropriate telecommunication requirements.*

## NCSL (National Conference of Standards Laboratories)

ANSI NCSL Z540.3-2006, Requirements for the Calibration of Measuring and Test Equipment

*This National Standard will establish the technical requirements for the calibration of measuring and test equipment through the use of a system of functional components. Collectively, these components are used to manage and assure that the accuracy and reliability of the measuring and test equipment are in accordance with identified performance requirements. In addition, this National Standard includes and updates the relevant calibration system requirements for measuring and test equipment described by the previous standards such as Part II of ANSI/NCSL Z540.1 (R2002) and Military Standard 45662A.*

ANSI/NCSL Z540.1-1994 (R2002), Calibration -- Calibration Laboratories and Measuring and Test Equipment -- General Requirements

*This standard provides a mechanism for promoting confidence in calibration laboratories and measuring and test equipment when it can be shown that they are operated in compliance with its requirements.*
*The intent of this Standard is that laboratories meeting its requirements comply, for calibration activities, with the relevant requirements of the ANSI/ASQC Q90 series of standards, including those of the model described in ANSI/ASQC Q92 when they are acting as suppliers producing calibration results. This Standard includes the requirements relevant to calibration laboratories of ISO/IEC Guide 25 (1990) and requirements relevant to the quality assurance of measuring and test equipment derived from MI-Std 45662A.*

ANSI/NCSL Z540.2-1997 (R2002), U.S. Guide to the Expression of Uncertainty in Measurement

*The proposed standard has been derived from the International Organization for Standardization (ISO) U.S. Guide to the Expression of Uncertainty in Measurement to promote consistent international methods in the expression of measurement uncertainty within U.S. standardization, calibration, laboratory accreditation, and metrology services. It is identical to the ISO Guide (corrected and reprinted, 1995) with the exception of minor editorial changes to facilitate it's use in the United States. These changes are as follows: (1) a dot on the line is used as the decimal marker instead of a comma, (2) the spelling of words is in accordance with Webster's Third New International Dictionary instead of the Oxford English Dictionary, and (3) the running heads on pages are partially modified.*

## NECA (National Electrical Contractors Association)

ANSI/NECA 1-2006, Standard for Good Workmanship in Electrical Construction

*This standard defines the process for commissioning building electrical systems and provides sample guidelines for attaining optimum system performance which conform to design, specifications, and industry-accepted codes and standards.*

ANSI/NECA 100-2006, Symbols for Electrical Construction Drawings

*This standard identifies the most commonly used symbols for electrical construction drawings.*

ANSI/NECA 101-2006, Standard for Installing Steel Conduits (Rigid, IMC, EMT

*This standard describes installation procedures for steel conduits.*

ANSI/NECA 102-2004, Installing Aluminum Conduits

*This standard describes installation procedures for aluminum rigid metal conduit (RMC).*

ANSI/NECA 104-2006, Recommended Practice for Installing Aluminum Building Wire and Cable

*This recommended practice describes installation procedures and design considerations for aluminum building wire and cable in residential, commercial, institutional and industrial applications not exceeding 600 volts.*

ANSI/NECA 111-2003, Standard for Installing Nonmetallic Raceways (RNC, ENT and LFNC)

*Describes installation procedures for nonmetallic raceways of circular cross-section used for electrical power wire and cable, communications wiring, or fiber optic cables.*

ANSI/NECA 120-2005, Standard for Installing Armored Cable (Type AC) and Metal Clad Cable (Type MC)

*This standard covers the installtion of Type AC and Type MC cables, which are used for electrical wiring for residential, commercial, and industrial occupancies.*

ANSI/NECA 200-2002, Recommended Practice for Installing and Maintaining Temporary Electric Power at Construction Sites

*Describes installation procedures for temporary power at construction sites operating at voltages of 600 volts of less. It covers the planning, installation, expansion, maintenance, cutover, and removal of the temporary power system. The objective of this recommended practice is to ensure a safe, adequate, functional, and reliable temporary power distribution system for all trades on site. This standard was listed for public review in the*

*5/4/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/NECA 202-2001 (R2006), Standard for Installing Industrial Heat Tracing Systems

*This standard describes the requirements for the installation, testing, and documentation of the electrical freeze protection and process heat tracing systems.*

ANSI/NECA 230-2003, Recommended Practice for Installing Motors

*This document describes recommended procedures for selecting and installing electric motors and motor controllers.*

ANSI/NECA 303-2005, Standard for Installing Closed-Circuit Television (CCTV) Systems

*This standard describes installation procedures for closed-circuit television system equipment installed for protection of building interiors, building perimeter, and surrounding property. This publication applies to closed-circuit television systems for security and monitoring activities in nonhazardous locations both indoors and outdoors. It also covers periodic routine maintenance procedures for closed-circuit television systems. This publication applies to the following: 1. Closed-circuit television cameras 2. Monitors, switchers, multiplexers, and recording devices 3. Electronic hardware components 4. Conductor and cable installation.*

ANSI/NECA 305-2001, Fire Alarm System Job Practices

*Describes practices for installing, testing and maintaining fire alarm systems. These job practices represent a minimum level of quality for fire alarm system installations.*

ANSI/NECA 400-1999, Recommended Practice for Installing and Maintaining Switchboards

*Describes installation procedures for deadfront distribution switchboards rated 600 volts or less. It also covers periodic routine maintenance procedures for switchboards, and special procedures to be used after adverse circumstances such as ground fault or immersion in water. This is the second public review for this standard. It was originally listed for public review in the July 17, 1998 issue of Standard Action. It is being resubmitted due to substantive changes to the text.*

ANSI/NECA 402-2001, Recommended Practice for Installing Motor Control Centers

*Describes installation procedures for motor control centers rated 600 volts or less. It also covers periodic routine maintenance procedures to be used after adverse circumstances such as a short-circuit, ground-fault or immersion in water.*
*Single copy price: $25.00*
*Order from: NECA, Attn: Orderdesk: orderdesk@necanet.org*
*Send comments (with copy to BSR) to: Brooke Stauffer, NECA: brooke@necanet.org*

ANSI/NECA 404-2006, Recommended Practice for Installing Generator Sets

*This standard describes the procedures for installing and maintaining generator sets.*

ANSI/NECA 406-2003, Recommended Practice for Installing Residential Generator Sets

*This standard describes installation procedures for the following:*
*(a) Generator sets permanently installed at one-family dwellings to provide backup power. These are usually rated 120/240 volts, single-phase, three-wire. However, some large homes have three-phase electrical systems and use backup generators rated 120/208 volts, three-phase, four-wire.*
*(b) Generator sets fueled by gasoline, natural gas, or liquefied petroleum (LP) gas.*

ANSI/NECA 407-2002, Recommended Practice for Installing and Maintaining Panelboards

*This recommended practice describes the installation procedures for panelboards rated 600 Volts AC or less, with main disconnects or lugs rated 1600 Amperes or less, and with feeder or branch circuit overcurrent devices rated 1200 Amperes or less. This publication applies to single panelboards or multi-section panelboards and load centers used for distributing power for commercial, institutional, and industrial loads in nonhazardous locations both indoors and outdoors. It also covers periodic routine maintenance and troubleshooting procedures for panelboards, and special procedures used after adverse operating conditions such as a short-circuit, ground-fault, or immersion in water.*

ANSI/NECA 408-2002, Recommended Practice for Installing and Maintaining Busways

*Describes installation procedures for feeder and plug-in busway and associated accessories rated 600 Volts AC or less, and 100 Amperes or more. It also covers periodic routine maintenance procedures for busway, and special procedures used after adverse operating conditions such as a short-circuit, ground-fault, or immersion in water. This publication does not cover lighting busway, trolley busway, cablebus, or metal enclosed bus.*

ANSI/NECA 409-2002, Recommended Practice for Installing and Maintaining Dry-Type Transformers

*Describes installation procedures for single- and three-phase distribution and power transformers and associated accessories rated 600 Volts AC or less, and 0.25 kVA or more, of the following types:*
*1) Ventilated, indoor and outdoor, self-cooled or forced air cooled.*
*2) Nonventilated, indoor and outdoor, self-cooled or forced air cooled.*
*This publication applies to general purpose, dry-type, two-winding transformers used for supplying power, heating and lighting loads for commercial, institutional, and industrial use in nonhazardous locations both indoors and outdoors. lso covers periodic routine maintenance and troubleshooting procedures for transformers, and special procedures used after adverse operating conditions such as a short-circuit, ground-fault, or immersion in water.*

ANSI/NECA 410-2005, Standard for Installing and Maintaining Liquid-Filled Transformers

*This recommended practice describes installation procedures for pad-mounted, sealed, self-cooled, compartmental, single and three phase liquid filled distribution and power transformers.*

ANSI/NECA 411-2006, Standard for Installing and Maintaining Uninterruptible Power Supplies (UPS)

*This standard describes the installation and maintenance of uninterruptible power supplies (UPS).*

ANSI/NECA 430-2006, Standard for Installing Medium-Voltage Switchgear

*This standard describes site preparation and installation of medium-voltage switchgear rated 2,400 Volts to 34,500 Volts.*

ANSI/NECA 568-2006, Standard for Installing Commercial Building Telecommunications Cabling

*This standard describes installation procedures for commercial bulding telecommunications cabling.*

ANSI/NECA 600-2003, Recommended Practice for Installing Medium Voltage Cable

*This recommended practice describes installation procedures for solid-dielectric medium-voltage cable rated greater than 600 volts AC and installed in conduits, ducts, or direct-buried. This publication applies to single- and multi-conductor cables used for distributing power for commercial, institutional, and industrial loads in nonhazardous locations both indoors and outdoors.*

ANSI/NECA 605-2005, Recommended Practice for Installing Underground Nonmetallic Utility Duct

*This manual covers recommendations for shipping, handling, storage, installation, a joining of underground single bore nonmetallic duct for power, lighting, signaling, and communications applications. Although not specifically mentioned in this manual variations of the products discussed may occasionally be specified. Users should follow manufacturers' installation recommendations.*

ANSI/NECA 90-2004, Recommended Practice for Installing Residential Generator Sets

*This recommended practice defines the process of commissioning building electrical systems and provides sample guidelines for attaining optimum system performances which conform to design, specifications, and industry-accepted codes and standards.*

ANSI/NECA FOA 301-2004, Standard for Installing and Testing Fiber Optic Cables

*This standard describes procedures for installing and testing fiber optic cables and related components to carry signals for telecommunications, control, and similar purposes. These procedures represent a minimum level of quality for fiber optic installations. This standard is intended to define what is meant by installing equipment in a "neat and workmanlike manner" as required by the National Electrical Code, Sections 110-12 and 770-8.*

ANSI/NECA/IESNA 500-2006, Standard for Installing and Maintaining Indoor-Commercial Lighting Systems

*This standard describes the installation and recommended maintenance of indoor commercial lighting systems.*

ANSI/NECA/IESNA 501-2000 (R2006), Recommended Practice for Installing Exterior Lighting Systems

*Thi standard describes the procedures for installing exterior lighting systems.*

ANSI/NECA/IESNA 502-1999 (R2006), Recommended Practice for Installing Industrial Lighting Systems

*This standard describes installation procedures for industrial lighting systems.*

## NEMA (National Electrical Manufacturers Association)

ANSI C119.4-2004, Electric Connectors – Connectors for Use between Aluminum-to-Aluminum or Aluminum-to-Copper Bare Overhead Connectors

*This standard covers connectors used for making electrical connections between aluminum-to-aluminum or aluminum-to-copper bare conductors used by electric utilities. This standard establishes the electrical and mechanical test requirements for electrical connectors. This standard is not intended to recommend operating conditions or temperatures.*

ANSI C119.6-2006, Standard for Non-Sealed, Multiport Connector Systems Rated 600 Volts or Less for Aluminum and Copper Conductors

*This standard covers non-sealed, multiport distribution connectors rated 600 Volts or less used for making electrical connections between aluminum-to-aluminum, aluminum-to-copper, or copper-to-copper conductors for above grade, electric utility applications. This standard establishes the electrical and mechanical test requirements for connectors used at normal operating temperatures not to exceed 90 C and is not intended to recommend any other operating conditions.*

ANSI C12.1-2001, Electricity Metering, Code for

*Establishes acceptable performance criteria for new types of ac watthour meters, demand meters, demand registers, pulse devices, and auxiliary devices. It describes acceptable in-service performance levels for meters and devices used in revenue metering. It also includes information on related subjects, such as recommended measurement standards, installation requirements, test methods, and test schedules. This Code for Electricity Metering is designed as a reference for those concerned with the art of electricity metering, such as utilities, manufacturers, and regulatory bodies.*

ANSI C12.10-2004, Electromechanical Watthour Meters

*Covers the physical aspects of both detachable and bottom-connected watthour meters and associated registers. These include ratings, internal wiring arrangements, pertinent dimensions, markings, and other general specifications. Refer to the latest version of ANSI C12.1and ANSI C12.20 for performance requirements.*

ANSI C12.19-1997, Utility Industry End Device Data Tables

*Defines a table structure for utility application data to be passed between an end device and a computer. It does not define device design criteria nor specify the language or protocol used to transport that data. The purpose of the tables is to define structures for transporting data to and from end devices.*

ANSI C12.19a-2001, Utility Industry End Device Data Tables

ANSI C12.20-2003, Electricity Meters 0.2 and 0.5 Accuracy Classes

*Establishes acceptable performance criteria for electricity meters. Accuracy class designations, current class designations, voltage and frequency ratings, test current values, service connection arrangements, pertinent dimensions, form designations, and environmental tests are covered.The existing C12.20 Standard has been revised with the intent to bring it up to date in an industry that is changing dramatically, due to both technology and regulatory matters. This American National Standard establishes acceptable performance criteria for electricity meters. The Standard was also broadened to include class 2 meters. Most meter specification have been retained from the previous edition without major changes.*

ANSI C12.21-2006, Protocol Specification for Telephone Modem Communication

*The standard details the criteria required for communications between an electric power metering device and a utility host via a modem connected to the switched telephone network. The utility host could be a laptop computer, a master station system, an electric power metering device, or some other electronic communications device. The standard does not specify implementation requirements of the telephone switch network to the modem, nor does it include definitions for the establishment of the communication channel.*

ANSI C12.4-1984 (R2002), Registers, Mechanical Demand

*This standard covers the voltage and frequency rating, full-scale values, scale classes, demand intervals, multiplying constants, timing mechanism, and other general features of mechanical demand registers required for use on watthour meters. Since mech*

ANSI C12.5-1978 (R2002), Meters, Thermal Demand

*This standard covers the class designations, voltage and frequency ratings, scale values, demand intervals, multiplying constants, mounting dimensions, terminal arrangements, and other features of general-service-type thermal watt demand meters and watt*

ANSI C12.6-1987 (R2002), Phase-Shifting Devices Used in Metering, Marking and Arrangement of Terminals for

*This specification applies to phase-shifting devices designed to provide the proper lagged voltages required for kvar and kVA measurement.*

ANSI C12.7-2005, Requirements for Watthour Meter Sockets

*Covers the general requirements and pertinent dimensions applicable to watthour meter sockets rated up to and including 600 V and up to and including 320 A continuous duty per socket opening.*

ANSI C12.8-1981 (R2002), Watthour Meters, Test Blocks and Cabinets for Installation of Self-Contained “A” Base

*This standard covers the dimensions and functions of test blocks and cabinets used with self-contained A-base watthour meters.*

ANSI C12.9-2005, Test Switches for Transformer-Rated Meters

*Intended to encompass the dimensions and functions of meter test switches used with transformer-rated watthour meters in conjunction with instrument transformers.*

ANSI C136.1-2004, Roadway Lighting – Filament Lamps – Guide for Selection

*This is a guide for the proper selection of filament lamps for use in roadway and area lighting equipment.*

ANSI C136.10-2006, Roadway and Area Lighting Equipment - Locking-type Photocontrol Devices and Mating Receptacles - Physical and Electrical Interchangeability and Testing

*This standard covers locking-type photocontrols used in roadway and area lighting equipment, which may be physically and electrically interchanged to operate within established values.*

ANSI C136.11-2006, Roadway and Area Lighting Equipment - Multiple Sockets

*This standard covers medium and mogul sockets as used in luminaires designed and intended for use in lighting roadways and other areas open to the general use by the public.*

ANSI C136.12-2004, Mercury Lamps Used in Roadway Lighting Equipment, Guide for the Selection of

*This is a guide for the selection of mercury lamps recommended for use in roadway lighting equipment.*

ANSI C136.13-2004, Roadway and Area Lighting Equipment - Metal Brackets for Wood Poles

*Covers metal pipe, tubing, and structural brackets for wood poles designed to support luminaires of generally speherical, ellipsoidal, or rectangular shapes used in roadway and area lighting.*

ANSI C136.14-2004, Roadway & Area Lighting Equipment--Elliptically Shaped, Enclosed Side-mounted Luminaires for Horizontal-burning High-intensity Discharge Lamps

*Covers dimensional, maintenance, and light distribution features that permit the interchange of enclosed side-mounted luminaires for horizontal-burning high-intensity discharge lamps used in roadway and area lighting equipment.*

ANSI C136.15-2004, High-Intensity-Discharge and Low-Pressure-Sodium Lamps in Luminaires, Field Identification of

*The intent of this standard is to provide a simple, uniform method for identifying the type and wattage rating of a high intensity discharg or low pressure sodium lamp installed in a luminaire.*

ANSI C136.16-2004, Enclosed Post Top Mounted Luminaires in Roadway Lighting Equipment

*This standard covers dimensional, maintenance, and light distribution features that permit the interchange of enclosed, post top-mounted luminaires whose center of mass is approximately over the mounting tenon.*

ANSI C136.17-1995 (R2005), Roadway and Area Lighting--Enclosed Side-mounted Luminaires for Horizontal-burning High-intensity Discharge Lamps--Mechanical Interchangeability of Refractors

*This standard covers the dimensional features and the materials of refractors for enclosed side-mounted luminaires for horizontal-burning high-intensity discharge lamps.*

ANSI C136.18-2006, Roadway and Area Lighting Equipment - High-mast Side-mounted Luminaires for Horizontal- or Vertical-burning High-intensity Discharge Lamps

*This standard is intended to cover physical, operational, maintenance, and light-distribution features that permit use of high-mast luminaires in roadway applications when specified.*

ANSI C136.19-2004, Roadway Lighting – High-Pressure Sodium Lamps in Luminaires – Guide for Selection

*Covers the selection of high-pressure sodium lamps recommended for use in roadway and area lighting equipment.*

ANSI C136.2-2004, Roadway Lighting Equipment - Luminaires Voltage Classification

*This standard covers three voltage classifications for luminaires used in roadway and area lighting, and also covers general testing methods to determine dielectric and transient voltage withstands.*

ANSI C136.21-2004, Roadway Lighting – Vertical Tenons Used with Post-Top-Mounted Luminaires

*Covers the attachment features of vertical tenons on pole tops or brackets used in roadway and area lighting that permit the interchangeability of post-top-mounted luminaires.*

ANSI C136.22-2004, Roadway Lighting Equipment – Internal Labeling of Luminaires

*Covers internal luminaire identification labels for all styles of luminaires used for roadway or area lighting applications.*

ANSI C136.23-2006, Roadway and Area Lighting Equipment - Enclosed Architectural Luminaires

*This standad covers physical, operating, maintenance, and light distribution features for the specification of architectural luminaires in roadway and area lighting applications.*

ANSI C136.24-2005, Roadway and Area Lighting Equipment--Nonlocking (Button) Type Photocontrols

*Covers the electrical and mechanical interchangeability of nonlocking type photocontrols for mounting within a roadway or off-roadway luminaire, herein called “controls.” These controls are commonly called “button” photocontrols.*

ANSI C136.26-2003, Roadway and Area Lighting Equipment - Trouble-shooting Guide for High-pressure Sodium Luminaires

*This trouble-shooting guide is intended to help the service person quickly diagnose a high-pressure sodium luminaire and also assure that the problem is fixed on the first attempt. The guide addresses the four most commonly encountered problems.*

ANSI C136.27-2005, Roadway and Area Lighting Equipment - Tunnel and Underpass Lighting Luminaires

*This standard covers luminaires used for illuminating roadway tunnels and underpasses. The requirements of this standard are limited to general attributes due to the wide variety of designs possible.*

ANSI C136.28-2006, Roadway and Area Lighting Equipment - Glass Lenses Used in Luminaires

*This standard covers flat and molded glass of soda-lime and borosilicate materials used as lenses for roadway and area lighting luminaires.*

ANSI C136.3-2005, Roadway Lighting Equipment - Luminaire Attachments

*Covers attachment features of luminaires used in roadway and area lighting equipment. The features covered apply to luminaires that are side- or post-top-mounted.*

ANSI C136.32-2006, Roadway and Area Lighting Equipment - Enclosed Setback Luminaires and Directional Floodlights for High-Intensity Discharge Lamps

*This standard covers dimensional, maintenance, and electrical features that permit the interchange of similar style enclosed luminaires having the same light distribution classifications for HID lamps.*

ANSI C136.33-2005, Roadway and Area Lighting Equipment - Plug-in Type Receptacle and Plug for High-Intensity Dicharge Ignitors

*This standard covers the physical features, dimensions, and electrical requirements of mating receptacles for plug-in type HID lamp ignitors.*

ANSI C136.34-2004, Roadway and Area Lighting Equipment - Vandal
Shields for Roadway and AreaLighting Luminaires

*This standard covers supplementary vandal resistant shields used to protect luminaires and luminaire accessories used for roadway and area lighting applications.*

ANSI C136.4-2003, Roadway Lighting Equipment – Series Sockets and Series-Socket Receptacles

*Covers the following equipment for luminaires for lighting roadways: a) Series sockets having medium impact strength and intended for service at high temperatures. b) Series sockets having high impact strength and intended for services at limited temperatures. c) series-socket receptacles (hereinafter called the receptacle) in the 5000 V classification.*

ANSI C136.5-1989 (R2003), Roadway Lighting Equipment – Film Cutouts

*Covers operating and dimensional features of single-shot film cutouts used with series roadway lighting equipment and circuits, and function by dielectric breakdown and subsequent partial fusing of components to establish a shunting electrical circuit to bypass nonoperative series roadway lighting equipment.*

ANSI C136.6-2004, Roadway Lighting Equipment - Metal Heads and Reflector Assemblies - Mechanical and Optical Interchangeability

*This standard covers dimensional features of luminaires with metal heads that permit mechanical and optical interchangeability of both head and reflector assemblies.*

ANSI C136.9-2004, Roadway Lighting – Socket Support Assemblies for Use in Metal Heads, Mechanical Interchangeability

*This standard covers dimensional, maintenance, and light distribution features that permit the interchange of enclosed, post top-mounted luminaires whose center of mass is approximately over the mounting tenon.*

ANSI C18.1M, Part 1-2005, Dry Cells and Batteries – Specifications

*Applies to portable primary cells and batteries with aqueous electrolyte and a zinc anode (non-lithium). This edition includes the following electrochemical systems: a) Carbon zinc (LeClanche and zinc chloride types); b) Alkaline manganese dioxide; c) Silver oxide; d) Zinc air.*

ANSI C18.1M, Part 2-2003, Portable Primary Cells and Batteries with Aqueous Electrolyte - Safety Standard

*Specifies performance requirements for portable primary batteries with aqueous electrolyte and zinc anode (non-lithium) to ensure their safe operation under normal use and reasonably foreseeable misuse.*

ANSI C18.2M, Part 1-2003, Portable Rechargeable Cells and Batteries-General and Specifications

*Applies to portable rechargeable, or secondary, cells and batteries based on the following electrochemical systems: A.) Nickel-cadmium, B.) Nickel-metal hydride, C.) Sealed lead-acid, D.) Lithium-ion. Section 1 of this standard contains general information and all standardized performance and mechanical tests upon which all the specifications in Section 2 are based.Section 2 specification sheets list those tests and requirements described herein that are required for each battery. Not all tests in Section 1 are necessarily required on every specification sheet.*

ANSI C18.2M, Part 2-1999, Portable Rechargeble Cells and Batteries - Safety Standard

ANSI C18.3M, Part 1-2005, Portable Lithium Primary Cells and Batteries - General and Specifications

*This standard applies to portable lithium primary cells and batteries. This edition includes the following electrochemical systems:*

*a) Lithium/carbon monofluoride;*
*b) Lithium/manganese dioxide;*
*c) Lithium/iron disulfide.*

*Applies to portable lithium primary cells and batteries. This edition will include the following electrochemical systems: lithium/carbon monofluoride, lithium/manganese dioxide, and lithium/iron disulfide.*

ANSI C18.3M, Part 2-2004, Portable Lithium Primary Cells and Batteries - Safety Standard

*Specifies tests and requirements for portable primary lithium cells and batteries, both the chemical systems and the types covered in ANSI C18.3M, Part 1, to ensure their safe operation under normal use and reasonably foreseeable misuse.*

ANSI C29.1-1988 (R2002), Electrical Power Insulators, Test Methods for

*Covers test methods to be followed in making tests to determine the characteristics of wet-process procelain electrical power insulators.*

ANSI C29.10-1989 (R2002), Wet-Process Porcelain Insulators – Indoor Apparatus Type

*Covers high-voltage indoor-apparatus insulators made of wet-process porcelain and used in the transmission and distribution of electrical energy*

ANSI C29.12-1997 (R2002), Insulators – Composite – Suspension Type

*Covers composite suspension insulators made of fibreglass-reinforced resin rod core, polymer material weathersheds, and metal end fittings intended for use on overhead transmission lines for electric power systems, 70 kV and above.*

ANSI C29.13-2000, Insulators - Composite Distribution Deaded Type

*Covers composite distribution deadend insulators made of a fiberglass-reinforced resin matrix core, polymer material weathersheds, and metal end fittings intended for use on overhead lines for electric power systems, 69 kV and below. Mechanical and electrical performance levels specified herein are requirements for new insulators.*

ANSI C29.17-2001, Insulators - Composite-Line Post Type

*Describes the qualification test procedures for composite line post insulators that are made of a fiberglass-reinforced resin matrix core, elastomeric weathersheds and metal end fittings. The insulators are intended for use on overhead lines in electric power systems, 70kV and above. Mechanical and electrical performance levels specified in this standard are applicable to new insulators.*

ANSI C29.18-2003, Insulators Composite - Distribution Line Post Type

*Covers composite distribution line post insulators made of a fiberglass-reinforced resin matrix core, elastomeric material weathersheds, and metal end fittings designed for use on overhead lines for electric power systems, 69 kV and below. Mechanical and electrical performance levels specified herein are requirements for new insulators.*

ANSI C29.2-1992 (R1999), Insulators – Wet-Process Porcelain and Toughened Glass – Suspension Type

*Covers suspension-type insulators, 4-1/4 inches (108 millimeters) in diameter or larger, made of wet-process porcelain or of toughened*

*glass and used in the transmission and distribution of electrical energy.*

ANSI C29.3-1986 (R2002), Wet-Process Porcelain Insulators (Spool Type)

*Covers spool-type insulators made of wet-process porcelain and used in the transmission and distribution of electrical energy*

ANSI C29.4-1989 (R2002), Wet-Process Porcelain Insulators – Strain Type

*Covers strain-type insulators made of wet-process porcelain and used in the transmission and distribution of electrical energy*

ANSI C29.5-1984 (R2002), Wet-Process Porcelain Insulators, Low- and Medium-Voltage Pin Type

*Covers low and medium-voltage-type insulators made of wet-process porcelain and used in the transmission and distribution of electrical energy*

ANSI C29.6-1996 (R2002), Wet-Process Porcelain Insulators - High-Voltage Pin Type

*Covers materials, dimensions, physical characteristics, and testing information for high voltage pin insulators made of wet process porcelain and used in the transmission and distribution of energy*

ANSI C29.7-1996 (R2002), Wet-Process - Porcelain Insulators - High-Voltage Line-Post Type

*Covers materials, dimensions, physical characteristics, and testing information for high-voltage line-post type insulators made of wet process porcelain and used in the transmission and distribution of energy*

ANSI C29.8-1985 (R2002), Wet-Process Porcelain Insulators (Apparatus, Cap and Pin Type)

*Covers high-voltage cap-and-pin-type apparatus insulators made of wet-process porcelain and used in the transmission and distribution of electrical energy*

ANSI C29.9-1983 (R2002), Wet-Process Porcelain Insulators (Apparatus, Post Type)

*Covers outdoor high-voltage post-type apparatus insulators made of wet-process porcelain and used in the transmission and distribution of electrical energy*

ANSI C37.50-1989 (R2000), Switchgear – Low-Voltage AC Power Circuit Breakers Used in Enclosures – Test Procedures

*Covers the test procedures for enclosed low-voltage ac power circuit breakers.*

ANSI C37.51-2003, Metal-Enclosed Low-Voltage AC Power-Circuit-Breaker Switchgear Assemblies - Conformance Test Procedures

*Applies to metal-enclosed low-voltage power-circuit-breaker switchgear assemblies and covers the conformance test procedures for the basic switchgear section that includes the structure, circuit-breaker compartments, instrument compartments, buses, and internal connections.*

ANSI C37.54-2003, Conformance Test Procedures for Indoor Alternating Current High-Voltage Circuit Breakers Applied as Removable Elements in Metal-Enclosed Switchgear Assemblies

*Specifies tests to demonstrate that the circuit breaker being tested conforms with the ratings assigned to it in accordance with American National Standard for Switchgear – AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis – Preferred Ratings and Related Required Capabilities, ANSI C37.06-1987 (R1994).*

ANSI C37.55-2003, Medium Voltage Metal-Clad Switchgear Assemblies -- Conformance Test Procedures

*This standard is a conformance testing standard operationally applicable to all metal-clad switchgear assemblies designed, tested, and manufactured in accordance with American National Standard for Metal-Clad and Station-Type Cubicle Switchgear, ANSI/IEEE C37.20.2-1987.*

ANSI C37.57-2003, Switchgear – Metal-Enclosed Interrupter Switchgear Assemblies – Conformance Testing

*Describes selected tests and procedures to demonstrate conformance in accordance with Section 6 of Tests, of American National Standard for Metal-Enclosed Interrupter Switchgear, ANSI/IEEE C37.20.3-2001.*

ANSI C37.58-2003, Conformance Test Procedures for Indoor AC Medium Voltage Switches for Use in Metal-Enclosed Switchgear

*Applies to the conformance test procedures for ac medium-voltage switches rated above 1000 volts as designed, manufactured, and tested in accordance with ANSI/IEEE C37.20.4. It is intended for use in metal-clad switchgear, as described in ANSI/IEEE C37.20.2, and metal-enclosed interrupter switchgear, as described in ANSI/IEEE C37.20.3.*

ANSI C37.85-2002, Interrupters Used in Power Switchgear, X-Radiation Limits for AC High-Voltage Power Vacuum

*Specifies the maximum permissible X-radiation emission from alternating-current high-voltage power vacuum interrupters that are intended to be operated at voltages above 1000 volts and up to 38,000 volts when tested in accordance with procedures described in the standard.*

ANSI C50.41-2000, Polyphase Induction Motors for Power Generating Stations

*Provides specific guidance to the power generating industry on electrical machines intended specifically for that industry. The proposed standard also includes various changes designed to keep the document up-to-date with current practices.*

ANSI C78.LL1256-2003, Electric Lamps - Procedures for Fluorescent Lamp Sample Preparation and the Toxicity Characteristic Leaching Procedure

*This standard is supplies specific instructions for size reduction of lamps including integral electronic compact, pin-based compact, linear and U-shaped fluorescent lamps.*

ANSI C78.LL3-2003, Electric Lamps - Procedures for High Intensity Discharge Lamp - Sample Preparation and the Toxicity Characteristic Leaching Procedure

*This standard specifically covers high-intensity discharge lamp types. The procedures contained within are intended to supplement the Toxicity Characteristic Leaching Procedure by supplying specific instructions for size reduction and for other critical procedures specific to the testing of HID lamps.*

ANSI C78.LL4-2003, Electric Lamps - Procedures for Incandescent Lamp Sample Preparation and the Toxicity Characteristic Leaching Procedure

*This standard specifically covers common incandescent lamp types. It details procedures for preparation of incandescent lamps for Toxicity Characteristic Leaching Procedure (TCLP) which are intended to supplement the TCLP by supplying specific instructions for size reduction and for other critical procedures specific to the testing of incandescent lamps.*

ANSI C78.MR11-2-1997 (R2002), Electric Lamps - 1.375 Inch (35 mm) Integral Reflector Lamps with Front Covers and GU4 or GZ4 Bases

*Details lamp dimensions for those lamps in the family of 1.375 inch (35mm) integral-reflector lamps with front covers and GU4 or GZ4 bases. These lamps, commonly known as MR11, are intended for use in general lighting applications.*

ANSI C78.1340-1990 (R2003), Mercury Lamps, Specification for 450-Watt, 230-Volt, B75 Self-Ballasted

*Concerns 450W self-ballasted mercury lamps*

ANSI C78.1341-1990 (R2003), Mercury Lamps, Specifications for 750-Watt, 120-Volt, Self-Ballasted

*Concerns 750-Watt, 120-Volt self-Ballasted Mercury Lamps*

ANSI C78.1342-1990 (R200x), Mercury Lamps, 160-Watt, 120-Volt, Self-Ballasted

*Concerns 160-watt 120-volt B87 Self-Ballasted Mercury Lamps*

ANSI C78.1380-1988 (R2003), Electric Lamps – 250-Watt, 120-Volt, Self-Ballasted Mercury Lamps – Specifications

*Concerns 250W 120V S55 Self Ballasted Mercury Lamps*

ANSI C78.1381-1998 (R2003), Electric Lamps – 70-Watt, M85 Metal-Halide Lamps

*Concerns 70W, M85 Single-Ended Metal Halide Lamps*

ANSI C78.1385-1998 (R2003), Electric Lamps - 150-Watt, M81 Double-Ended Metal-Halide Lamps

*Concerns 150-Watt M81 Double-Ended Metal-Halide Lamps*

ANSI C78.1386-1998 (R2003), Electric Lamps - 100-Watt, M91 Double-Ended Metal-Halide Lamps

*Concerns 100W, M91 Double-Ended Metal Halide Lamps*

ANSI C78.1387-2001, Electric Lamps - 250-Watt, M80 Double-Ended Metal Hailde Lamps

*Contains information on 250-watt, M80 Double-Ended Metal Hailde Lamps.*

ANSI C78.1401-2004, Projection Lamps, Double-Contact, Medium Ring, Base-Up Type, Dimensions of

*This standard established the dimensions essential to the interchangeability of lamps of the double-contact, medium ring (Special B) base-up type.*

ANSI C78.1402-2004, Projection Lamps, Four-Pin, Prefocus, Base-Down Type, Dimensions for

*This standard established the dimensions essential to the interchangeability of four-pin, prefocus projection lamps for base-down operation of T10 and T12 bulb sizes.*

ANSI C78.1403-1997 (R2002), Electric Lamps – Tungsten Halogen Lamps with G6.35, GX.35 and GY6.35 Bases

*Concerns Tungsten Halogen Lamps with G6.35, GX6.35 and GY6.35 Bases*

ANSI C78.1406-2004, Projection Lamps, Single-Contact, Medium Prefocus, Base-Down Type, Dimensions of

*This project is a revision of ANSI C78.1406-1983*

*This standard established the dimensions essential to the interchangeability of single-contact medium prefocus based projection lamps of T-10 and T-12 bulb sizes.*

ANSI C78.1407-2004, Projection Lamps, Condenser-Reflector, Four-Pin, Prefocus-Base Types, Dimensions for

*This project is a revision of ANSI C78.1407-1985*

ANSI C78.1408-2004, Electric Lamps – CBA Projection Lamps

*This project is a revision of ANSI C78.1408-1991. Details information concerning the CBA Projection Lamp.*

ANSI C78.1413-2001 (R2006), Electric Lamps – Two-Inch (51-mm) Integral-Reflector-Rim Reference Projection Lamps – Dimensions of Centering Systems

*This standard specifies detailed dimensions for 51mm (two inch) integral reflector rim reference projection lamps with GX5.3, GY5.3, or GU5.3 bases to assure interchangeability within the appropriate holding systems.*

ANSI C78.1417-1997 (R2002), Electric Lamps - 1.65 Inch (42-mm) Integral Reflector, Rim Reference Projection Lamps w/GX5.3 or GY5.3 Bases - Dimensional & Centering System

*Concerns 1.65-inch (42mm) Integral-Reflector Rim Reference Projection Lamps w/ GX5.3 or GY5.3 Bases--Dimensions & Centering System*

ANSI C78.1420-2001 (R2006), Electric Lamps - Microfilm Projection Lamps-Two-inch (51mm) Dichroic Coated Integral Reflector, Rim Reference, Tungsten Halogen Lamps with GX5.3 Bases

*This standard consolidates the lamps commonly used for microfilm projectors into a single performance standard.*

ANSI C78.1421-2002, Dimensions and Centering Systems for Projection Lamps – 35mm Integral Reflector Rim Reference Lamps with GZ4 Bases

*Specifies lamp dimensions of 35mm (1.38 inch) diameter integral reflector rim reference projection lamps with GZ4 bases so that Interchangeability with the appropriate holding systems will be assured. Since lamp position is controlled at the reflector rim, centering device dimensions of lamp holding systems are also specified.*

ANSI C78.1430-1997 (R2004), Electric Lamps - Slide Projector Lamps - Condensing, Dichroic, 1.65-Inch (42mm), Integral Reflector Rim-Reference Tungsten-Halogen Lamps with GX5.3 Bases

*Contains information on Slide Projection Lamps, Condensing, Dichroic, 1.65 in. (42mm), Integral-Reflector, Rim Reference TH Lamps with GX5.3 Bases and Slide Projection Lamps, Condensing, Dichroic, Two-inch (51mm) Integral-Reflector, Rim Reference TH Lamps with GY5.3 Bases.*

ANSI C78.1431-1997 (R2004), Electric Lamps: Slide Projector Lamps: Condensing, Dichroic, 2-Inch (51-mm), Integral Reflector, Rim-Reference Tungsten-Halogen Lamps with GY5.3 Bases

*Contains information on Slide Projection Lamps, Condensing, Dichroic, 1.65 in. (42mm), Integral-Reflector, Rim Reference TH Lamps with GX5.3 Bases and Slide Projection Lamps, Condensing, Dichroic, Two-inch (51mm) Integral-Reflector, Rim Reference TH Lamps with GY5.3 Bases.*

ANSI C78.1432-1997 (R2002), Electric Lamps - Tungsten-Halogen Lamps with GZ9.5 Two-Pin, Prefocus Bases and 36.5mm Nominal Light Center Length

*Concerns Tungsten-Halogen Lamps with GZ9.5 Two-Pin Prefocus Bases and 36.5mm Nominal LCL*

ANSI C78.1433-2001, Two-Inch (51-mm) Integral Reflector, Rim Reference, Tungsten Halogen Large Screen Projection Lamps with GX 5.3 Bases

*Consolidates previous standards for certain low-voltage two-inch (51-mm) dichroic-coated integral reflector, rim reference tungsten halogen lamp types with GX5.3 bases designed for large screen projection systems and used in 8mm projection, 16mm projection, slide projector, photo enlarger, and printing applications. The lamp types contained in this standard are not to be considered as interchangeable although they will all physically fit into two-inch integral rim reference centering systems and common GX5.3 lampholders. Photometry performance of each lamp depends upon the photometry appraisal system for which it was designed as well as the system in which the lamp is used. Photometry appraisal and end use systems may or may not be the same.*

ANSI C78.1434-2001 (R2006), Condensing Dichroic Coated Integral Reflector Side Pin Tungsten Halogen Projection Lamps with GX7.9 Bases

*This standard consolidates previous standards for certain low voltage condensing dichroic-coated integral reflector side pin tungsten halogen projection lamps with GX7.9 bases designed for large screen projection systems and used in 8mm and 16mm projector applications.*

ANSI C78.1435-2002, Projection Lamps - Tungsten-Halogen Lamps with G5.3 Bases

*Consolidates projection lamps with G5.3 bases into a single standard. The lamps contained in this standard are not to be considered as interchangeable, although physically they will all fit the common G5.3 lampholders. The photometry of each lamp is dependent upon the system for which it was designed and on the system in which it was used. Representative photometric values are found in Table 2.*

ANSI C78.1450-1983 (R2006), Incandescent Projection Lamps - Method for Life Testing

*This standard describes a method for life testing incandescent projection lamps. It also defines associated terms and describes a method of evaluating acceptability.*

ANSI C78.1451-2002 (R2007), Use of Protective Shields with Tungsten-Halogen Lamps - Cautionary Notice

*This standard concerns the use of protective shields with Tungsten-Halogen Lamps.*

ANSI C78.1452-2004, Electric Lamps – Projection Lamps – Vocabulary

*This project is a revision of ANSI C78.1452-1991. Provides definitions for a wide range of terms used in the design, manufacturing, and application of photogenic lamps.*

ANSI C78.1460-2004, Single-Ended Tungsten-Halogen Lamps, GZ9.5 Base, T6 Bulb, 36.5 mm LCL, 76.2 mm MOL with Proximity Reflector

*This project is a revision of ANSI C78.1460-1991. This standard defines the dimensional, physical, and other characteristics to assist in the proper application of tungsten-halogen lamps with GZ9.5 bases, T6 (T19) bulbs at 36.5 mm LCL and 76.2 mm maximum overall length with internal proximity reflectors.*

ANSI C78.1500-2001 (R2006), Electric Lamps – Tungsten-Halogen Lamps with P28 Bases and 89 mm LCL

*This standard defines the dimensional limits and other physical characteristics required to ensure interchangeability and assist in the proper application of a specific category of lamps. This category is tungsten-halogen lamps with P28 bases and 89 mm (3-1/2) inch) nominal light center length.*

ANSI C78.1501-2001 (R2006), Electric Lamps – Tungsten-Halogen Lamps with G22 Bases and 63.5 mm LCL

*This standard defines the dimensional limits and other physical characteristics required to ensure interchangeability and assist in the proper application of a specific category of lamps. This category is tungsten-halogen lamps with G22 bases and 63.5mm (2-1/2 inch) nominal light center length.*

ANSI C78.1503-2001 (R2006), Electric Lamps – Tungsten-Halogen Lamps with G9.5 Bases and 60.5 mm LCL

*This standard defines the dimensional limits and other physical characteristics required to ensure interchangeability and assist in the proper application of a specific category of lamps. This category is tungsten-halogen lamps with G9.5 bases and 60.5mm (2-3/8 inch) nominal light center length.*

ANSI C78.1504-2001 (R2006), Electric Lamps – Tungsten-Halogen Lamps with P28 Bases and 55.5 mm LCL

*This standard defines the dimensional limits and other physical characteristics required to ensure interchangeability and assist in the proper application of a specific category of lamps. This category is tungsten-halogen lamps with P28 bases and 55.5mm (2-3/16 inch) nominal light center length.*

ANSI C78.1505-2001 (R2006), Electric Lamps – Tungsten-Halogen Lamps with G38 Bases and 127 mm LCL

*This standard defines the dimensional limits and other physical characteristics required to ensure interchangeability and assist in the proper application of a specific category of lamps. This category is tungsten-halogen lamps with G38 bases and 127mm (5 inch) nominal light center length.*

ANSI C78.180-2003, Fluorescent Lamp Starters, Specifications for

*Covers performance of glow switch starters used with preheat-type fluorescent and similar discharge lamps.*

ANSI C78.20-2003, Electric Lamps – Characteristics of Incandescent Lamps A, G, PS, and Similar Shapes with E26 Medium Screw Bases

*Sets forth the physical and electrical characteristics of the group of incandescent lamps that have A, G, PS, and similar bulb shapes with E26 medium screw (single- or double-contact) bases, including the reduced-wattage versions.*

ANSI C78.21-2003, Incandescent Lamps – PAR and R Shapes

*Sets forth the physical and electrical characteristics of the group of incandescent lamps that have PAR and R bulb shapes.*

ANSI C78.21a-1996 (R2002), Electric Lamps – Incandescent Lamps – PAR and R Shapes

*Contains drawings concerning PAR 20 and PAR 30 Halogen Lamp*

ANSI C78.21b-1999 (R2002), Electric Lamps - Incandescent Lamps - PAR and R Additional Lamps

*Concerns lamp space drawings*

ANSI C78.21c-1998 (R2002), Electric Lamps - Incandescent Lamps - PAR and R Additional Lamps - PAR30, Short Overall Length Lamp, Figure C78.21-276

*Concerns incandescent lamps*

ANSI C78.22-1995 (R2003), Incandescent Lamps – A, G, PS, and Similar Shapes with E39 Mogul Screw Bases

*Sets forth the physical and electrical characteristics of the group of incandescent lamps that have A, G, PS, and similar bulb shapes with E39 mogul screw (single- or double-contact) bases.*

ANSI C78.23-1995 (R2003), Electric Lamps – Incandescent Lamps – Miscellaneous Types

*Sets forth the physical and electrical characteristics of the group of incandescent lamps that have A, C, G, Par, PS, R, S, and T Two-Inch Integral-reflector Lamps; and similar bulb shapes with E26, E39, and GU5.3 (or GX5.3) bases.*

ANSI C78.24-2001 (R2006+), Two-Inch (51-mm) Integral-reflector Lamps with Front Covers and GU5.3 or GX 5.3 Bases

*This standard specifies the detailed lamp dimensions for those lamps in the family of two-inch (51-mm) integral-reflector lamps with GU5.3 or GX5.3 bases and front covers. These lamps are intended for use in general lighting applications.*

ANSI C78.260-2002, Tubular Tungsten-Halogen Lamps, Physical Characteristics

*This standard covers the dimensional limits and other physical characteristics required to assure the interchangeability and proper application of tubular tungsten-halogen lamps.*

ANSI C78.260a-1999, Electric Lamps - Tubular Tungsten-Halogen Lamps - Physical Characteristics - GY6.35 Interchangeability

*Adds paragraph 8.5 regarding the interchangebility of GY6.35 cap/holder fits, with reference to table 6: "General Purpose Lamps."*

ANSI C78.260c-1998, Electric Lamps - Tubular Tungsten Halogen Lamps - Physical Characteristics - Marking Requirements

*Presents the definition, wording and drawing of the warning label for 500 W tubular tungsten halogen lamps, due to fire hazard*

ANSI C78.261-1977 (R2002), Tubular Incandescent Infrared Lamps, Specification for

*Covers specifications for tubular incandescent infrared lamps*

ANSI C78.30-1997 (R2002), Electric Lamps: Procedure for Use in Preparation of Lamp Space Drawings

*Describes the procedures to be followed for the preparation of lamp space drawings for those specific bulb shapes and bases noted.*

ANSI C78.370-1997 (R2003), Designation of Photo Lamps, Method for

*Describes a system for the designation of photographic, stage and studio lamps*

ANSI C78.370/390 lcd-2002 (R2006), Amendments to ANSI C78.370-1997 (#6.7) & ANSI C78.390-1998 (#7.7) : Criteria for Reinstatement of De-Listed Codes & Amendments to ANSI C78.370-1997 (#6.6) & ANSI C78.390-1998 (#7.6) : Resolution

*This document serves as amendments to ANSI C78.370-1997 (#6.7) & ANSI C78.390-1998 (#7.7)-the Criteria for Reinstatement of De-Listed Codes & Amendments to ANSI C78.370-1997 (#6.6) & ANSI C78.390-1998 (#7.6) : Resolution Procedure.*

ANSI C78.375-1997 (R2003), Fluorescent Lamps – Guide for Electrical Measurements

*Concerns electrical measurements for fluorescent lamps.*

ANSI C78.376-2001 (R2006), Specifications for the Chromaticity of Fluorescent Lamps

*This standard covers the objectives and tolerances for the chromaticity of T8, T10 and T12 fluorescent lamps with nominal loading of from 5 to 10 watts per foot at their normal 100 hour rating point.*

ANSI C78.379-2006, Electric Lamps – Classification of the Beam Patterns of Reflector Lamps

*This standard describes a system for classification of beam patterns and beam angles of reflector lamps.*

ANSI C78.380-2005, High-Intensity Discharge Lamps, Method of Designation

*This standard describes a system for the designation of high-intensity discharge lamps, including compact, enclosed-arc discharge light sources such as mercury, metal halide, high-pressure sodium, and similar types of lamps.*

ANSI C78.381-1961 (R2006), Glow Lamps - Method of Designation

*This standard details the method of designation for glow lamps.*

ANSI C78.385-1961 (R2006), Glow Lamps - Methods of Measurement

*This standard details the method of measurement for glow lamps.*

ANSI C78.389-2004, High-Intensity Discharge Lamps-Methods of Measuring Characteristics

*This document is a consolidation/revision of the standard that describes the procedures to be followed and the precautions to be observed in measuring the electrical characteristics of high-intensity discharge lamps. The standard outlines methods of measurement that will make it possible to obtain reproducible and accurate measurements of high-intensity discharge lamp characteristics.*

ANSI C78.390-2006, Method of Designation for Electric Lamps – Miniature and Sealed-Beam Incandescent Lamps

*This standard describes a system for the designation of miniature and sealed-beam lamps.*

ANSI C78.391-2004, Electric Lamps - Characteristics of Miniature Lamps of T1 and T1-3/4 Shapes

*This standard sets forth the physical and electrical characteristics of those groups of subminiature incandescent lamps with T-1 and T-1 ¾ bulb shapes, including lamps of various base or termination configurations.*

ANSI C78.40-1992 (R2003), Specifications for Mercury Lamps

*Physical/electrical characterisitcs of mercury*

ANSI C78.40a-1998 (R2003), Electric Lamps - Specifications for Mercury Lamps - Maximum Outline Drawing of Bulb BT56, page 56

*Concerns Maximum Outline Drawing of Bulb BT56, Page 56*

ANSI C78.41-2006, High-Intensity Discharge Lamps - Low Pressure Sodium Lamps

*This standard describes the physical and electrical requirements of the principal types of single-ended low pressure sodium lamps.*

ANSI C78.42-2004, Electric Lamps - High-Pressure Sodium Lamps

*This standard sets forth the physical and electrical requirements for HPS lamps, to ensure performance and interchangeability.*

ANSI C78.43-2005, Electric Lamps - Single-Ended (SE) Metal-Halide Lamps

*This standard sets forth the physical and electrical requirements for single-ended metal halide lamps operated on 60 Hz ballasts to ensure interchangeability and safety.*

ANSI C78.5-2003, Electric Lamps – Fluorescent Self-Ballasted Lamps – Performance Guide

*Specifies the performance requirements together with the test methods and conditions required to show compliance of self-ballasted compact fluorescent lamps up to 60 watts which are intended for domestic and similar general lighting*

ANSI C78.60360-2002, Electric Lamps- Standard Method of Measurement of Lamp Cap Temperature Rise

*Describes the standard method of measurement of lamp cap temperature rise which is to be used when testing incandescent or discharge lamps for compliance with the limits. It also covers the method of test and the specifications for test lampholders for lamps fitted with various sizes of Edison screw (ES) and Bayonet (BC) caps*

ANSI C78.60432.1-2003, For Electric Lamps- Incandescent Lamps- Safety Specifications - Tungsten Halogen Lamps for Domestic and Similar General Lighting Purposes- Part 1

*This document contains the Chapter 1 United States Deviations to IEC 60432:1-2002.*

ANSI C78.60432.2-2004, For Electric Lamps- Incandescent Lamps- Safety Specifications - Tungsten Halogen Lamps for Domestic and Similar General Lighting Purposes- Part 2

*This document contains the Chapter 1 United States Deviations to IEC 60432-2-2002.*

ANSI C78.60432.3-2004, Electric Lamps- Incandescent Lamps-Safety Specifications-Part 3 : Tungsten halogen lamps

*This document contains the Chapter 1 United States Deviations to IEC 60432:3*

ANSI C78.81-2005, Electric lamps-Double-capped fluorescent lamps-Dimensional and Electrical Characteristics

*This standard sets forth the physical and electrical characteristics of the principal types of fluorescent lamps intended for application on conventional line frequency circuits, and electronic high frequency circuits.*

ANSI C79.1-2002, Nomenclature for Glass Bulbs – Intended for Use with Electric Lamps

*This standard describes a system of nomenclature that provides designations for glass bulbs used as the envelopes for electric lamps.*

ANSI C80.1-2005, Rigid Steel Conduit – Zinc Coated (GCR)

*Covers the requirements for electrical rigid steel conduit for use as a raceway for wires or cables of an electrical system. Finished conduit is produced in nominal 10-ft. (3.05m) lengths, threaded on each end with one coupling attached. It is protected on the exterior surface with a metallic zinc coating or alternate corrosion protection coating and on the interior surface with a zinc or organic coating. This standard also covers conduit couplings, elbows, nipples and conduit lengths other than 10-ft (3.05 m.*

ANSI C80.3-2005, Steel Electrical Metallic Tubing (EMT)

*Covers the requirements for steel electrical metallic tubing, for use as a raceway for wires or cables of an electrical system typically furnished in nominal 10-ft (3.05 m) lengths. It is protected on the exterior surface with a metallic zinc coating or alternate corrosion protection coating and on the interior surface with a zinc, or organic coating. This standard also covers elbows for electrical metallic tubing.*

ANSI C80.5-2005, Electrical Rigid Aluminum Conduit (ERAC)

*Covers the requirements for electrical rigid aluminum conduit for use as a raceway for the wires or cables of an electrical system. The finished conduit is produced in nominal 10-ft (3.05 m) lengths, threaded on each end with one coupling attached. This standard also covers aluminum conduit couplings, elbows, nipples and conduit lengths other than 10 ft (3.05 m).*

ANSI C80.6-2005, Electrical Intermediate Metal Conduit (EIMC)

*Covers the requirements for steel Electrical Intermediate Metal Conduit for use as a raceway for wires or cables of an electrical system. Finished conduit is produced in nominal 10-ft (3.05-m) lengths, threaded on each end with one coupling attached. It is protected on the exterior surface with a metallic zinc coating or an alternate corrosion resistant coating and on the interior surface with a zinc or organic coating.*

ANSI C81.62-2006, Electric Lamp Lampholders

*This document sets forth the specifications for lampholders for electric lamps.*

ANSI C81.63-2006, Gauges for Electric Lamp Bases and Lampholders

*This document sets forth the specifications for gauges for bases (caps) and lampholders for electric lamps.*

ANSI C81.64-2005, Guidelines and General Information for Electrical Lamp Bases, Lampholders, and Gauges

*This standard gives guidance and information to designers and testing personnel and includes the designation system and general information regarding bases (caps), lampholder and gauges.*

ANSI C82.1-2004, Specifications for Fluorescent Lamp Ballasts

*This standard is intended to cover ballasts which have rated open-circuit voltages of 2000 volts or less and are intended to operate lamps at a frequency of 50 Hz or 60 Hz.*

ANSI C82.11 consolidated-2004, Lamp Ballasts - High Frequency Fluorescent Lamp Ballasts - Supplements

*Contains a collection of amendments which supercede the 1993 standard and consists of three supplements (C82.11a, b, c), which were approved by the ANSI ASC method of standard development. This consolidated standard is intended to cover high frequency ballasts which have rated open-circuit voltages of 200 volts or less and are intended to operate at a supply frequency of 50 Hz or 60 Hz.*

ANSI C82.12-1999 (R2007), Fluorescent Adapters

*This standard is intended to cover fluorescent lamp adapters rated for 120 and 127 volt, 60 hertz input and for use with Edison-screw lampholders.*

ANSI C82.13-2002 (R2006), Definitions for Fluorescent Lamps and Ballasts

*This standard provides definitions of terms used in ANSI C78 and C82 series standards for fluorescent lamps and ballasts.*

ANSI C82.14-2006, Low Frequency Square Wave Ballasts for Metal Halide Lamps

*This standard concerns low frequency square wave ballasts for metal halide lamps.*

ANSI C82.1d-1996, Electric Lamps – Paragraphs 5.3.3 and 5.5.3: Compact Fluorescent Lamp Ballasts

*Adds specifications for Ballasts for Compact Fluorescent Lamps to existing standard for Fluorescent Lamp Ballasts.*

ANSI C82.2-2002 (R2007), Method of Measurement of Fluorescent Lamp Ballasts

*This standard outlines the procedures to be followed and precautions to be observed in measuring and testing line frequency fluorescent lamp ballasts as specified.*

ANSI C82.3-2002 (R2007), Reference Ballasts for Fluorescent Lamps

*This standard describes the essential design features and operating characteristics of reference ballasts for fluorescent lamps.*

ANSI C82.4-2002, Ballasts – for High-Intensity-Discharge and Low-Pressure Sodium Lamps (Multiple-Supply Type)

*Provides specifications for an operating characteristics of ballasts for mercury, metal-halide, high-pressure sodium (LPS) lamps.*

ANSI C82.5-1990 (R2003), Reference Ballasts – High-Intensity-Discharge and Low-Pressure Sodium Lamps

*Concerns Reference Ballasts for HID and Low Pressure Sodium Lamps*

ANSI C82.6-2005, Reference Ballasts for High-Intensity-Discharge Lamps – Methods of Measurement

*This standard describes the procedures to be followed and the precautions to be taken in measuring performance of ballasts for high-intensity discharge (HID) lamps.*

ANSI C82.6a-1988 (R2003), Reference Ballasts for High-Intensity-Discharge Lamps – Methods of Measurement

*Concerns Ballasts for High Intensity Discharge Lamps - Method of Measurement*

ANSI C82.7-1983 (R2003), Mercury Lamp Transformers, Constant Current (Series) Supply Type, Specifications for

*Concerns Mercury Lamp Transformers - Constant-Current (Series) Supply Type*

ANSI C82.77-2001 (R2005), Lamp Ballasts-Harmonic Emission Limits-Related Power Quality Requirements for Lighting Equipment

*This standard specifies harmonic limits and methods of measurement for lighting equipment.*

ANSI C82.8-1988 (R2003), Lamp Transformers – Incandescent Filament Lamp Transformers – Constant-Current (Series) Supply Type

*Concerns Specifications for Incandescent Filament Lamp Transformers -Constant-Current (Series) Supply Type*

ANSI C82.9-1996 (R2003), High-Intensity-Discharge and Low-Pressure Sodium Lamps, Ballasts and Transformers – Definitions

*Concerns Definitions for HID Lamp Ballasts and Transformers*

ANSI C82.9b-1998 (R2003), Electric Lamp Ballasts - High-Intensity-Discharge and Low-Pressure Sodium Lamps, Ballasts and Transformers - Definitions

*Concerns Total Harmonic Distortion*

ANSI C84.1-2006, American National Standard for Electric Power Systems and Equipment - Voltage Ratings (60 Hertz)

*This standard establishes nominal voltage ratings and operating tolerances for 60-hertz electric power systems above 100 volts. It also makes recommendations to other standardizing groups with respect to voltage ratings for equipment used on power systems and for utilization devices connected to such systems. This standard includes preferred voltage ratings up to and including 1200 kV maximum system voltage, as defined in the standard.*

ANSI CC 1-2005, Electric Power Connection for Substations

*This Standards Publication covers uninsulated connectors and bus supports which are made of metal and intended for use in substations. Connectors which are supplied in equipment are covered by the appropriate equipment standards and are excluded from this Standards Publication.*

ANSI Z535.1-2006, Safety Color Code

*This standard sets forth the technical definitions, color standards and color tolerances for safety colors.*

ANSI Z535.2-2002, Environmental and Facility Safety Signs

*Covers requirements for environmental and facility safety signs.*

ANSI Z535.3-2002, Criteria for Safety Symbols

*Provides general criteria for the design, evaluation, and use of safety symbols to identify and warn against specific hazards, and to provide information to avoid personal injury.*

ANSI Z535.4-2002, Product Safety Signs and Labels

*Provides guidelines for the design of safety signs and labels for application to products.*

ANSI Z535.5-2002, Accident Prevention Tags

*Defines the requirements for the design and use of accident prevention tags. No other type of tag is addressed by this standard.*

ANSI Z535.6-2006, Product Safety Information in Product Manuals, Instructions, and Other Collateral Materials

*Sets forth a hazard communication system developed specifically for product safety information in collateral materials. It incorporates elements of the graphical approaches used by other ANSI Z535-series standards into a common design direction selected to provide product safety information in an orderly and visually consistent manner. This standard is intended to: (1) address the applicability of elements of other ANSI Z535-series standards to collateral materials, (2) establish a uniform and consistent visual layout for safety information in collateral materials for a wide variety of products, (3) minimize the proliferation of designs for safety information in collateral materials, (4) establish a national uniform system for the recognition of potential personal injury hazards for those persons using products, (5) assist manufacturers in providing safety information in*

ANSI/ICEA P-54-440/NEMA WC-51-2002, Ampacities of Cables Installed in Cable Trays

*Covers the Ampacity ratings for 600 to 15000 volt solid dielectric cables installed in cable trays. Ampacity ratings are tabulated for single conductor cables, triplexed assemblies of single conductor cables and three conductor cables incorporating an overall jacket.*

ANSI/ICEA S-100-685-1997, Thermoplastic Insulated and Jacketed Telecommunications Station Wire for Indoor/Outdoor Use

*Covers station wire intended primarily for application on the premises of communications users. The wire is intended for use between the point of demarcation (the mattock interface device/ protector ) and the telephone termination device within single and multi-family dwellings. Materials, construction and performance requirements are included in the standard, together with applicable test procedures.*

ANSI/ICEA S-101-699-2001, Category 3 Individually Unshielded Twisted Pair Indoor Cable For Use In General Purpose Non-LAN Telecommunications Wiring Systems Technical Requirements

*This standard covers mechanical, electrical and flammability requirements for thermoplastic insulated and jacketed, copper conductor, inside wiring cables intended primarily for general purpose communication applications in telephone company central offices or on consumer premises in non-LAN (Local Area Network) applications.*

ANSI/ICEA S-103-701-2004, Riser Cable

*Establishes generic technical requirements that may be referenced by individual telecommunications cable specifications covering products intended for normal indoor premises use in the wiring systems of communications users.*

ANSI/ICEA S-105-692-2004, 600 Volt Single Layer Thermoset Insulated Utility Underground Distribution Cables

*Applies to the materials, constructions, and testing of single conductor cables and assemblies of completed single conductor thermoset insulated cables, with an insulated or bare copper or an insulated aluminum neutral, used for the distribution of electrical energy at phase-to-phase voltages not exceeding 600 volts, or phase-to-ground voltage not exceeding 480 volts, 60 Hz, and at conductor temperatures not exceeding 90 °C for use in direct burial and underground ducts. This standard applies to the materials, constructions, and testing of single conductor cables and assemblies of completed single conductor thermoset insulated cables, with an insulated or bare copper or an insulated aluminum neutral, used for the distribution of electrical energy at phase-to-phase voltages not exceeding 600 volts, or phase-to-ground voltage not exceeding 480 volts, 60 Hz, and at*

ANSI/ICEA S-106-703-2006, Broadband Aerial Service Wire Aircore, Polyolefin Insulated, Copper Conductor

*This Standard covers material, mechanical and electrical requirements for Broadband Buried Service Wire (BB-BSW) of =6 pair, intended for use principally in extending a circuit from a broadband cable terminal to a subscriber's network interface device (NID)*

ANSI/ICEA S-108-720-2004, Standard for Extruded Insulation Power Cables Rated Above 46 through 345 KV

*This standard applies to materials, constructions, and testing of crosslinked polyethylene (XLPE) and ethylene propylene rubber (EPR) insulated shielded power cables rated above 46 to 345 kV used for the transmission of electric energy.*

ANSI/ICEA S-109-709-2004, Distribution Frame-Wire, Technical Requirements

*Covers mechanical and electrical requirements for insulated, copper conductor wires, intended primarily for use as a telecommunications central office distribution frame wire.*

ANSI/ICEA S-70-547-2000, Weather-Resistant Polyolefin-Covered Wire and Cable

*Applies to materials, constructions, and testing of weather-resistant polyethylene covered conductors, rated for 75oC or 90oC normal service temperature. These conditions are intended primarily for the distribution of electrical energy under normal conditions of overhead (aerial) installations and service outdoors.*

ANSI/ICEA S-73-532/NEMA WC 57-2004, Control, Thermocouple Extension and Instrumentation Cables

*Applies to materials, construction, and testing of multiconductor control, thermocouple extension and instrumentation cables rated up to and including 125C.*

ANSI/ICEA S-76-474-2005, Neutral-Supported Power Cable Assemblies with Weather-Resistant Extruded Insulation Rated 600 Volts

*This standard applies to the materials, constructions, and testing of assemblies of extruded dielectric insulated electric current carrying phase conductors and bare or covered neutral electrical conductors used as weather resistant wires and cables suspended from supporting structures for the overhead distribution of electrical energy. This standard is intended to apply to the following multiplexed wire and cable constructions: Neutral Supported Service Drop Cables, and Neutral Supported Secondary Distribution Cables.*
*The use of these service drop and secondary distribution cables is limited to circuits not exceeding 600 volts phase to phase, or 480 volts phase-to-ground, and to a normal service conductor temperature rating of 75° C or 90° C.*

ANSI/ICEA S-80-576-2002, Category 1 & 2 Individually Unshielded Twisted Pair Indoor Cables (With or Without an Overall Shield) for Use in Communications Wiring Systems Technical Requirements

*Establishes generic technical requirements that may be referenced by individual telecommunications cable specifications covering products intended for normal indoor premises use in the wiring systems of communications users. The parameters covered provide material, construction, and performance requirements.*

ANSI/ICEA S-81-570-2005, Standard for 600 Volt Cables of Ruggedized Design

*This standard applies to the materials, constructions, and testing of single conductor cables and assemblies of completed single conductor cables used for the distribution of electrical energy at phase-to-phase voltages not exceeding 600 volts or phase to ground not exceeding 480V, and at temperatures not exceeding 75°C or 90°C, as applicable to the construction. It requires the use of ruggedized extruded insulations to improve the resistance of the cable to certain forms of mechanical damage associated with their intended use as directly buried Secondary Distribution and Service Cables. These cables, when operated within the voltage and temperature limits stated herein, are also suitable for use in other types of installations under the conditions normally associated with those installations.*

ANSI/ICEA S-84-608-2002, Telecommunications Cable Filled, Polyolefin Insulated, Copper Conductor – Technical Requirements

*Establishes generic technical requirements that may be referenced by individual telecommunications cable specifications covering products intended for normal outside plant use. The parameters covered provide material, construction, and performance requirements that are applicable to filled, polyolefin insulated and jacketed cables of all pair counts, including a variety of shield and jacket combinations and optional compartmental screening*

ANSI/ICEA S-85-625-2002, Aircore, Polyolefin Insulated, Copper Conductor Telecommunications Cable – Technical Requirements

*The purpose of this Standard is to establish generic technical requirements that may be referenced by individual telecommunications cable specifications covering products intended for normal outside plant use. The parameters covered provide material, construction, and performance requirements that are applicable to aircore, polyolefin insulated and jacketed cables of all pair counts, including a variety of shield and jacket combinations and optional compartmental screening*

ANSI/ICEA S-86-634-2004, Telecommunications Cable Buried Distribution and Service Wire – Technical Requirements

*Establishes generic technical requirements that may be referenced by individual telecommunications wire specifications covering products intended for normal outside plant use.*

ANSI/ICEA S-87-640-2006, Optical Fiber Outside Plant Communications Cable

*This standard is a revision and update of the existing ANS for optical fiber outside plan (outdoor) cable.*
*This revision notably includes two new items: a definition of a low temperature cable rating and definitions for 1625 nm transmission. The new low temperature is defined as -50C. The standard includes compliance testing rationale and requirements. Compliance requirements for 1625 nm performance are included.*

ANSI/ICEA S-89-648-2002, ICEA Standard for Aerial Service Wire

*This standard covers material, mechanical and electrical requirements for Aerial Service Wire (ASW) intended for use principally in extending a telephone circuit from a distribution cable terminal to a subscriber's station protector.*

ANSI/ICEA S-90-661-2002, Individually Unshielded Twisted Pair Indoor Cables for Use In Communication Wiring Systems – Technical Requirements

*Covers mechanical, electrical and flammability requirements for thermoplastic insulated and jacketed, copper conductor, individually unshielded twisted pair indoor cables, with or without an overall shield, intended primarily for use as horizontal cables, backbone cables, or patch cordage. Depending upon the application and system requirements, this Standard provides choices for materials, transmission characteristics and flammability ratings.*

ANSI/ICEA S-91-674-2006, Coaxial and Coaxial/Twisted Pair Composite Buried Service Wires

*Covers mechanical and electrical requirements for service wires containing at least one coaxial core and optionally up to six twisted pairs, used for service applications to extend the telephone/multimedia circuit from the distribution terminal to the subscriber's station protected NID (Network Interface Device) or protected NIU (Network Interface Unit.*

ANSI/ICEA S-92-675-2005, Coaxial and Coaxial/Twisted Pair Composite Service Wires for Aerial Applications

*Covers mechanical and electrical requirements for service wires containing at least one coaxial core and optionally up to six twisted pairs, used for service applications to extend the telephone/multimedia circuit from the distribution terminal to the subscriber's station protected NID (Network Interface Device) or protected NIU (Network Interface Unit).*

ANSI/ICEA S-94-649-2005, Concentric Neutral Cables Rated 5,000-46,000 Volts

*This Standard applies to the materials, constructions and testing of crosslinked polyethylene, tree retardant crosslinked polyethylene and ethylene propylene rubber insulated single conductor or multiplexed concentric neutral cables rated 5 to 46kV that are used for the transmission and distribution of electrical energy.*

ANSI/ICEA S-97-682-2000, Utility Shielded Power Cables Rated 5000 - 46,000 Volts

*Applies to materials, constructions, and testing of crosslinked polyethylene and ethylene propylene rubber insulated single conductor or*

*multiplexed shielded power cables rated 5 to 46 kV which are used for the transmission and distribution of electrical energy.*

ANSI/ICEA S-98-688-2006, Broadband Twisted Pair Cable Aircore, Polyolefin Insulated, Copper Conductor

*Covers mechanical and electrical requirements for aircore broadband twisted pair telecommunications cable with polyolefin insulated copper conductors, intended to supply broadband services from the remote switch to the customer premises.*

ANSI/ICEA S-99-689-1997, Broadband Twisted Pair Cable Filled, Polyolefin Insulated, Copper Conductor

*Covers mechanical and electrical requirements for filled, broadband, twisted-pair, telecommunications-cable, polyolefin-insulated copper conductors. It provides alternative choices for type of insulation, type of filling compound, core assemblies, and sheath design (shielding materials, single or double jackets, and jacket materials.)*

ANSI/ICEA T-26-465/NEMA WC 54-2000, Guide for Frequency of Sampling Extruded Dielectric Power, Control, Instrumentation, and Portable Cables for Test

*The guide provides a combination of plans for the frequencies at which cable samples may be obtained for tests to determine conformance to the appropriate requirements of ICEA Standards Publications. This guide applies only to extruded dielectric power, control, instrumentation, and portable cables.*

ANSI/ICEA T-28-562-2003, Test Method For Measurement of Hot Creep of Polymeric Insulations

*This standard provides a procedure, which is suited for determining the relative degree of crosslinking of polymeric electric cable insulation.*

ANSI/IEC 60529-2004, Degrees of protection provided by enclosures (IP Code)

*Applies to the classification of degrees of protection provided by enclosures for electrical equipment with a rated voltage not exceeding 72.5 kV.*

ANSI/IEC C78.1195-2001 (R2006), Double-Capped Fluorescent Lamps - Safety Specifications

*This standard specifies the safety requirements for double-capped fluorescent lamps for general lighting purposes of all groups having Fa6, Fa8, G5, G13, 2G13, R17d and W4.3x8.5d caps.*

ANSI/IEC C78.1199-2001 (R2006), Single-Capped Fluorescent Lamps - Safety Specifications

*This standard specifies the safety requirements for single-capped fluorescent lamps for general lighting purposes of all groups having 2G7, 2GX7, GR8, 2g10, G10q, GR10q, GX10q, GY10q, 2G11, G23, GX23, G24, GX24, and GX32 caps.*

ANSI/IEC C78.62035-2004, Discharge Lamps (excluding fluorescent lamps) - Safety Specifications

*This document is a revision of the standard that specifies the safety requirements for discharge lamps (excluding fluorescent lamps) for general lighting purposes and is applicable to low-pressure sodium vapor lamps and to high-intensity discharge (HID) lamps. It is a revision of a previously adopted NAIS : ANSI/IEC C78.62035-2002 with IEC referenced only material that incorporates USA deviations.*

ANSI/IEC C78.682-1997 (R2002), Electric Lamps - Standard Method of Measuring the Pinch Temperature of Quartz Tungsten-Halogen Lamps

*Specifies details of the type of thermocouple to be used to measure the pinch temperature of quartz-tungsten-halogen lamps, the methods of preparation of the lamp and thermocouple, and the measurement to be made*

ANSI/IEC C78.901-2005, Electric Lamps - Single-Ended Fluorescent Lamps - Dimensional and Electrical Characteristics

*This standard sets forth the physical and electrical characteristics required to assure the interchangeability and to assist in the proper application of single-based fluorescent lamps.*

ANSI/IEC C81, Electric Lamps - Gauges for Electric Lamp Bases and Lampholders

ANSI/IEC C81.61-2006, Specifications for Bases (Caps) for Electric Lamps

*This document sets forth the specifications for bases (caps) used on electric lamps.*

IEEE C136.31-2001, Roadway and Area Lighting Equipment - Luminaire Vibration

*Covers minimum vibration withstand capability and vibration methods for roadway luminaires.*

NEMA 250-2001, Enclosures for Electrical Equipment (1000 Volts Maximum)

*Covers the classification and description of enclosures for electrical equipment. Enclosures for rotating apparatus have not been included. The primary purpose of this publication is to permit a potential user to determine:*
*(a) the type of enclosure appropriate for the application, (b) the features the enclosure is expected to have, and (c) the tests applied to the enclosure to demonstrate its conformance to the description.*

NEMA 61800-1-2002, Adjustable Speed Electrical Power Drive Systems - Part 1: General Requirements - Rating Specifications for Low Voltage Adjustable Speed d.c. Power Drive Systems

*Applies to general purpose adjustable speed d.c. drive systems which include the power conversion, control equipment, and also a motor or motors. Excluded are traction and electrical vehicle drives. It applies to systems connected to line voltages up to 1 kV a.c., 50 Hz or 60 Hz. This international adoption replaces ANSI/NEMA ICS 7-1993.*

NEMA AB 4-2004, Guidelines for Inspection and Preventive Maintenance of Molded Case Circuit Breakers Used in Commercial and Industrial Applications

*NEMA Standards Publication AB 4 sets forth, for use by qualified personnel, a number of basic procedures that may be used for the inspection and preventive maintenance of molded case circuit breakers used in industrial and commercial applications rated up to and including 1000 V 50/60 Hz ac or ac/dc.*

NEMA C119.1-2006, Sealed Insulated Underground Connector System Rated 600 Volts

*This standard covers sealed, insulated underground connector systems rated at 600 volts for utility applications and establishes electrical, mechanical, and sealing requirements for sealed underground connector systems. The purpose of this standard is to give reasonable assurance to the user that sealed insulated underground connector systems meeting the requirements of this standard will perform in a satisfactory manner, provided they have been properly selected for the intended application and are installed in accordance with the manufacturer's recommendation.*

NEMA FB-1-2003, Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies

*Covers fittings that are a part of electrical raceway systems designed for use as intended by the requirements of the National Electrical Code®, NFPA 70, including fittings for use with non-flexible tubular raceways -Rigid and Intermediate Metal Conduit, Electrical Metallic Tubing. Also included are fittings for use with flexible conduit and cable raceways including-FMC, AC, MC, Tray Cable, MI Cable, Flexible Cord, NM Cable, and SE Cable. The standard also includes cast metal Outlet Boxes and Conduit Bodies and covers, that, when designed for the purpose, serve as a box intended to house conductor splices and/or wiring devices; and cast metal Junction Boxes, Pull Boxes and covers.*

NEMA FB-11-2000, Plugs, Receptacles, and Connectors of the Pin and Sleeve Type for Hazardous Locations

*Applies to all plugs, receptacles, and connectors up to 600 volts alternating current, 250 volts direct current, and all current ratings up to 200 amperes. This publication covers the ratings, materials, construction, performance, and tests of pin and sleeve type devices that are used for the connection of circuits to transmit and distribute electrical energy for normal conditions of installation and service in hazardous locations as defined by Article 500 of the National Electrical Code. This publication does not apply to devices used in flammable anesthetizing locations.*

NEMA FI 1-2003, Manufactured Electrical Mica

*This Standards Publication covers manufacturing, measurement, and testing of manufactured electrical mica.*

NEMA FI 3-2004, Calendered Aramid Papers Used for Electrical Insulation

*This standards publication is applicable to qualification and testing of calendered aramid papers inthicknesses up to 30 mils (0.76 mm) for use as electrical insulation. For U.S. Government procurement purposes, this standardreplaces Military Standard MIL-I-24204A.*

NEMA FU 1-2004, Low Voltage Cartridge Fuses

*Covers the following classes of fuses: G, H, J, K, L, R, T, CC low voltage cartridge fuses rated 600 volts or less, alternating current and direct current.*

NEMA GR 1-2001, Ground Rods and Ground Rod Couplings

*Applies to materials, construction, and performance of copper bonded and hot dipped galvanized, zinc electroplated, stainless steel, and chemical ground rod electrodes. Ground rod Electrodes and ground rod Electrode couplings that function in accordance with the American National Standard National Electrical Code(NFPA 70-1997). This standards' publication also includes information for products Electrode that have been successfully used for many years but not defined within the American National Standard National Electrical Code (NFPA 70-1997). The items described in this Standards Publication are defined in Section 1.*

NEMA HP 3-2000, Electrical and Electronic PTFE (Polytetrafluoroethylene) Insulated High Temperature Hook-Up Wire, Types ET (250 Volt), E (600 Volt) and EE (1000 Volt)

*Covers specific requirements for PTFE (polytetrafluoroethylene) insulated solid and stranded wire, designed for the internal wiring of high reliability electrical and electronic equipment. This standard addresses 250 volt (Type ET), 600 volt (Type E) and 1000 volt (Type EE) wire and permits continuous conductor temperature ratings of -65°C to +200°C with silver-coated conductors and -65°C to +260°C with nickel-coated conductors.*

NEMA HP 4-2000, Electrical and Electronic FEP (Fluorinated Ethylene Propylene)-Insulated High Temperature Hook-Up Wire, Types KT (250 Volt), K (600 Volt) and KK (1000 Volt)

*Covers specific requirements for FEP (Fluorinated Ethylene Propylene) insulated solid and stranded wire, designed for the internal wiring of high reliability electrical and electronic equipment. This Standards Publication addresses 250 volt (Type KT), 600 volt (Type K), and 1000 volt (Type KK) wire and permits continuous conductor temperature ratings of -65°C to +200°C with silver-coated or nickel-coated conductors and -65°C to +150°C with tin-coated conductors.*

NEMA IA 2.1-1993 (R2002), Programmable Controllers – Part 1: General Information

*Comprises a NEMA Adoptive Standard with deviations to accommodate the National Electrical Code and other U.S. practices. It establishes definitions and identifies principal characteristics for the selection and application of programmable controllers and their associated peripherals.*

NEMA IA 2.2-1993 (R2002), Programmable Controllers – Part 2: Equipment Requirements

*Comprises a NEMA Adoptive standard with deviations to accommodate the National Electrical Code and other U.S. practices. It specifies minimum requirements for the functional characteristics, service conditions, construction characteristics, general safety, and tests applicable to programmable controllers and their associated peripherals*

NEMA IA 2.3-1993 (R2002), Programmable Controllers – Part 3: Programming Languages

*Comprises a NEMA Adoptive Standard with deviations to accommodate the National Electrical Code and other U.S. practices. It specifies the syntax and semantics of four programming languages - two graphical languages and two textual languages - for programmable controllers. Parts of an application can be programmed in any of these languages and linked into a single executable program. This standard also defines features that facilitate communication among programmable controllers and other components of automated systems.*

NEMA IA 2.4-1996 (R2002), Programmable Controllers – Part 4: User Guidelines

*Describes different philosophies behind IEC standards and NEMA standards. Helps users make sound selection decisions.*

NEMA ICEA S-93-639/WC 74-2006, 5-46kV Shielded Power Cable for Use in the Transmission and Distribution of Electric Energy

*This standard applies to materials, constructions, and testing of 5 kV to 46 kV shielded XLPE and EPR insulated wires and cables which are used for the transmission and distribution of electrical energy for normal conditions of installation and service, either indoors, outdoors, aerial, underground, or submarine.*

NEMA ICS 8-2001, Industrial Control and Systems Crane and Hoist Controllers

*Applies to controllers for crane service as applied to DC, wound/rotor AC, and inverter duty motors, rated 600 volts or less. The types of cranes to which these standards are applicable are defined in the following American National Standards Institute Publications: ANSI/ASME B30.2, ANSI/ASME B30.3, ANSI/ASME B30.4.*

NEMA LD-3-2005, High Pressure Decorative Laminates

*This Standards Publication covers high-pressure decorative laminate (HPDL) sheets which consist of papers, fabrics, or other core materials that have been laminated at pressures of more than 5.0 MPa using thermosetting condensation resins as binders.*

NEMA MG 1-2003, Revision 1, Motors and Generators

*This standard is used by all North American motor manufacturers in the construction and performance of electric motors and generators. It is also used by consulting and design engineers in specifying motors for applications.*

NEMA MW 1000-2006, Magnet Wire (Revision 2)

*This publication is designed to present, in concise and convenient form, all of the existing NEMA Standards for magnet wire for use in the winding of coils for electrical apparatus, including definitions, type designations, dimensions, constructions, performance, and test methods.*

NEMA OS 1-2003, Sheet-Steel Outlet Boxes, Device Boxes, Covers and Box Supports

*This Standard covers those general-purpose metal outlet boxes, device boxes, covers, and supports that are widely used by the consumer. These items are designed to facilitate the pulling of wires, to protect and facilitate wiring splices and taps, to provide a means of mounting and protecting wiring devices, and to provide a connection for rigid conduit, electrical metallic tubing, armored cable, metal clad cable, nonmetallic sheathed cable, flexible metallic conduit and knob-and-tube wiring systems.*

NEMA OS 2-2003, Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports

*This Standard covers those general-purpose nonmetallic outlet boxes, device boxes, covers, and supports that are widely used by the consumer. These items are designed to facilitate the pulling of wires, to protect and facilitate wiring splices and taps, to provide a means of mounting and protecting wiring devices, and to provide a connection for nonmetallic sheathed cable, nonmetallic tubing (Loom), rigid nonmetallic conduit, and electrical nonmetallic tubing or other approved raceways.*

NEMA PB 1.1-2003, General Instructions for Proper Installation, Operation, and Maintenance of Panelboards Rated 600 Volts or Less

*Covers single panelboards or groups of panel units suitable for assembly in the form of single panelboards, including buses, and with or without switches or automatic overload protective devices (fuses or circuit breakers), or both. These units are used in the distribution of electricity at 600 volts and less with:*

*1600—ampere mains or less*
*1200—ampere branch circuits or less*

*Specifically excluded are live-front panelboards, panelboards employing cast enclosures for special service conditions, and panelboards designed primarily for residential and light commercial service equipment.*

NEMA PB 2.1-2003, General Instructions for Proper Handling, Installation, Operation, and Maintenance of Deadfront Distribution Switchboards Rated 600 Volts or Less

*Covers floor-mounted deadfront switchboards which consist of an enclosure, molded case and low-voltage power circuit breakers, fusible or non-fusible switches, instruments, and metering, monitoring, or control equipment, with associated interconnections and supporting structures. These units are used in the distribution of electricity at:*

*a. 600 volts and less*
*b.6000 amperes or less*

NEMA PDD 04.00.01-2000, Product Descriptor Data Common Fields

*Suggests the common data fields and their definitions that electrical manufacturers need to share with electrical distributors and third party catalog and information providers. This standard should not suggest any particular "database" design or implementation. Many of the fields discussed can be repeated. Therefore, it should not be used to suggest a flat file exchange, or any particular type of transaction. This standard is to be used to describe/define the different product information fields being exchanged. Future revisions of this document are anticipated*

NEMA VE 1-2003, Metal Cable Tray Systems

*Specifies the requirements for metal cable trays and associated fittings designed for use in accordance with the rules of the Canadian Electrical Code (CEC), Part I, and the National Electrical Code® (NEC®).*

NEMA VE 2-2000, Metal Cable Tray Installation Guidelines

*Addresses shipping, handling, storing, and installing of cable tray systems as well as information on maintenance and system modification.This standard was listed for public review in the 4/20/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

NEMA WC 27500-2000, Aerospace and Industrial Electric Cable

*contains requirements for finished cables. The component wires are covered by other referenced standards. These cables are intended for signal and low-voltage power applications with defined environment or temperature conditions found in commercial aircraft, military aircraft, and high performance vehicles.*

NEMA WC 53-2000/ICEA T-27-581-2000, Standard Test Methods for Extruded Dielectric Power, Control, Instrumentation, and Portable Cables for Test

*Applies to the testing of extruded dielectric insulated power, control, instrumentation, and portable cables.Included in this standard are many, but not all, of the test methods to which reference is made in ICEA/NEMA Standards for Cables.*

NEMA WC 61-1992 (R2004), Transfer Impedance Testing (Modified MIL-C-85485 Test Method)

*This standard is intended to provide a reliable surface transfer impedance test method for coaxial cables and shielded multiconductor cables over the frequency range from dc to 100MHz.*

NEMA WC 63.2-1996 (R2005), Performance Standard for Coaxial Premise Data Communications Cables

*This standard defines minimum electrical performance characteristics, material and mechanical specifications of premise wiring cables for data applications. Definitions and applicable test methods are included. The performance requirements contained in this document are for cables as manufactured. The installed cable interconnect system may have different characteristics. The performance of the installed cable is outside the scope of this document.*
*This standard covers 50 ohm coaxial cables for data communication systems.*

NEMA WC 66-2001, Performance Standard for Category 6 and Category 7 100 Ohm Shielded and Unshielded Twisted Pair Cables

*Conforms with the cabling system architecture and design as specified in the ANSI/TIA/EIA 568-A series and to harmonize them with international standards such as ISO/IEC 11801. These cables have improved Return Loss (RL) and Crosstalk loss performance requirements beyond the Category 5e values in NEMA WC 63.1. These cables may be used for voice, data and video applications whose spectral bandwidth extends up to 200 MHz for Category 6 and 600 MHz for Category 7. These cables are tested at a frequency 25% greater than the spectral bandwidth specified above: 250 MHz for Category 6 and 750 MHz for Category 7. Applicable definitions, test methods and performance requirements are included.*

NEMA WC 67-2005, Uninsulated Conductors Used in Electrical and Electronic Applications

*Covers the following uninsulated conductors: single end (solid) and stranded; coated and uncoated copper; coated copper alloy; coated copper-clad steel; aluminum conductors; thermocouple extension conductors. These conductors are used primarily in insulated wires for aerospace, electrical, electronic and other high performance applications.*

NEMA WC 70-1999/ICEA S-96-658-1999, Nonshielded Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy

*Applies to materials, constructions, and testing of 2000 volt and below nonshielded thermoplastic, crosslinked polyethylene, and crosslinked rubber insulated wires and cables which are used for the transmission and distribution, of electrical energy for normal conditions of installation and service, either indoors, outdoors, aerial, underground or submarine.*

NEMA WC 71-1999/ICEA S-96-659-1999, Nonshielded Cables Rated 2001-5000 Volts for Use in the Distribution of Electric Energy

*Applies to materials, constructions, and testing of 2001 through 5000 volt nonshielded power cables having insulations of thermoplastic polyethylene, cross-linked polyethylene or crosslinked rubber. The nonshileded cables described in this standard are intended for use for the transmission and distribution of electrical energy in normal condtions of service in indoor, outdoor, aerial, underground or submarine installations within the applications limits stated in this standard. They are not intended for portable use applications.*

NEMA WD 6-2002, Wiring Devices – Dimensional Requirements

*Covers dimensional requirements for plugs and receptacles rated up to 60 ampere and 600 volts. They also include dimensions for wallplates.*

## NERC (North American Electric Reliability Council)

## NETA (InterNational Electrical Testing Association)

ANSI/NETA ETT-2000, Certification of Electrical Testing Personnel

*Specifies requirements leading to certification of technicians performing testing of electrical power equipment and systems.*

ANSI/NETA MTS 7.2.1-2001, NETA Maintenance Testing Specifications for Dry-Type Transformers: Air-Cooled, 600 Volts and Below - Small (167 kV Single-Phase, 500 kVA Three-Phase, and Smaller) and Air-Cooled, All Above 600 Volts and 600 Volts and Below - Large

*Provises a specification for electrical maintenance testing of Dry-Type Transformers: Air-Cooled, 600 Volts and Below - Small (167 kV Single-Phase, 500 kVA Three-Phase, and Smaller) and Air-Cooled, All Above 600 Volts and 600 Volts and Below- Large (Greater than 167 kV Single-Phase and 500 kVA Three-Phase)Specification for electrical maintenance testing of Dry-Type Transformers: Air-Cooled, 600 Volts and Below - Small (167 kV Single-Phase, 500 kVA Three-Phase, and Smaller) and Air-Cooled, All Above 600 Volts and 600 Volts and Below- Large (Greater than 167 kV Single-Phase and 500 kVA Three-Phase) This standard was listed for public review in the 6/16/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text. This announcement concerns substantive changes made at the Committee level following the*

ANSI/NETA MTS 7.2.2-2001, Maintenance Testing Specifications for Liquid-Filled Transformers

*Provides a specification for electrical maintenance testing of liquid-filled transformers.Specification for electrical maintenance testing of liquid-filled transformers. This standard was listed for public review in the 6/16/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text. This announcement concerns substantive changes made at the Committee level following the Public Comment period previously published in ANSI Standards Action. No Public Comments were received during the initial announcement. Only the substantive changes are open for comment.*

## NFPA (National Fire Protection Association)

ANSI A119.2-2002, Recreational Vehicles

*This standards provides minimum construction requirements to ensure a reasonable degree of safety and heath for occupants using facilities supplied by recreational vehicle parks and campgrounds, which offer temporary living sites for use by recreational vehicles, recreational park trailers, and other camping units.*

ANSI A119.4-1999 (R2002), Recreational Vehicle Parks and Campgrounds

*Provides minimum construction requirements to ensure a reasonable degree of safety and heath for occupants using facilities supplied by recreational vehicle parks and campgrounds, which offer temporary living sites for use by recreational vehicles, recreational park trailers, and other camping units. An editoral restructing of the 1999 edition, to conform to with the 2000 edition of the NFPA manual of style was done to create this edition. No technical changes were made to this edition.*

ANSI/NFPA 1-2006, Uniform Fire Code™

*Covers the prevention of fire and explosion through the regulation of conditions that could cause fire or explosion and panic resulting therefrom.*

ANSI/NFPA 10-2002, Portable Fire Extinguishers

*Covers the selection, installation, inspection, maintenance, and testing of portable extinguishing equipment.*

ANSI/NFPA 1000-2006, Standard for Fire Service Professional Qualifications Accreditation and Certification Systems

*Establishes the minimum criteria for accrediting bodies and the minimum criteria for the assessment and validation of the process used to certify fire and related emergency response personnel to professional qualifications standards.*

ANSI/NFPA 1001-2002, Fire Fighter Professional Qualifications

*Identifies the professional levels of competence required of fire department members, especially the requirements for entrance into the fire department, and the first three levels of progression thereafter.*

ANSI/NFPA 1002-2003, Fire Apparatus Driver/Operator Professional Qualifications

*Identifies the professional levels of competence required of the fire apparatus driver/operator.*

ANSI/NFPA 1003-2005, Airport Fire Fighter Professional Qualifications

*Identifies the level of professional competence required of the airport fire fighter for aircraft rescue and fire fighting.*

ANSI/NFPA 1005-2006, Standard on Professional Qualifications for Marine Fire Fighting for Land-Based Fire Fighters

*This standard identifies the minimum job preference requirements for marine fire fighters responsible for firefighting operations aboard commercial/military vessels over 50 feet involved in fire that call at North American ports or that are signatory to the International Safety of Life at Sea (SaLAS) agreement.*

ANSI/NFPA 1006-2003, Standard for Rescue Technician Professional Qualifications

*This standard establishes the minimum job performance requirements necessary for fire service and other emergency response personnel who perform technical rescue operations.*

ANSI/NFPA 101-2006, Life Safety Code®

*Deals with life safety from fire and like emergencies. Covers construction, protection and occupancy features to minimize danger to life from fires, smoke, fumes or panic before buildings are vacated.*

ANSI/NFPA 101A-2007, Guide On Alternative Approaches to Life Safety

*Consists of a number of different system approaches to life safety.*

ANSI/NFPA 101B-2002, Means of Egress Code

*Identifies the minimum criteria for the design of egress facilities so as to permit prompt escape of occupants from buildings or, where desirable, into safe areas within buildings.*

ANSI/NFPA 102-2006, Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures

*Covers the construction, location, protection and maintenance of tents and air-supported structures used for places of assembly; temporary, permanent and portable grandstands and bleachers; interior folding or telescopic seating normally used in gymnasiums, multi-use rooms and similar indoor mass seating.*

ANSI/NFPA 1021-2003, Fire Officer Professional Qualifications

*Identifies the professional levels of competence required for fire department officers.*

ANSI/NFPA 1031-2003, Professional Qualifications for Fire Inspector

*Identifies the professional levels of competence required for fire inspectors. It specifically covers the requirements for knowledge and the progression through levels of competency.*

ANSI/NFPA 1033-2003, Professional Qualifications for Fire Investigator

*Identifies the professional levels of competence required for fire investigators. Specifically, it addresses the required areas of expertise and defines each level of competence.*

ANSI/NFPA 1035-2005, Public Fire Educator Professional Qualifications

*Identifies the professional levels of competence required of public fire educators. It specifically covers the requirements for knowledge and a progression through three levels of competency.*

ANSI/NFPA 1037-2006, Standard for Professional Qualifications for Fire Marshals

*This standard shall identify the professional level of performance required for fire marshal, specifically identifying the minimum job performance requirements necessary to perform as a fire marshal.*

ANSI/NFPA 1041-2006, Standard for Fire Service Instructor Professional Qualifications

*This standard identifies the professional levels of competence required of fire service instructors.*

ANSI/NFPA 105-2007, Standard for the Installation of Smoke Door Assemblies

*This standard shall prescribe minimum requirements for smoke door assemblies for use in providing safety to life and protection of property from smoke.*

ANSI/NFPA 1051-2006, Standard for Wildland Fire Fighter Professional Qualifications

*This standard shall identify the minimum job performance requirements for wildland fire duties and responsibilities.*

ANSI/NFPA 1061-2006, Standard for Professional Qualifications for Public Safety Telecommunicator

*This standard identifies the minimum job performance requirements for public safety telecommunicators.*

ANSI/NFPA 1071-2006, Standard for Emergency Vehicle Technician Professional Qualifications

*Iidentifies the minimum job performance requirements for those personnel who perform diagnosis, maintenance, and repair of emergency response vehicles.*

ANSI/NFPA 1081-2007, Standard for Industrial Fire Brigade Member Professional Qualifications

*This standard identifies the minimum job performance requirements necessary to perform the duties of an individual who is a member of an organized industrial fire brigade providing services at a specific facility or site.*

ANSI/NFPA 11-2005, Standard for Low-, Medium-, and High-Expansion Foam Systems

*Covers minimum requirements for Halon 1301 fire extinguishing systems for the use and guidance of those charged with the purchasing, designing, installing, testing, inspecting, approving, listing, operating and maintaining such systems.*

ANSI/NFPA 110-2005, Emergency and Standby Power Systems

*Provides a series of forms to aid in note taking at the scene of a fire incident and during the investigation.*

ANSI/NFPA 111-2005, Stored Electrical Energy Emergency and Standby Power Systems

*Establishes guidelines and recommended practice for the systematic investigation or analysis of fire explosion incidents.*

ANSI/NFPA 1122-2002, Unmanned Rockets

*Applies to the design, construction, limitation of propellant mass and power, and reliability of all rocket motors, other than fireworks rockets, produced commercially for sale to and/or use by the public for purposes of education, recreation, and sporting competition.*

ANSI/NFPA 1123-2006, Code for Fireworks Display

*Applies to the construction, handling, and use of fireworks intended solely for public display. It shall also apply to the general conduct and operation of the display.*

ANSI/NFPA 1124-2006, Code for the Manufacture, Transportation, Storage and Retail Sales of Fireworks and Pyrotechnic Articles

*Applies to the manufacture, transportation and storage of fireworks.*

ANSI/NFPA 1125-2007, Code for the Manufacture of Model Rocket and High Power Rocket Motors

*1.1.1* This code shall apply to the manufacture of model and high power rocket motors designed, sold, and used for the purpose of propelling recoverable aero models. 1.1.2 This code shall apply to the design, construction, limitation of propellant mass and power, and reliability of model and high power rocket motors and model rocket and high power motor-reloading kits and their components. 1.1.3 This code shall not apply to the sale and use of the following: (1) Model rocket motors (covered by NFPA 1122, Code for Model Rocketry) (2) High power rocket motors (covered by NFPA 1127, Code for High Power Rocketry) 1.1.4* This code shall not apply to the manufacture, transportation, and storage of fireworks. 1.1.5 This code shall not apply to the manufacture, transportation, and storage of rocket motors by the United States military or other agencies or political*

ANSI/NFPA 1126-2006, Standard for the Use of Pyrotechnics before a Proximate Audience

*Provides reasonable protection to pyrotechnic operators, performers, support personnel, and viewing proximate audiences, where pyrotechnic special effects are used indoors or outdoors.*

ANSI/NFPA 1127-2002, High Power Rocketry

*Applies to the design, construction, limitation of propellant mass and power, and reliability of all high power rocket motors produced commercially for sale to and/or use by the certified user for education, recreation, and sporting competition.*

ANSI/NFPA 1141-2003, Fire Protection in Planned Building Groups

*Covers minimum planning criteria for fire protection for planned building groups in suburban and rural areas.*

ANSI/NFPA 1142-2007, Standard on Water Supplies for Suburban and Rural Fire Fighting

*This standard shall identify minimum requirements for water supplies for structural fire-fighting purposes in rural and suburban areas where adequate and reliable water supply systems for fire-fighting purposes, as determined by the authority having jurisdiction, do not otherwise exist. The minimum requirements identified in this standard shall be subject to increase by the authority having jurisdiction to meet particular conditions such as the following: (1) Limited fire department resources (2) Extended fire department response time (3) Delayed alarms (4) Limited access (5) Hazardous vegetation (6) Structural attachments, such as decks and porches (7) Unusual terrain (8) Special uses*

ANSI/NFPA 1143-1998, Wildfire Control

*Presents fundamental information to fire departments in the control of wildfire burning in natural and other vegatative fuels*

ANSI/NFPA 1144-2002, Protection of Life and Property from Wildfire

*Presents minimum planning criteria for the protection of life and property from wildfire. It includes information on safe procedures and practices at the wildland/urban interface or intermix.*

ANSI/NFPA 1145-2006, Guide for the Use of Class A Foams in Manual Structural Fire Fighting

*Identifies fundamental information for agencies planning to utilize Class A foam for structural fire fighting and protection. It presents necessary and useful information on foam properties and characteristics, proportioning and discharge hardware, application techniques and safety considerations*

ANSI/NFPA 115-2003, Laser Fire Protection

*Covers minimum fire protection criteria for the design, manufacture, installation and use of lasers and associated equipment. This includes criteria for responding to fire emergencies involving lasers.*

ANSI/NFPA 1150 -2004, Chemicals and Wildland and Fire Control

*Specifies requirements and test procedures for foam chemicals used in wildland fire fighting.*

ANSI/NFPA 1192-2005, Recreational Vehicles

*Covers fire safety guidelines for fuel systems, fire detection equipment, existing facilities, and plumbing systems, including water distribution and drainage systems.*

ANSI/NFPA 1194-2005, Recreational Vehicle Parks and Campgrounds

*Provides construction requirements and use of land areas designated for recreational vehicle parks.*

ANSI/NFPA 12-2005, Carbon Dioxide Extinguishing Systems

*Covers the fire and explosion hazards that may exist in oxygen enriched atmospheres.*

ANSI/NFPA 120-2004, Coal Preparation Plants

*Covers minimum requirements for reducing the potential for losses of life and property from fire and explosion in coal preparation plants. Only plants designed to prepare coal for shipment are included in this standard.*

ANSI/NFPA 1201-2004, Developing Fire Protection Services for the Public

*Recommendations for individuals having responsibility for the organization for fire services.*

ANSI/NFPA 122-2004, Storage of Flammable and Combustible Liquids within Underground Metal and Non-Metal Mines Other Than Coal

*Covers requirements for safeguarding life and property against fire and related hazards associated with the storage of flammable and combustible liquids within underground mines other than coal.*

ANSI/NFPA 1221-2007, Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems

*1.1.1 This standard shall cover the installation, performance, operation, and maintenance of public emergency service communications systems and facilities. 1.1.2 This standard shall not be considered to be a design specification or an instruction manual.*

ANSI/NFPA 1250-2004, Recommended Practice in Emergency Service Organization Risk Management

*Establishes minimum criteria to develop, implement or evaluate an emergency services organization risk management program for effective risk identification, control and financing.*

ANSI/NFPA 12A-2004, Halon 1301 Fire Extinguishing Systems

*Covers minimum requirements for Halon 1301 fire extinguishing systems for the use and guidance of those charged with the purchasing, designing, installing, testing, inspecting, approving, listing, operating and maintaining such systems.*

ANSI/NFPA 13-2007, Installation of Sprinkler Systems

*This standard shall provide the minimum requirements for the design and installation of automatic fire sprinkler systems and exposure protection sprinkler systems covered within this standard.*

ANSI/NFPA 130-2007, Standard for Fixed Guideway Transit and Passenger Rail Systems

*1.1.1 This standard shall cover fire protection requirements for passenger rail, underground, surface, and elevated fixed guideway transit systems, including trainways, vehicles, fixed guideway transit stations, and vehicle maintenance and storage areas, and for life safety from fire in fixed guideway transit stations, trainways, vehicles, and outdoor vehicle maintenance and storage areas. 1.1.2 Fixed guideway transit stations shall pertain to stations accommodating only passengers and employees of the fixed guideway transit and passenger rail systems and incidental occupancies in the stations. This standard establishes minimum requirements for each of the identified subsystems. 1.1.3 This standard shall not cover requirements for the following:(1) Conventional freight systems (2) Buses and trolley coaches (3) Circus trains (4) Tourist, scenic, historic, or excursion*

ANSI/NFPA 13D-2007, Installation of Sprinker Systems in One- and Two-Family Dwellings and Manufactured Homes

*This standard shall cover the design and installation of automatic sprinkler systems for protection against the fire hazards in one- and two-family dwellings and manufactured homes.*

ANSI/NFPA 13E-2005, Recommended Practice for Fire Department Operations in Properties Protected by Sprinkler and Standpipe Systems

*Applies to the highway transportation of LP-Gas and to the design, construction, installation and operation of all LP-Gas systems.*

ANSI/NFPA 13R-2007, Installation of Sprinker Systems in Residential Occupancies Up to and Including Four Stories in Height

*This standard shall cover the design and installation of automatic sprinkler systems for protection against fire hazards in residential occupancies up to and including four stories in height.*

ANSI/NFPA 14-2003, Standard for the Installation of Standpipe, Private Hydrants, and Hose Systems

*Covers the minimum requirements for the installation of standpipe and hose systems for buildings and structures.*

ANSI/NFPA 140-2004, Motion Picture and Television Production Studio Soundstages and Approved Protection Facilities

*Establishes minimum requirements for the hazards associated with practices, processes and materials for the following facilities when used for motion picture and television production: Sound stages; approved production facilities; and production locations.*

ANSI/NFPA 1401-2006, Fire Service Training Reports and Records

*Presents a systematic appraoch to the function of providing essential information for managing training activity.*

ANSI/NFPA 1402-2006, Guide to Building Fire Service Training Centers

*This guide addresses the design and construction of facilities for fire training. It covers the aspects that should be considered when planning such a facility. It should be understood that it is impractical to list every item that might be included in a training center or every type of specialty training facility that might be constructed. Therefore, the main components of a training center necessary to accomplish general fire fighter training effectively, efficiently, and safely are presented here.*

### ANSI/NFPA 1403-2006, Live Fire Training Evolutions

*This standard shall contain the minimum requirements for training fire suppression personnel engaged in fire-fighting operations under live fire conditions. 1.1.1 The minimum requirements for training shall comprise a basic system that can be adapted to local conditions to serve as a standard mechanism for live fire training.*

### ANSI/NFPA 1404-2006, Fire Department Self-Contained Breathing Apparatus Program

*Contains minimum requirements for a fire service respiratory protection program. These requirements are applicable to organizations providing fire suppression, fire training, rescue and respiratory protection equipment training, and other emergency services including public, military, and private fire departments and fire brigades.*

### ANSI/NFPA 1405-2006, Guide for Land-Based Fire Fighters Who Respond to Marine Vessel Fires

*Identifies the elements of a comprehensive marine firefighting response program, including, but not limited to, vessel familiarization, training considerations, pre-fire planning and special hazards, that will enable land-based firefighters to safely and efficiently extinguish vessel fires.*

### ANSI/NFPA 1410-2005, Standard on Training for Initial Emergency Scene Operations

*Covers the evaluation of prior training in initial fire flow delivery procedures by fire department personnel engaged in structural fire fighting efforts.*

### ANSI/NFPA 1451-2006, Fire Service Vehicle Operations Training Program

*1.1.1 This standard shall contain the minimum requirements for a fire service vehicle operations training program. 1.1.2 This standard shall outline the development of a written training program, including the organizational procedures for training, vehicle maintenance, and identifying equipment deficiencies; and for design, financing, and other areas. 1.1.3 The knowledge and skills required of safety, training, maintenance, and administrative officers charged with developing and implementing the operations training program shall also be outlined within this standard.*

### ANSI/NFPA 1452-2005, Guide for Training Fire Service Personnel to Conduct Dwelling Fire Safety Surveys

*Provides the fire department training officers or other fire service personnel with guidance on the establishment of a dwelling fire safety program.*

### ANSI/NFPA 15-2007, Standard for Water Spray Fixed Systems for Fire Protection

*1.1.1 This standard provides the minimum requirements for the design, installation, and system acceptance testing of water spray fixed systems for fire protection service and the minimum requirements for the periodic testing and maintenance of ultra high-speed water spray fixed systems. 1.1.2* Water spray fixed systems shall be specifically designed to provide for effective fire control, extinguishment, prevention, or exposure protection. 1.1.3* This standard shall not apply to water spray protection from portable nozzles, sprinkler systems, monitor nozzles, water mist suppression systems, explosion suppression, or other means of application covered by other standards of NFPA.*

### ANSI/NFPA 150-2007, Standard on Fire and Life Safety in Animal Housing Facilities

*This standard contains minimum requirements for the construction, fire protection, and occupancy of racetrack stable areas, including those at state, county, and local fairgrounds. Dormitories and grandstand areas are the responsibilities of the Committees on Safety to Life and the Committee on Tents and Membrane Structures, respectively (NFPA 101®, Life Safety Code®; NFPA 102, Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures).*

### ANSI/NFPA 1500-2007, Fire Department Occupational Safety and Health Program

*This standard shall contain minimum requirements for a fire-service-related occupational safety and health program.*

### ANSI/NFPA 1521-1997 (R2002), Fire Department Safety Officer

*Contains minimum requirements for the assignment, duties, and responsibilities of a safety officer for a fire department or other fire service organization.*

### ANSI/NFPA 1561-2005, Standard on Emergency Services Incident Management System

*Covers minimum requirements for an incident management system to be used by fire departments to manage all emergency incidents.*

### ANSI/NFPA 1581-2005, Fire Department Infection Control Program

*Contains minimum requirements for a fire department infection control program.*

ANSI/NFPA 1582-2007, Standard on Comprehensive Occupational Medical Program for Fire Departments

*This standard contains descriptive requirements for a comprehensive occupational medical program for fire departments. 1.1.1* The medical requirements in this standard are applicable to candidates and members whose essential job tasks, as defined by the authority having jurisdiction (AHJ), are described in NFPA 1001, NFPA 1002, NFPA 1003, NFPA 1006, NFPA 1021, and NFPA 1051. 1.1.2 This standard provides information for physicians and other health care providers responsible for fire department occupational medical programs. 1.1.3 These requirements are applicable to public, governmental, military, private, and industrial fire department organizations providing rescue, fire suppression, emergency medical services, hazardous materials mitigation, special operations, and other emergency services. 1.1.4 This standard shall not apply to industrial*

ANSI/NFPA 1583-2000, Standard on Health Related Fitness Programs for Fire Fighters

*This document provides the minimum requirements for a health related fitness program for fire department members who are involved in rescue, fire suppression, emergency medical services, hazardous materials operations, special operations, and related activities.*

ANSI/NFPA 1584-2003, Recommended Practice for a Fire Department Rehabilitation Program

*Establishes the minimum criteria to develop and implement a member's rehabilitation process for fire department incident scene operation and training exercises.*

ANSI/NFPA 16-2006, Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems

*This standard contains minimum requirements for the design, installation, and maintenance of foam-water sprinkler and spray systems. These systems shall be designed with the required density for either foam or water application as the controlling factor, depending on the design purpose of the system. It is not the intent of this standard to specify where foam-water sprinkler and spray protection is required. The determination of where foam-water sprinklers and spray systems are required shall be made in accordance with such applicable standards as NFPA 30, Flammable and Combustible Liquids Code, and NFPA 409, Standard on Aircraft Hangars. This standard shall apply only to systems using low-expansion foam.*

ANSI/NFPA 160-2006, Standard for the Use of Flame Effects before an Audience

*This standard shall apply to flame special effects before an audience, including their design, fabrication, installation, testing, control, operation, and maintenance.*

ANSI/NFPA 1600-2006, Standard on Disaster/Emergency Management and Business Continuity Programs

*This standard establishes a common set of criteria for disaster management, emergency management, and business continuity programs hereinafter referred to as the program. 1.2 Purpose. This standard shall provide those with the responsibility for disaster and emergency management and business continuity programs the criteria to assess current programs or to develop, implement, and maintain a program to mitigate, prepare for, respond to, and recover from disasters and emergencies. 1.3 Application. This document shall apply to both public and private programs.*

ANSI/NFPA 1620-2003, Recommended Practice for Pre-Incident Planning

*Applies to the evaluation of the protection, construction, and operational features of specific occupancies for the development of a pre-incident plan for response to fires and other types of emergencies.*

ANSI/NFPA 1670-2004, Operations and Trainings for Technical Rescue Incidents

*Identifies and establishes performance levels for safely and effectively conducting operations at technical rescue incidents.*

ANSI/NFPA 17-2002, Dry Chemical Extinguishing Systems

*Covers minimum requirements for dry chemical fire extinguishing systems which discharge dry chemical from fixed nozzles or hand hose lines by means of expellant gas.*

ANSI/NFPA 170-2006, Standard for Fire Safety and Emergency Symbols

*The scope provides referents and symbols for visual alerting of building occupants during fire and related life safety emergencies; presents fire protection symbols for the architectural, engineering, and allied design fields; presents fire protection symbols for diagrams employed in fire risk and loss analysis; presents standard referents and symbols for visual alerting of fire fighters during fire and related emergencies.*

ANSI/NFPA 1710-2004, Standard for the Organization and Deployment of Fire Suppression, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments

*Contains minimum requirements relating to the organization and deployment of fire suppression, emergency medical operations, and special operations to the public by substantially all career fire departments.*

ANSI/NFPA 1720-2004, Standard on Volunteer Fire Service Deployment

*Contains minimum requirements relating to the organization and deployment of fire suppression resources: and for those fire departments which provide them, emergency medical, and special operations resources.*

ANSI/NFPA 17A-2002, Wet Chemical Extinguishing Systems

*Covers the design, installation, operation, testing and maintenance of wet chemical pre-engineered fire extinguishing systems which discharge wet chemical from fixed nozzles and piping by means of expellant gas.*

ANSI/NFPA 18-2006, Standard on Wetting Agents

*Covers qualification tests, methods of evaluation, general rules for application, and limitations for use of wetting agents as related to fire control and extinguishment.*

ANSI/NFPA 1851-2001, Standard on Selection, Care, and Maintenance of Structural Fire Fighting Protective Ensemble Elements

*Specifies the minimum selection, care and Maintenance requirements for protective ensembles that include protective coats, protective trousers, protective coveralls, helmets, gloves, footwear, and interface components that are compliance with NFPA 1971.*

ANSI/NFPA 1852-2002, Standard on Selection, Care, and Maintenance of Open-Circuit SCBA

*Specifies minimum requirements for the selection, care, and maintenance of open-circuit self-contained breathing apparatus (SCBA) that are used in fire fighting, rescue, and other hazardous duties and that are compliant with NFPA 1981, Standard on Personal Alert Safety Systems, where applicable.*

ANSI/NFPA 18A-2006, Standard on Water Additives for Fire Control and Vapor Mitigation

*This standard shall provide the minimum requirements for water additives used for the control and/or suppression of fire and mitigation of flammable vapors.*

ANSI/NFPA 1901-2003, Automotive Fire Apparatus

*Covers new automotive fire apparatus designed for sustained pumping operations during structural fire fighting and supporting associated fire department operations. It consists of a fire pump, water tank, hose and equipment.*

ANSI/NFPA 1906-2006, Wildland Fire Apparatus

*This standard shall apply to a new automotive fire apparatus designed for wildland fire suppression. It consists of a vehicle equipped with a pump, water tank, limited hose, and equipment. The vehicle shall have the capability to pump and roll. This apparatus is not intended for interior structural fire fighting.*

ANSI/NFPA 1911-2006, Standard for Service Tests of Fire Pump Systems on Fire Apparatus

*This standard shall cover the service testing of fire pump systems on automotive fire apparatus.*

ANSI/NFPA 1912-2006, Standard on Refurbishing Fire Apparatus

*Applies to self-propelled automotive fire apparatus of the various types commonly utilized by fire departments for fire fighting and rescue operations. It shall include work done "in-house" at the fire department or municipal shops as well as at outside shops or apparatus manufacturers.*

ANSI/NFPA 1925-2004, Marine Fire Fighting Vessels

*Provides minimum requirements for marine fire fighting vessels. It shall apply to both the construction of new vessels and the conversion of existing vessels for fire fighting purposes. It also provides minimum maintenance and testing requirements.*

ANSI/NFPA 1931-2004, Design and Design Verification Tests for Fire Department Ground Ladders

*Provides requirements for the construction, care and use of fire department ground ladders.*

ANSI/NFPA 1932-2004, Use, Maintenance, and Service Testing of Fire Department Ground Ladders

*Covers requirements for the use, maintenance, inspection and service testing of fire department ground ladders.*

ANSI/NFPA 1936-2005, Standard on Powered Rescue Systems

*Specifies the minimum requirements for the design, performance, testing, and certification of newly manufactured hydraulic powered rescue tools used to facilitate the extrication of victims from entrapment.*

ANSI/NFPA 1951-2006, Standard on Protective Ensemble for USAR Operations

*1.1.1* This standard shall specify the minimum design, performance, testing, and certification requirements for USAR ensembles and ensemble elements, including garments, helmets, gloves, footwear, and eye and face protection devices designed to provide emergency response personnel limited protection from physical, environmental, thermal, chemical splash, and bloodborne hazards during USAR operations. 1.1.2 This standard shall apply to the design, manufacturing, and certification of new protective ensembles or new individual protective ensemble elements. 1.1.3 This standard shall not apply to protective ensembles or protective ensemble elements for personnel assigned to or involved in search, rescue, recovery, or site stabilization operations that require the functional capabilities for water or wilderness incidents.*

ANSI/NFPA 1961-2006, Fire Hose

*This standard shall define the design and construction requirements for new fire hose, the testing required to verify the design and construction, and the inspection and testing required of all new fire hose.*

ANSI/NFPA 1962-2003, Care, Use, and Service Testing of Fire Hose, Including Couplings and Nozzles

*Covers care of all types of fire hose and coupling assemblies while in service, in use, and after use; including record keeping, inspecting, and service testing.*

ANSI/NFPA 1963-2003, Screw Threads and Gaskets for Fire Hose Connections

*Covers the dimensions for screw thread connections, gages, gaskets, gasket seats, and the size thread of threaded connections specified herein.*

ANSI/NFPA 1964-2003, Spray Nozzles (Shutoff and Tip)

*Applies to new portable adjustable-pattern nozzles intended for general fire department use, for marine and offshore platform use, or for use with fire hoses affixed to standpipe systems.*

ANSI/NFPA 1965-2003, Standard for Hose Appliances

*This standard covers the requirements for hose appliances up to and including 150 mm (6 in.) designed for connection to fire hose, fire apparatus, and fire hydrants and intended for general fire service use in controlling or conveying water.*

ANSI/NFPA 1971-2000, Protective Clothing for Structural Fire Fighting

*Covers minimum design and performance criteria and test methods for protective clothing designed to protect fire fighters against adverse environmental effects during structural fire fighting.*

ANSI/NFPA 1975-2004, Station/Work Uniforms for Fire Fighters

*Covers minimum general requirements, performance requirements and text methods for textile materials used in the construction of station/work uniforms.*

ANSI/NFPA 1976-2000, Protective Clothing for Proximity Fire Fighting

*Specifies minimum design and performance criteria and test methods for protective clothing designed to provide limb/torso protection for fire fighters against adverse environmental effects encountered during proximity fire fighting operations.*

ANSI/NFPA 1977-2005, Protective Clothing and Equipment for Wildland Fire Fighting

*This standard specified the minimum design and performance criteria and test methods for protective clothing, helmets, gloves, footwear, and fire shelters to protect fire fighters against the adverse effects to the fire fighter's body during wildland fire fighting.*

ANSI/NFPA 1981-2006, Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services

*1.1.1* This standard shall specify the minimum requirements for the design, performance, testing, and certification of open-circuit self-contained breathing apparatus (SCBA) and combination open-circuit self-contained breathing apparatus and supplied air respirators (SCBA/SAR) for fire and emergency services personnel. 1.1.2 This standard shall specify the requirements for SCBA as detailed in Section 1.3 Application. 1.1.3 This standard shall not specify requirements for other types of self-contained breathing apparatus. 1.1.4 Nothing herein shall restrict any jurisdiction or manufacturer from exceeding these minimum requirements.*

ANSI/NFPA 1982-2006, Standard on Personal Alert Safety Systems (PASS)

*1-1.1* This standard shall specify minimum design, performance, and certification requirements and test methods for all Personal Alert Safety Systems (PASS) to be used by fire fighters and other emergency services personnel who engage in rescue, fire fighting, and other hazardous duties. 1-1.2 This standard shall apply to the design, manufacturing, and certification of all new PASS including, but not limited to, Stand-Alone PASS and SCBA-Integrated PASS. This standard shall not apply to any PASS manufactured to previous editions of this standard. 1-1.3 The requirements of this standard shall not apply to accessories that might be attached to PASS unless specifically addressed herein. 1-1.4 Nothing herein is intended to restrict any jurisdiction or manufacturer from exceeding these minimum requirements.*

ANSI/NFPA 1983-2006, Fire Service Life Safety Rope, Harnesses, and Hardware

*Covers minimum performance and design criteria and test methods for life safety rope, harnesses, and hardware used by the fire service.*

ANSI/NFPA 1989-2003, Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection

*Specifies the minimum requirements for breathing air quality for fire and emergency services organizations that use atmosphere-supplying respirators.*

ANSI/NFPA 1991-2005, Vapor Protective Suits for Hazardous Chemical Emergencies

*Covers design criteria, performance criteria, and test methods for Vapor-Protective Suits designed to protect emergency response personnel against exposure to specified chemicals in vapor and liquid splash environments during hazardous chemical emergencies.*

ANSI/NFPA 1992-2005, Standard on Liquid Splash-Protective Ensembles and Clothing (Level B) for Hazardous Materials Emergencies

*Covers design criteria, performance criteria, and test methods for Liquid Splash-Protective Suits designed to protect emergency response personnel against exposure to specified chemicals in liquid-splash environments during hazardous chemical emergencies.*

ANSI/NFPA 1994-2001, Standard on Protective Ensembles for Chemical or Biological Terrorism Incidents

*Specifies minimum design, performance and documentation requirements, and test methods for protective ensembles for personnel responding to incidents involving the release of dual-use industrial chemicals, chemical warfare agents or biological warfare agents.*

ANSI/NFPA 1999-2003, Protective Clothing for Emergency Medical Operations

*Specifies minimum documentation, design criteria, performance criteria and test methods for new-single use and new multiple-use emergency medical clothing, including garments, gloves, and face protection devices, designed to protect emergency medical service personnel as well as victims and patients from contact with liquid-borne pathogens during emergency medical operations.*

ANSI/NFPA 20-2007, Standard for the Installation of Stationary Pumps for Fire Protection

*1.1.1 This standard deals with the selection and installation of pumps supplying liquid for private fire protection. 1.1.2 Items considered include liquid supplies; suction, discharge, and auxiliary equipment; power supplies; electric drive and control; diesel engine drive and control; steam turbine drive and control; and acceptance tests and operation. 1.1.3 This standard does not cover system liquid supply capacity and pressure requirements, nor does it cover requirements for periodic inspection, testing, and maintenance of fire pump systems. 1.1.4 This standard does not cover the requirements for installation wiring of fire pump units.*

ANSI/NFPA 2001-2004, Clean Agent Fire Extinguishing Systems

*Contains minimum requirements for total flooding, clean agent fire extinguishing systems.*

ANSI/NFPA 2010-2006, Standard for Fixed Aerosol Fire Extinguishing Systems

*This standard contains minimum requirements for fixed aerosol fire extinguishing systems.*

ANSI/NFPA 204-2006, Standard for Smoke and Heat Venting

*1.1.1* This standard shall apply to the design of venting systems for the emergency venting of products of combustion from fires in buildings. The provisions of Chapters 4 through 10 shall apply to the design of venting systems for the emergency venting of products of combustion from fires in nonsprinklered, single-story buildings using both hand calculations and computer-based solution methods as provided in Chapter 9. Chapter 11 shall apply to venting in sprinklered buildings. 1.1.2* This standard shall not specify under which conditions venting is to be provided or required. 1.1.3 Where a conflict exists between a general requirement and a specific requirement, the specific requirement shall be applicable.*

ANSI/NFPA 211-2006, Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances

*Covers the installation and use of chimneys, fireplaces and venting systems.*

ANSI/NFPA 2112-2007, Standard on Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire

*This standard shall specify the minimum design, performance, certification requirements, and test methods for flame-resistant garments for use in areas at risk from flash fires.*

ANSI/NFPA 2113-2007, Standard on Selection, Care, Use, and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire

*1.1.1* This standard shall specify the minimum selection, care, use, and maintenance requirements for flame-resistant garments for use in areas at risk from flash fires by industrial personnel that are compliant with NFPA 2112, Standard on Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire. 1.1.2* This standard shall not apply to protective clothing for wildland fire fighting, technical rescue, structural fire fighting, proximity fire fighting, or any other fire-fighting operations, or hazardous materials emergencies. This standard shall not apply to protection from electrical flashes, radiological agents, biological agents, or hazardous materials.*

ANSI/NFPA 214-2005, Water-Cooling Towers

*This standard shall establish minimum criteria for disaster management and provide guidance to the private and public sectors in the development of a program for effective disaster preparedness response and recovery.*

ANSI/NFPA 22-2003, Water Tanks for Private Fire Protection

*Covers requirements for the design, construction, installation and maintenance of earth supported fabric tanks and accessory equipment supplying water for private fire protection.*

ANSI/NFPA 220-2006, Types of Building Construction

*Defines standard types of building construction and the terms "limited combustible," and "non-combustible," as applied to building construction materials.*

ANSI/NFPA 221-2006, Fire Walls

*Specifies requirements for the design and construction of fire walls and fire barrier walls.*

ANSI/NFPA 225-2005, Model Manufactured Home Installation Standard

*Identifies and establishes performance levels for safely and effectively conducting operations at technical rescue incidents.*

ANSI/NFPA 232-2007, Protection of Records

*This standard provides requirements for records protection equipment and facilities and records-handling techniques that provide protection from the hazards of fire. This standard does not consider forcible entry. 1.1.1 This standard covers the following four categories of records storage environments and corresponding levels of risk tolerance: (1) Records vaults, which provide the highest level of protection (2) File rooms, which provide an intermediate level of protection for active and semiactive records (3) Archival storage, which provides a high level of protection for permanently valuable records (4) Records centers, which provide an intermediate level of protection for temporary records 1.1.2* This standard does not cover the storage and handling of cellulose nitrate film records. 1.1.3* This standard does not cover the storage and handling of useful records.*

ANSI/NFPA 24-2007, Standard for the Installation of Private Fire Service Mains and Their Appurtenances

*1.1.1 This standard shall cover the minimum requirements for the installation of private fire service mains and their appurtenances supplying the following: (1) Automatic sprinkler systems (2) Open sprinkler systems (3) Water spray fixed systems (4) Foam systems (5) Private hydrants (6) Monitor nozzles or standpipe systems with reference to water supplies (7) Private hydrants (8) Hose houses1.1.2 This standard shall apply to combined service mains used to carry water for fire service and other uses.*

ANSI/NFPA 241-2004, Safeguarding Construction, Alteration, and Demolition Operations

*Applies to buildings in the course of erection, alteration or demolition.*

ANSI/NFPA 25-2002, Water-Based Extinguishing Systems

*Establishes the minimum requirements necessary for the inspection, testing and maintenance of water extinguishing systems. These systems include sprinklers, standpipe and hose, fire service piping and appurtenances, fire pumps, water storage tanks, fixed water spray, foam-water, and valves. The document also addresses impairment handling and reporting*

ANSI/NFPA 251-2006, Methods of Fire Tests of Building Construction and Materials

*Covers fire test methods for the fire-resistive properties of building members and assemblies.*

ANSI/NFPA 252-2003, Fire Tests of Door Assemblies

*Covers methods of fire tests that are applicable to door assemblies of various materials and types of construction, for use in wall openings to retard the passage of fire.*

ANSI/NFPA 253-2006, Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source

*Describes a procedure for measuring critical radiant flux behavior of horizontally mounted floor covering systems exposed to a flaming ignition source in a graded radiant heat energy environment in a test chamber.*

ANSI/NFPA 255-2006, Standard Method of Test of Surface Burning Characteristics of Building Materials

*Describes a method of test of surface burning characteristics of building materials that is applicable to any type of building material that, by its own structural quality or the manner in which it is applied, is capable of supporting itself in position or may be supported in the test furnace to a thickness comparable to its recommended use.*

ANSI/NFPA 256-2003, Fire Test of Roof Coverings

*Covers methods intended to measure the relative fire characteristics of roof coverings under simulated fire originating outside the building. They shall be applicable to roof coverings intended for installation on either combustible or noncombustible decks, when applied as intended for use.*

ANSI/NFPA 257-2007, Standard on Fire Test for Window and Glass Block Assemblies

*This standard prescribes standardized fire and hose stream test procedures that apply to fire window assemblies, including window, glass block, and other light-transmitting assemblies intended for use in window openings to retard the spread of fire through such openings in fire-resistive walls.*

ANSI/NFPA 258-2001, Research Test Methods for Determining Smoke Generation of Solid Materials

*Provides a means for comparing the specific optical density of the smoke generated by materials and assemblies in the form and thickness tested, and under the specified exposure conditions.*

ANSI/NFPA 259-2003, Potential Heat of Building Materials

*Provides a means of determining, under controlled laboratory conditions, the potential heat of building materials subjected to a defined high temperature exposure condition.Provides a means of determining, under controlled laboratory conditions, the potential heat of building materials subjected to a defined high temperature exposure condition.*

ANSI/NFPA 260-2003, Cigarette Ignition Resistance of Components of Upholstered Furniture

*Provides the performance results of upholstered furniture under conditions of exposure to a smoldering cigarette.*

ANSI/NFPA 261-2003, Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes

*This method is designed to evaluate the ignition resistance of upholstered furniture when exposed to smoldering cigarettes under specified conditions.*

ANSI/NFPA 262-2002 (R2007), Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces

*1.1.1* This standard shall prescribe the methodology to measure flame travel distance and optical density of smoke for insulated, jacketed, or both, electrical wires and cables and optical fiber cables that are to be installed in plenums and other spaces used to transport environmental air without being enclosed in raceways. 1.1.2 This test method shall not provide information on the fire performance of insulating materials contained in electrical or optical cables in fire conditions other than the ones specifically used in Section 6.6 of this standard, nor shall it measure the contribution of the cables to a developing fire condition. 1.1.3* Although this test uses equipment similar to that used in NFPA 255, Standard Method of Test of Surface Burning Characteristics of Building Materials, and in ASTM E 84, Standard Test Method for Surface Burning Characteristics of Building Materials,*

ANSI/NFPA 265-2007, Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile Coverings on Full Height Panels and Walls

*1.1.1 This standard describes a test method for determining the contribution of textile wall coverings to room fire growth during specified fire exposure conditions. 1.1.2* This test method shall be used to evaluate the flammability characteristics of textile wall coverings where such materials constitute the exposed interior surfaces of buildings and demountable, relocatable, full-height partitions used in open building interiors. 1.1.3 This test method shall not be used to evaluate the fire endurance of assemblies, nor shall it be used to evaluate the effect of fires originating within a wall assembly. 1.1.4 The test method shall not be used for the evaluation of floor or ceiling finishes. 1.1.5* This test method shall not apply to fabric-covered, lower-than-ceiling-height, freestanding, prefabricated panel furniture systems.*

ANSI/NFPA 268-2007, Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source

*1.1.1 This fire test response standard describes a method for determining the propensity of ignition of exterior wall assemblies from exposure to 12.5 kW/m2 (1.10 Btu/ft2-sec) radiant heat in the presence of a pilot ignition source. 1.1.2 This test method evaluates the propensity of ignition of an exterior wall assembly where subjected to a minimum radiant heat flux of 12.5 kW/m2 (1.10 Btu/ft2-sec). This method determines whether ignition of an exterior wall assembly occurs when the wall is exposed to a specified radiant heat flux, in the presence of a pilot ignition source, during a 20-minute period. 1.1.3 This test method utilizes a gas-fired radiant panel to apply a radiant heat flux of 12.5 kW/m2 (1.10 Btu/ft2-sec) to a representative sample of an exterior wall assembly while the test specimen is exposed simultaneously to a pilot ignition source. 1.1.4 This test method applies to*

ANSI/NFPA 270-2002, Test Method for Measurement of Smoke Obscuration using a Conical Radiant Source in a Single Closed Chamber

*Specifies a method of measuring smoke production from the exposed surface of specimens of essentially flat materials, composites or assemblies not exceeding 25 mm in thickness, when placed in a horizontal orientation and subjected to specified levels of thermal irradiance in a closed cabinet with the application of a pilot flame.*

ANSI/NFPA 271-2004, Heat Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter

*Covers test methods to measures the response of materials exposed to controlled levels of radiant heating, with or without an external igniter.*

ANSI/NFPA 272-2003, Method of Test for Heat Release Rates for Upholstered Furniture Components or Composites and Mattresses Using an Oxygen Consumption Calorimeter

*Determines the ignition time and the release rates of heat from components or composite structures of upholstered furniture and mattresses using an oxygen consumption calorimeter.Determines the ignition time and the release rates of heat from components or composite structures of upholstered furniture and mattresses using an oxygen consumption calorimeter.*

ANSI/NFPA 274-2003, Standard Test Method to Evaluate Fire Performance Characteristics of Pipe Insulation

*This test method is to provide a means of determining the fire performance characteristics of pipe insulation and pipe insulation assemblies arranged in horizontal and vertical orientation, under controlled laboratory conditions.*

ANSI/NFPA 285-2006, Standard Method of Test for the Evaluation of Flammability Characteristics of Exterior Nonload Bearing Wall Assemblies Containing Combustible Components Using the Intermediate Scale Multi-Story Test Apparatus

*Test method of determining the flammability characteristics of exterior, non loading-bearing wall assemblies/panels which contain combustible components. The test evaluates the capability of the test assembly to resist flame propagation, resist vertical spread of flame within the panel and internally surface (room side) to another story, and lateral spread to adjacent spaces. The test is an intermediate-scale, multistory test apparatus.*

ANSI/NFPA 286-2006, Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth

*Develop test for room corner procedures.*

ANSI/NFPA 287-2007, Standard Test Methods for Measurement of Flammability of Materials in Cleanrooms Using a Fire Propagation Apparatus (FPA)

*1.1.1 This standard shall determine and quantify the flammability characteristics of materials containing polymers that are used in cleanroom applications. The propensity of these materials to support fire propagation as well as other flammability characteristics are quantified by means of a fire propagation apparatus. Measurements obtained include time to ignition (tign), chemical and convective heat release rates, mass loss rates, and smoke extinction coefficient (D). 1.1.2 This standard includes the following separate test methods: (1) The ignition test, which shall be used for the determination of tign (2) The combustion test, which shall be used for the determination of , , , and D (3) The fire propagation test, which shall be used for the determination of from burning of a vertical specimen*

ANSI/NFPA 288-2001 (R2007), Standard Method of Fire Tests of Floor Fire Door Assemblies Installed Horizontally in Fire Resistance Rated Floor Systems

*1.1.1 This standard shall apply to floor fire door assemblies of various materials and types of construction that are installed horizontally in openings of fire resistance-rated floor systems to retard the passage of fire. 1.1.2 Tests made in conformity with this test method demonstrate the performance of floor fire door assemblies during the test exposure. However, such tests shall not be construed as determining the suitability of floor fire door assemblies for use after their exposure to fire.*

ANSI/NFPA 290-2003, Standard for Fire Testing of Passive Protection Materials for Use on LP-Gas Containers

*Develop test procedures for torch fire and hose stream testing of thermal insulating systems for LP-gas containers.*

ANSI/NFPA 291-2002 (R2007), Recommended Practice for Fire Flow Testing and Marking of Hydrants

*The scope of this document is fire flow testing and marking of hydrants.*

ANSI/NFPA 295-2003, Standard for Wildfire Control

*(Will be renumbered NFPA 1143) Presents fundamental information to fire departments in the control of wildfire burning in natural and other vegatative fuels.*

ANSI/NFPA 30-2003, Flammable and Combustible Liquids Code

*Applies to all flammable and combustible liquids except those that are solid at 100oF or above. Covers tank storage, piping, valves and fittings, container storage, industrial plants, bulk plants, service stations and processing plants.*

ANSI/NFPA 301-2001, Code for Safety to Life from Fire on Merchant Vessels

*Provides minimum requirements, with due regard to function, for the design, operation and maintenance of merchant vessels for safety to life from fire and similar emergencies.*

ANSI/NFPA 302-2004, Motor Craft (Pleasure and Commercial), Fire Protection for

*Covers the prevention of fuel leakage, the elimination of possible sources of vapor ignition from particularly dangerous locations, the provision of adequate means for keeping vital areas ventilated at all times, the avoidance of unnecessary use of combustible materials in exposed locations and the provision of proper fire extinguishing equipment.*

ANSI/NFPA 303-2006, Fire Protection Standard for Marinas and Boatyards

*Provides minimum acceptable level of safety to life and property from fire and electrical hazards at establishments used for the construction, repair, storage, launching, berthing, or fueling of small craft and construction of boats in conjunction with the foregoing.*

ANSI/NFPA 306-2003, Control of Gas Hazards on Vessels

*Covers vessels carrying or burning combustible or flammable liquids, carrying or having carried flammable compressed gases, chemicals in bulk or other products capable of creating a hazardous condition.*

ANSI/NFPA 307-2006, Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves

*Covers the construction and protection of piers and wharves and structures thereon unique to marine terminal facilities and operations.*

ANSI/NFPA 30A-2007, Code for Motor Fuel Dispensing Facilities and Repair Garages

*1.1.1 This code shall apply to motor fuel dispensing facilities; marine/motor fuel dispensing facilities; and motor fuel dispensing facilities located inside buildings, at fleet vehicle motor fuel facilities, and at farms and isolated construction sites. This code shall also apply to motor vehicle repair garages. 1.1.2* This code shall not apply to those motor fuel dispensing facilities where only liquefied petroleum gas (LP-Gas), liquefied natural gas (LNG), or compressed natural gas (CNG) is dispensed as motor fuel.*

ANSI/NFPA 30B-2007, Code for the Manufacture and Storage of Aerosol Products

*1.1.1 This code shall apply to the manufacture, storage, and display of aerosol products as herein defined. 1.1.2* This code shall not apply to the manufacture, storage, and display of aerosol products that contain only a nonflammable base product and a nonflammable propellant. 1.1.3* This code shall not apply to the storage and display of containers whose contents are comprised entirely of LP-Gas products. 1.1.4 This code shall not apply to post-consumer processing of aerosol containers.*

ANSI/NFPA 31-2006, Standard for the Installation of Oil-Burning Equipment

*Covers minimum requirements for safety to life and property from fire in the installation of oil burners and the equipment used in connection with them.*

ANSI/NFPA 312-2006, Standard for Fire Protection of Vessels During Construction, Conversion, Repair and Lay-up

*Applies to vessels during the course of construction, conversion, repairs, or while laid up.*

ANSI/NFPA 318-2006, Standard for the Protection of Semiconductor Fabrication Facilities

*Provides reasonable safeguards for the protection of facilities containing cleanrooms from fire and related hazards. These safeguards are intended to provide protection against injury, life loss, and property damage.*

ANSI/NFPA 32-2007, Drycleaning Plants

*This standard shall apply to establishments hereinafter defined as drycleaning plants.*

ANSI/NFPA 326-2005, Safe Entry Into Tanks Containing Flammable or Combustible Liquids

*Provides minimum requirements for marine fire fighting vessels. It shall apply to both the construction of new vessels and the conversion of existing vessels for fire fighting purposes. It also provides minimum maintenance and testing requirements.*

ANSI/NFPA 329-2005, Underground Leakage of Flammable and Combustible Liquids

*Covers minimum general requirements, performance requirements and text methods for textile materials used in the construction of station/work uniforms.*

ANSI/NFPA 33-2007, Standard for Spray Application Using Flammable or Combustible Materials

*1.1.1 This standard shall apply to the spray application of flammable or combustible materials, as herein defined, either continuously or intermittently, by any of the following methods: (1) Compressed air atomization (2) Airless or hydraulic atomization (3) Electrostatic application methods (4) Other means of atomized application 1.1.2 This standard shall also apply to the application of flammable or combustible materials, as herein defined, either continuously or intermittently, by any of the following methods: (1) Fluidized bed application methods (2) Electrostatic fluidized bed application methods (3) Other means of fluidized application 1.1.3 This standard shall also apply to spray application of water-borne, water-based, and water-reducible materials that contain flammable or combustible liquids or that produce combustible deposits or residues. 1.1.4* This standard shall not apply*

ANSI/NFPA 34-2007, Standard for Dipping and Coating Processes Using Flammable or Combustible Liquids

*1.1.1 This standard shall apply to processes in which articles or materials are passed through tanks, vats, containers, or process equipment that contain flammable or combustible liquids, including but not limited to dipping, roll coating, flow coating, curtain coating, and cleaning. 1.1.2 This standard shall also apply to the use of water-borne, water-based, and water-reducible materials that contain flammable or combustible liquids or that produce combustible deposits or residues. 1.1.3 This standard shall not apply to processes involving noncombustible liquids. 1.1.4 This standard shall not apply to the use of a liquid that does not have a fire point when tested in accordance with ASTM D 92, Standard Test Method for Flash and Fire Points by Cleveland Open Cup, up to the boiling point of the liquid or up to a temperature at which the sample being tested shows an obvious physical*

ANSI/NFPA 35-2005, Manufacture of Organic Coatings

*Covers utility gas plants for the design, construction, location, installation and operation of refrigerated and non-refrigerated liquefied petroleum gas systems.*

ANSI/NFPA 36-2004, Solvent Extraction Plants

*Covers reasonable requirements for the safety to life and property from explosion and fire in the design, construction and operation of solvent extraction processes involving the use of flammable solvents.*

ANSI/NFPA 37-2006, Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines

*Covers the installation and operation of stationary combustion engines and gas turbines. Also covers portable engines which remain connected for use in the same location for a period of one week or more and which are used instead of or to supplement stationary engines.*

ANSI/NFPA 385-2006, Standard for Tank Vehicles for Flammable and Combustible Liquids

*1-1.1* This standard shall apply to tank vehicles to be used for the transportation of asphalt or normally stable flammable and combustible liquids with a flash point below 200°F (93.4°C). It shall provide minimum requirements for the design and construction of cargo tanks and their appurtenances and shall set forth certain matters pertaining to tank vehicles. 1-1.2 The provisions of this standard shall not preclude the use of additional safeguards for tank vehicles used for the transportation of flammable and combustible liquids having characteristics introducing additional factors such as high rates of expansion, instability, corrosiveness, and toxicity. 1-1.3 The provisions of this standard shall also apply to cutback asphalts that have flash points below 100°F (37.8°C) and to liquids transported at temperatures elevated above their flash points. 1-1.4 The requirements for*

ANSI/NFPA 40-2007, Standard for the Storage and Handling of Cellulose Nitrate Film

*1.1.1* This standard shall apply to all facilities that are involved with the storage and handling of cellulose nitrate-based film. 1.1.2 This standard shall not apply to the storage and handling of film having a base other than cellulose nitrate.*

ANSI/NFPA 402-2002, Aircraft Rescue and Fire Fighting Operations

*Provides aircraft rescue and fire fighting operational procedures for airport fire departments to assure the efficient utilization of the available aircraft rescue and fire fighting equipment and personnel provided.*

ANSI/NFPA 403-2003, Aircraft Rescue and Fire Fighting Services at Airports, Practice for

*Contains the minimum fire safety requirements for aircraft rescue and fire fighting (RFF) services at airports.*

ANSI/NFPA 405 -2004, Recommended Practice for the Recurring Proficiency Training of Aircraft Rescue and Fire Fighting Services

*Contains the minimum training evolutions and frequency requirements for maintaining a proficient and effective aircraft rescue and fire fighting (ARFF) team.*

ANSI/NFPA 407-2007, Aircraft Fuel Servicing

*This standard applies to the fuel servicing of all types of aircraft using liquid petroleum fuel. It does not apply to any of the following: (1) In-flight fueling (2) Fuel servicing of flying boats or amphibious aircraft on water (3) Draining or filling of aircraft fuel tanks incidental to aircraft fuel system maintenance operations or manufacturing*

ANSI/NFPA 408-2004, Aircraft Hand Fire Extinguishers

*Covers fire safety requirements for the type, capacity, rating, number, location, installation, and maintenance of aircraft hand fire extinguishers to be provided for the use of flight crew members or other occupants of an aircraft for the control of incipient fires in the areas of aircraft that are accessible during flight.*

ANSI/NFPA 409-2004, Aircraft Hangars

*Covers the construction and protection of aircraft hangers.*

ANSI/NFPA 410-2004, Aircraft Maintenance

*Covers the fire safety requirements to be followed during aircraft maintenance.*

ANSI/NFPA 412-2003, Evaluating Aircraft Rescue and Fire Fighting Foam Equipment

*Provides test procedures for evaluating the foam fire fighting equipment installed on rescue and fire fighting vehicles designed in accordance with the applicable portions of NFPA 414.*

ANSI/NFPA 414-2007, Standard for Aircraft Rescue and Fire-Fighting Vehicles

*1.1.1* This standard specifies the minimum design, performance, and acceptance criteria for aircraft rescue and fire-fighting (ARFF) vehicles intended to transport personnel and equipment to the scene of an aircraft emergency for the purpose of rescuing occupants and conducting rescue and fire-fighting operations. 1.1.2 Vehicles without wheels, such as track, amphibious, or air-cushion types, are not covered by this standard.*

ANSI/NFPA 415-2002, Aircraft Fueling Ramp Drainage

*Covers the design of the water drainage system of an aircraft fueling ramp to control the flow of fuel which may be spilled on a ramp and to minimize the resultant possible danger therefrom.*

ANSI/NFPA 418-2006, Standard for Heliports

*Covers roof-top heliport construction and*

ANSI/NFPA 42-1997 (R2002), Pyroxylin Plastic, Storage of

*Covers the storage of pyroxylin plastic in the form of raw material, unfinished and finished products and scrap.*

ANSI/NFPA 422-2004, Manual for Aircraft Fire and Explosion Investigators

*Provides recommendations to assist investigating teams on all matters relating to fire; to assess effectiveness of airborne fire detecting and extinguishing systems and crew emergency operations, rescue and fire fighting services; and to collect data for study and analysis.*

ANSI/NFPA 423-2004, Aircraft Engine Test Facilities

*Covers the fire safety practices regarding location, construction, services, utilities, fire protection, operation and maintenance of new aircraft engine test facilities and modifications made to existing test facilities with could effect the fire and explosion hazard potential with such facilities. These facilities include test cells, test stands and engine run-up enclosures designed to operate only on ground level conditions of temperature and pressure.*

ANSI/NFPA 424-2002, Airport Community Emergency Planning

*Covers airport/community emergency planning techniques and procedures and how to plan for utilization of personnel from all concerned departments and agencies to provide maximum aircraft emergency services.*

ANSI/NFPA 430-2004, Storage of Liquid and Solid Oxidizing Materials

*Covers the storage of oxidizing materials that are liquid or solid at ambient conditions.*

ANSI/NFPA 432-2002, Storage of Organic Peroxide Formulations

*Provide reasonable requirements for the safe storage of commercially available formulations containing organic peroxides.*

ANSI/NFPA 434-2002, Storage of Pesticides in Portable Containers

*Covers inside and outside storage of all forms of pesticides in portable containers other than fixed installations on transportation equipment.*

ANSI/NFPA 45-2004, Fire Protection for Laboratories Using Chemicals

*Applies to laboratories in which hazardous chemicals are handled or stored.*

ANSI/NFPA 450-2004, Guide for Emergency Medical Services and Systems

*Designed to assist individuals, agencies, organizations, or systems as well as those interested or involved in EMS System design.*

ANSi/NFPA 471-2002, Responding to Hazardous Materials Incidents

*Outlines the minimum requirements that should be considered when dealing with responses to hazardous materials incidents and to specify operating guidelines for responding to hazardous materials incidents.*

ANSI/NFPA 472-2002, Professional Competence of Responders to Hazardous Materials Incidents

*Covers the requirements for first responder, hazardous materials technician, and hazardous materials specialist.*

ANSI/NFPA 473-2002, EMS Operations at Hazardous Materials Incidents

*Identifies the levels of competence required of EMS personnel who respond to hazardous materials incidents. It specifically covers the requirements for basic life support and advanced life support personnel in the prehospital setting.*

ANSI/NFPA 484-2006, Standard for Combustible Metals

*Applies to the production, processing, finishing, handling, storage and use of all metals and alloys that are in a form that is capable of combustion or explosion.*

ANSI/NFPA 490-2002, Storage of Ammonium Nitrate

*Applies to the storage of ammonium nitrate in the form of crystals, flakes, grains or prills, including fertilizer grade, dynamite grade, nitrous oxide grade, technical grade and other mixtures containing 60 percent or more ammonium nitrate by weight, but does not apply to blasting agents.*

ANSI/NFPA 495-2006, Explosive Materials Code

*Covers the manufacture, transportation, storage, sale, and use of explosive materials.*

ANSI/NFPA 496-2003, Purged and Pressurized Enclosures for Electrical Equipment

*Covers the methods for purging and pressurizing enclosures to prevent ignition of a flammable atmosphere.*

ANSI/NFPA 497-2004, Recommended Practice for Classification of Class I Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas

*Covers recommendations for the classification of Class I Hazardous locations for electrical installations.*

ANSI/NFPA 498-2006, Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives

*Covers the design and operating features of explosives in motor vehicle terminals related to fire prevention and fire protection and prevention of explosions.*

ANSI/NFPA 499-2004, Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas

*Applies to those locations where combustible dusts are produced, processed, or handled and where dust released into the atmosphere or accumulated on surfaces may be ignited by electrical systems or equipment.*

ANSI/NFPA 5000-2006, Building Construction and Safety Code™

*Provide minimum design regulations to safeguard life and limb, health, property, and public welfare by regulating and controlling the permitting, design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures within the jurisdiction and certain equipment specifically regulated herein.*

ANSI/NFPA 501-2005, Manufactured Housing

*Contains minimum requirements for total flooding, clean agent fire extinguishing systems.*

ANSI/NFPA 501A-2005, Manufactured Home Installations, Sites, and Communities

*Covers fire safety requirements for the installation of manufactured homes and manufactured home sites, including accessory buildings, structures, and communities.*

ANSI/NFPA 502-2004, Limited Access Highways, Tunnels, Bridges, Elevated Roadways, and Air-Right Structures

*Covers guidance for those individuals responsible for the construction, operation, maintenance, and fire protection of limited access highways, tunnels, bridges, elevated roadways, and air right structures.*

ANSI/NFPA 505-2006, Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operation

*Applies to fork trucks, tractors, platform lift trucks, motorized hand trucks and other specialized industrial trucks powered by electric motors or internal combustion engines.*

ANSI/NFPA 51-2006, Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes

*1.1.1 This standard applies to the following: (1) Design and installation of oxygen-fuel gas welding and cutting systems and allied processes (see 3.3.2), except for systems meeting the criteria in 1.1.5 (2) Utilization of gaseous fuels generated from flammable liquids under pressure when such fuels are used with oxygen (3) Storage, on the site of a welding and cutting system installation, of the following: (a) Gases to be used with such systems where more than one cylinder each of oxygen and fuel gas are stored in any single storage area [This category includes storage of more than one cylinder each in any single storage area even though all such stored cylinders may be intended for use in systems of the kind described in 1.1.5(1).] (b) Calcium carbide. 1.1.2 Unless specifically indicated otherwise, the term welding and cutting systems shall be considered to include allied*

ANSI/NFPA 51A-2006, Acetylene Cylinder Charging Plants

*Covers plants which are engaged in the generation and compression of acetylene and in the charging of acetylene cylinders, either as their sole operation or in conjunction with facilities for charging other compressed gas cylinders.*

ANSI/NFPA 51B-2003, Standard for Fire Prevention During Welding, Cutting, and Other Hot Work

*Covers provisions to prevent loss of life and property from fire or explosion as a result of hot work*

ANSI/NFPA 52-2006, Vehicular Fuel Systems Code

*Applies to the design and installation of compressed natural gas (CNG) engine fuel systems on vehicles of all types and to their associated fueling (dispensing) systems.*

ANSI/NFPA 520-2005, Subterranean Space

*This standard addresses the safeguarding of life and property against fire, explosion, and related hazards associated with subterranean spaces.*

ANSI/NFPA 53-2004, Fire Hazards in Oxygen-Enriched Atmospheres

*Covers the fire and explosion hazards that may exist in oxygen enriched atmospheres.*

ANSI/NFPA 54-2006, National Fuel Gas Code

*Applies to the installation of fuel gas piping systems, fuel gas utilization equipment, and related accessories.*

ANSI/NFPA 55-2005, Compressed and Liquefied Gases in Portable Cylinders

*Consists of a number of different system approaches to life safety.*

ANSI/NFPA 550-2002 (R2006), Guide to the Fire Safety Concepts Tree

*This guide describes the structure, application, and limitations of the Fire Safety Concepts Tree.*

ANSI/NFPA 551-2006, Guide for the Evaluation of Fire Risk Assessments

*This guide is intended to provide assistance, primarily to authorities having jurisdiction (AHJs), in evaluating the appropriateness and execution of a fire risk assessment (FRA) for a given fire safety problem. While this guide primarily addresses regulatory officials, it also is intended for others who review FRAs, such as insurance company representatives and building owners.*

ANSI/NFPA 555-2004, Guide on Methods for Evaluating Potential for Room Flashover

*Applies to methods for evaluating potential for room flashover from fire involving the contents, furnishings, and interior finish of a room. The methods addressed by this Guide include prevention of ignition, installation of automatic fire suppression systems, control of ventilation factors, and limitation of the rate of heat release of individual and grouped room contents, furnishings and interior finish.*

ANSI/NFPA 556-2007, Guide for Identification and Development of Mitigation Strategies for Fire Hazard to Occupants of Passenger Road Vehicles

*Addresses methods for evaluating the hazard and risk from fire involving the furnishings contained in passenger or crew compartments of a road vehicle. The methods addressed by this guide included prevention of ignition, installation of fire barriers, control of ventilation factors, and limitation of the heat release rate of individual and grouped compartment furnishings.*

ANSI/NFPA 560-2006, Storage, Handling, and Use of Ethylene Oxide for Sterilization and Fumigation

*1.1.1 This standard shall not apply to the following: (1) Nonflammable mixtures of ethylene oxide with other chemicals (2) Ethylene oxide manufacturing facilities, and container filling, refilling, or transfilling facilities (3)* The off-site transportation of portable containers of ethylene oxide (4) Facilities using ethylene oxide as a chemical feedstock (5) Ethylene oxide in chambers 0.283 m3 (10 ft3) or less in volume, or for containers holding 200 ก (7.05 oz) of ethylene oxide or less.*

ANSI/NFPA 58-2004, Storage and Handling of Liquefied Petroleum Gases

*Applies to the highway transportation of LP-Gas and to the design, construction, installation and operation of all LP-Gas systems.*

ANSI/NFPA 59-2004, Storage and Handling of Liquefied Petroleum Gases at Utility Gas Plants

*Covers utility gas plants for the design, construction, location, installation and operation of refrigerated and non-refrigerated liquefied petroleum gas systems.*

ANSI/NFPA 59A-2006, Production, Storage, and Handling of Liquefied Natural Gas (LNG)

*Covers design, location, construction, and operation of facilities at any location for the liquefaction of natural gas and the storage, vaporization, transfer, handling, and truck transport of liquefied natural gas (LNG).*

ANSI/NFPA 600-2005, Standard on Industrial Fire Brigades

*Covers the organizing, operating, training, and equipping of private fire brigades.*

ANSI/NFPA 601-2005, Standard for Security Services in Fire Loss Prevention

*Covers the selection and training of guards who will perform fire loss prevention duties.*

ANSI/NFPA 61-2002, Prevention of Fire and Dust Explosions in Agricultural and Food Product Facilities

*Applies to all facilities that handle, process, blend, mill, receive, load, ship, package, store, or unload dry agricultural bulk materials, their by-products or ducts which includes grains, oilseeds, agricultural seeds, legumes, sugar, spices, feeds and other related materials. All facilities designed for manufacturing and handling starch, including drying grinding, conveying processing, packaging and storage of dry or modified starch; and dry products and dusts generated from these process.*

ANSI/NFPA 610-2003, Guide for Emergency and Safety Operations at Motorsports Venues

*Covers training, personnel, equipment and facilities as they relate to emergency operations and safety at motor sports venues.*

ANSI/NFPA 654-2006, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids

*Applies to all phases of the manufacture and processing of industrial dusts including, but not limited to, chemicals, dyes, pharmaceuticals, and plastics where a fire or explosion hazard may exist due to the presence of combustible dusts.*

ANSI/NFPA 655-2007, Prevention of Sulfur Fires and Explosions

*1.1.1* This standard shall apply to the crushing, grinding, or pulverizing of sulfur and to the handling of sulfur. 1.1.2 This standard shall not apply to the mining or transportation of sulfur.*

ANSI/NFPA 664-2007, Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities

*This standard shall establish the minimum requirements for fire and explosion prevention and protection of industrial, commercial, or institutional facilities that process wood or manufacture wood products, using wood or other cellulosic fiber as a substitute for or additive to wood fiber, and that process wood, creating wood chips, particles, or dust. 1.1.1 Woodworking and wood processing facilities shall include, but are not limited to, wood flour plants, industrial woodworking plants, furniture plants, plywood plants, composite board plants, lumber mills, and production-type woodworking shops and carpentry shops that are incidental to facilities that would not otherwise fall within the purview of this standard. 1.1.2* This standard shall apply to woodworking operations that occupy areas of more than 465 m2 (5000 ft2) or where dust-producing equipment requires an aggregate dust collection flow rate*

ANSI/NFPA 68-2006, Guide for Venting of Deflagrations

*1.1.1 This guide applies to the design, location, installation, maintenance, and use of devices and systems that vent the combustion gases and pressures resulting from a deflagration within an enclosure so that structural and mechanical damage is minimized. A deflagration can result from the ignition of a flammable gas, mist, or combustible dust. 1.1.2 This guide should be used as a companion document to NFPA 69, Standard on Explosion Prevention Systems, which covers explosion prevention measures and can be used in place of, or in conjunction with, NFPA 68. The choice of the most effective and reliable means for explosion control should be based on an evaluation that includes the specific conditions of the hazard and the objectives of protection. Venting of deflagrations only minimizes the damage that results from combustion. 1.1.3 This guide*

ANSI/NFPA 69-2002, Explosion Prevention Systems

*Covers the design, construction, operation, maintenance and testing of systems for the prevention of deflagration explosions by means of the following methods: (a) control of oxidant concentration; (b) control of combustible concentration; (c) explosion suppression; (d) deflagration pressure containment; (e) spark extinguishing systems.*

ANSI/NFPA 70 Handbook-1996, National Electrical Code Handbook (includes ANSI/NFPA 70-1996) (NOT AN AMERICAN NATIONAL STANDARD)

ANSI/NFPA 70-2005, National Electrical Code

*Covers electric conductors and equipment installed within or on public and private buildings or other structures, including mobile homes and recreational vehicles, floating buildings; and other premises such as yards, carnivals, parking and other lots and industrial substations; conductors that connect the installations to a supply of electricity; and other outside conductors and equipment on the premises; optical fiber cable; buildings used by the electric utility, such as office buildings, warehouse, garages, machine shops, and recreational buildings that are not an integral part of a generating plant, substation, or control center.*

ANSI/NFPA 701-2004, Fire Tests for Flame-Resistant Textiles and Films

*Covers fire safety requirements that apply to flame-resistant materials which are used extensively in the interior furnishing of buildings and transport facilities, in protective clothing for certain occupations and situations, and for protective outdoor coverings such as tarpaulins and tents.*

ANSI/NFPA 703-2006, Fire Retardant Impregnated Wood and Flame Retardant Coatings for Building Materials

*This standard provides criteria for defining and identifying fire retardant unpregnated wood and fire retardant related building materials.*

ANSI/NFPA 703-2006, Standard for Fire-Retardant Treated Wood and Fire-Retardant Coatings for Building Materials

*This standard provides criteria for defining and identifying fire retardant unpregnated wood and fire retardant related building materials.*

ANSI/NFPA 704-2007, Standard System for the Identification of the Hazards of Materials for Emergency Response

*This standard shall address the health, flammability, instability, and related hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies.*

ANSI/NFPA 705-2003, Match Flame Field Test for Flame Resistant Textiles and Films

*Covers fire safety requirements that apply to flame-resistant materials which are used extensively in the interior furnishing of buildings and transport facilities, in protective clothing for certain occupations and situations, and for protective outdoor coverings such as tarpaulins and tents.*

ANSI/NFPA 70B-2006, Electrical Equipment Maintenance

*Covers preventive maintenance for industrial type electrical systems and equipment.*

ANSI/NFPA 70E-2004, Electrical Safety Requirements for Employee Workplaces

*Covers protection to the employee from electrical hazards such as shock, arc blasts and explosions initiated by electricity.*

ANSI/NFPA 72-2007, National Fire Alarm Code®

*1.1.1 NFPA 72 covers the application, installation, location, performance, and maintenance of fire alarm systems and their components. 1.1.2 The provisions of this chapter apply throughout the Code unless otherwise noted.*

ANSI/NFPA 720-2005, Standard for the Installation of Carbon Monoxide (CO) Warning Equipment in Dwelling Units

*Contains requirements for the selection, installation, operation, and maintenance of equipment that detects concentrations of carbon monoxide that could pose a risk to the health of most occupants in family living units. This document is limited to carbon monoxide warning equipment for use in family living units.*

ANSI/NFPA 73-2006, Residential Electrical Maintenance

*Applies to accessible electrical equipment and those portions of the electrical system of existing one- and two-family residential dwellings that are accessible during an inspection without removing any part of the building structure or finish.*

ANSI/NFPA 730-2006, Guide for Premises Security

*This guide describes construction, protection, and occupancy features, and practices, intended to reduce security vulnerabilities to life and of property.*

ANSI/NFPA 731-2006, Standard for the Installation of Electronic Premises Security Systems

*This standard covers the application, location, installation, performance, testing, and maintenance of physical security systems and their components.*

ANSI/NFPA 75-2003, Electronic Computer/Data Processing Equipment

*Covers requirements for installations of electronic computer/data processing equipment.*

ANSI/NFPA 750-2006, Standard on Water Mist Fire Protection Systems

*This standard contains minimum requirements for the design, installation, maintenance, and testing of water mist fixed systems.*

ANSI/NFPA 76-2005, Recommended Practice for the Fire Protection of Telecommunications Facilities

*Establishes minimum requirements for the hazards associated with practices, processes and materials for the following facilities when used for motion picture and television production: Sound stages; approved production facilities; and production locations.*

## ANSI/NFPA 77-2007, Recommended Practice on Static Electricity

*1.1.1 This recommended practice applies to the identification, assessment, and control of static electricity for purposes of preventing fires and explosions. 1.1.2* This recommended practice does not apply directly to shock hazards from static electricity. However, application of the principles set forth in this recommended practice can reduce such shock hazards to personnel. 1.1.3* This recommended practice does not apply to the prevention and control of static electricity in hospital operating rooms or in areas where flammable anesthetics are administered or handled. 1.1.4* This recommended practice does not apply to lightning. 1.1.5* This recommended practice does not apply to stray electrical currents or to induced currents from radio frequency (RF) energy. 1.1.6* This recommended practice does not apply to fueling of motor vehicles, marine craft, or*

## ANSI/NFPA 780-2004, Installation of Lightning Protection Systems

*Covers lightning protection system installation requirements for: (a) ordinary structures; (b) miscellaneous structures and special occupancies; (c) heavy duty stacks; (d) water craft; or (e) structures containing flammable vapors, flammable gases, or liquids that can give off flammable vapors.*

## ANSI/NFPA 79-2002, Electrical Standard for Industrial Machinery

*Covers electric/electronic equipment, apparatus or systems supplied as part of industrial machinery or mass production industrial equipment that will promote safety to life and property.*

## ANSI/NFPA 80-2007, Fire Doors and Fire Windows

*1-1.1* This standard regulates the installation and maintenance of assemblies and devices used to protect openings in walls, floors, and ceilings against the spread of fire and smoke within, into, or out of buildings. The fire performance evaluation of these assemblies is tested in accordance with NFPA 251, Standard Methods of Tests of Fire Endurance of Building Construction and Materials, for horizontal access doors; NFPA 252, Standard Methods of Fire Tests of Door Assemblies, for fire doors and shutters; and NFPA 257, Standard on Fire Test for Window and Glass Block Assemblies, for fire windows and glass block. It is not the intent of this standard to establish the degree of protection required or to constitute the approval of any product. These are determined by the authority having jurisdiction. This standard is based on product and engineering practices recognized as acceptable at the date of issue.*

## ANSI/NFPA 801-2003, Facilities Handling Radioactive Materials

*Deals with practices aimed at reducing the risks of fires and explosions at facilities handling radioactive materials and provides requirements for personnel responsible for the design or operation of facilities that involve the storage, handling, or use of radioactive materials.*

## ANSI/NFPA 804-2006, Standard for Fire Protection for Advanced Light Water Reactor Electric Generating Plants

*Addresses advanced light water reactor electric generating plants, and provides minimum fire protection requirements to assure safe shutdown of the reactor, minimize the release of radioactive contaminants to the environment, provide safety to life of on-site personnel, limit property damage, and maintain continuity of operation.*

## ANSI/NFPA 805-2006, Standard on Performance Based Fire Protection for Light Water Reactor Electric Generation Plants

*Applies only to light water reactor electric generating plants, and provides performance-based fire protection requirements to ensure safe shut-down of the reactor, minimize the release of radioactive materials to the environment, provide safety to life of on-site personnel, limit property damage, and protect continuity of plant operation. The fire protection is based upon the principle of performance-based.*

## ANSI/NFPA 80A-2007, Recommended Practice for Protection of Buildings from Exterior Fire Exposures

*This recommended practice addresses separation distances between buildings to limit exterior fire spread based on exterior openings and other construction features.*

## ANSI/NFPA 82-2004, Incinerators, Waste and Linen Handling Systems and Equipment

*Covers basic requirements primarily concerned with fire hazards encompassing the installation and use of incinerators, waste handling systems, linen (laundry) handling systems, compactors, and waste storage rooms and containers.*

## ANSI/NFPA 820-2003, Fire Protection in Wastewater Treatment Plants and Collection Facilities

*Provides guidelines for protection against fire and explosion hazards in wastewater treatment plants and associated collection systems, including the hazard classification of specific areas and processes. This document covers collection, trunk and intercepting sewers and ancillary structures, pumping stations, wastewater treatment plants including sludge and chemical handling and treatment facilities.*

ANSI/NFPA 85-2006, Boiler and Combustion Systems Hazards Code

*This code shall apply to single burner boilers, multiple burner boilers, stokers, and atmospheric fluidized-bed boilers with a fuel input rating of 3.7 MWt (12.5 million Btu/hr) or greater, to pulverized fuel systems, and to fired or unfired steam generators used to recover heat from combustion turbines [heat recovery steam generators (HRSGs)]. 1.1.1 This code shall cover design, installation, operation, maintenance, and training. 1.1.2 This code shall cover strength of the structure, operation and maintenance procedures, combustion and draft control equipment, safety interlocks, alarms, trips, and other related controls that are essential to safe equipment operation. 1.1.3 Coordination of the design and operating procedures of the boiler furnace or HRSG system and any flue gas cleanup systems downstream of the postcombustion gas passes shall be required. Such coordination shall*

ANSI/NFPA 850-2005, Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations

*Provides recommendations for fire prevention and fire protection for electric generating plants.*

ANSI/NFPA 851-2005, Recommended Practice for Fire Protection for Hydroelectric Generating Plants

*Provides recommendations (not requirements) for fire prevention and fire protection for hydroelectric generating plants.*

ANSI/NFPA 853-2007, Standard for the Installation of Stationary Fuel Cell Power Plants

*1.1.1 This standard shall apply to the design, construction, and installation of stationary fuel cell power systems. 1.1.2 The scope of this document shall include the following: (1) A singular prepackaged, self-contained power system unit (2) Any combination of prepackaged, self-contained power system units (3) Power system units comprising two or more factory-matched modular components intended to be assembled in the field (4) Engineered and field-constructed power systems that employ fuel cells*

ANSI/NFPA 86-2007, Ovens and Furnaces

*1.1.1 This standard shall apply to Class A, Class B, Class C, and Class D ovens, dryers, or furnaces. The terms ovens, dryers, and furnaces shall be used interchangeably. Where chapters or specific paragraphs in this standard apply only to Class A, Class B, Class C, or Class D ovens, they are so noted. 1.1.2 Within the scope of this standard, a Class A, Class B, or Class C oven shall be any heated enclosure operating at approximately atmospheric pressure and used for commercial and industrial processing of materials. 1.1.3 A Class A oven shall be permitted to utilize a low-oxygen atmosphere. 1.1.4 This standard shall apply to bakery ovens, Class A ovens, in all respects, and reference is made to those sections of ANSI Z50.1, Bakery Equipment - Safety Requirements, that shall apply to bakery oven construction and safety. 1.1.5 This standard shall apply to atmosphere generators*

ANSI/NFPA 88A-2007, Standard for Parking Structures

*This standard shall cover the construction and protection of, as well as the control of hazards in, open, and enclosed parking structures. This standard shall not apply to one- and two-family dwellings.*

ANSI/NFPA 900-2006, Building Energy Code

*These regulations shall control the minimum energy-efficient requirements for the following: (1) The design, construction, reconstruction, alteration, repair, demolition, removal, inspection, issuance and revocation of permits or licenses, installation of equipment related to energy conservation in all buildings and structures and parts thereof (2) The rehabilitation and maintenance of construction related to energy efficiency in existing buildings (3) The standards or requirements for materials to be used in connection therewith*

ANSI/NFPA 901-2006, Standard Classifications for Incident Reporting and Fire Protection Data

*Identifies a common international language for the description of fire incidents and method for classifying fire protection data.*

ANSI/NFPA 909-2005, Standard for the Protection of Cultural Resources, Including Museums, Libraries, Places of Worship, and Historic Properties

*Describes principles and practices of fire safety for cultural properties and for those who operate, use, or visit them. It covers ongoing operation and rehabilitation and acknowledges the need to preserve historic integrity.*

ANSI/NFPA 90A-2002, Installation of Air Conditioning and Ventilating Systems

*Covers all systems for the movement of environmental air in structures, which (a) serve spaces of over 25,000 cubic feet in volume, or (b) serve buildings of Types III, IV and V construction over three stories in height, regardless of volume, or (c) serve buildings and spaces not covered by other applicable NFPA standards (d) serve occupants or processes not covered by other applicable NFPA standards.*

ANSI/NFPA 90B-2006, Standard for the Installation of Warm Air Heating and Air-Conditioning Systems

*Covers all systems for the movement of environmental air in structures which serve one- or two-family dwellings or serve spaces not exceeding 25,000 cubic feet in volume in any occupancy.*

ANSI/NFPA 91-2004, Exhaust Systems for Air Conveying of Materials

*Provides minimum requirements for the design, construction, installation, operation, testing, and maintenance of exhaust systems for air conveying of vapors, gases, mists, and noncombustible particulate solids except as modified or amplified by other applicable NFPA Standards.*

ANSI/NFPA 914-2001, Rehabilitation and Adaptive Reuse of Historic Structures

*Provides background material on the historic preservation field and its requirements, information regarding the identification of fire hazards, and recommendations for planning and design approaches and solutions appropriate for the historic building.*

ANSI/NFPA 921-2004, Investigation of Fires

*Establishes guidelines and recommended practice for the systematic investigation or analysis of fire explosion incidents.*

ANSI/NFPA 92A-2006, Standard for Smoke-Control Systems Utilizing Barriers and Pressure Differences

*Covers the design, installation, testing, operation and maintenance of new and retrofitted mechanical air conditioning and ventilation systems for the control of smoke.*

ANSI/NFPA 92B-2005, Standard for Smoke Management Systems in Malls, Atria, and Large Spaces

*Covers recommendations for the classification of Class I Hazardous locations for electrical installations.*

ANSI/NFPA 96-2004, Ventilation Control and Fire Protection of Commercial Cooking Operations

*Covers requirements for the design, installation and use of exhaust system components.*

ANSI/NFPA 99-2005, Health Care Facilities

*Applies to those locations where combustible dusts are produced, processed, or handled and where dust released into the atmosphere or accumulated on surfaces may be ignited by electrical systems or equipment.*

ANSI/NFPA 99B-2005, Hypobaric Facilities

*Provides guidance primarily for authorities having jurisdiction, in the evaluation of the appropriateness and execution of a risk assessment for a given fire safety problem.*

ANSINFPA 269-2007, Toxic Potency Data for Use in Hazard Modeling

*The pyrolysis or combustion of every combustible material or product produces smoke that is toxic. A standard test method for the development of data for use in toxic hazard modeling is valuable. Such data include quantification of the toxicity of the smoke. It also is desirable to ascertain whether the observed toxicity can be attributed to the major common toxicants.*

## NFPA2 (National Fluid Power Association)

ANSI B93.3-1984 (R2004), Cylinder Bore and Piston Rod Diameters – Inch Series

*This national standard is intended to establish an inch series of cylinder bores and piston rod diameters for application to hydraulic and pneumatic fluid power cylinders.*

ANSI B93.32M-1973 (R2001), Fluid Power Radial Compression Type Piston Rings, Groove Dimensions for

*Includes recommended groove dimensions, tolerances, and surface finish conditions for radial compression type piston rings used in fluid power cylinders, pumps, and valves.To include recommended groove dimensions, tolerances and surface finish conditions for radial compression type piston rings used in fluid power cylinders, pumps and valves. The groove widths shown do not include provisions for additional anti-extrusion devices which may be recommended.*

ANSI B93.35M-1978 (R2007), Cavity dimensions for fluid power exclusion devices (inch series)

*This standard includes dimensions for the cavity into which clearance-type and press-type exclusion devices are installed.*

ANSI B93.36M-1973 (R2001), Floating Type Metallic and Non-Metallic Fluid Power Piston Rings, Groove Dimensions for

*Includes groove dimensions, tolerances, and surface finish conditions for satisfactory performance of floating type piston rings in cylinders, pumps, and valves. It establishes uniform guidelines to designers for correct design of piston ring grooves to insure proper performance of floating type piston rings. It insures interchangeability of floating type piston rings without regard for material and provides an adequate listing of preferred ring groove widths. Includes groove dimensions, tolerances and surface finish conditions for satisfactory performance of floating type piston rings in cylinders, pumps and valves.*

ANSI B93.46-1978 (R2005), Filter Element, Method of Determining the Pore Size of a Cleanable Surface Type Hydraulic Fluid Power

*To include a standard method for determining the pore size of a cleanable surface type wire cloth hydraulic fluid power filter element with a pore size less than 600 micrometres. This size is the coarsest filter normally used in hydraulic systems.*

ANSI B93.51M-1980 (R2001), Pneumatic Fluid Power Quick Action Couplings, Test Conditions and Procedures for

*Includes: identical coupling halves, male or female coupling halves, and coupling assemblies used in pneumatic fluid power systems; couplings with & without fluid sealing means, when uncoupled; only quick-action couplings that are connected and disconnected by a linear or rotary motion. This standard is intended to: further the understanding & use of quick-action couplings; provide uniform test conditions & procedures; facilitate accurate communication; provide a basis for component selection & application. This standard was listed for public review in the 1/14/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI B93.54M-1981 (R1988), Hydraulic Fluid Power - Assembled Systems - Method for Achieving Roll-off Cleanliness

*Includes a procedure for achieving a desired cleanliness level of an assembled hydraulic system as part of machine production. It is intended to achieve a specific initial cleanlieness level in an assembled hydraulic system to minimize premature failure. This standard is a redesignation of ANSI B93.54M-1981. Since the original standard was administratively withdrawn, this version of the standard is being submitted as a new standard.*

ANSI B93.62M-1982 (R2007), Hydraulic fluid power - Reciprocating dynamic sealing devices in linear actuators - Method of testing, measuring and reporting leakage

*This standard includes standard methods for testing, measuring, and reporting leakage of reciprocating dynamic hydraulic fluid power sealing devices in linear actuators.*

ANSI B93.8-1968 (R2001), Bore and Rod Size Combinations and Rod End Configurations for Cataloged Square Head Industrial Fluid Power Cylinders

*Portrays the commonly cataloged dimensions for piston rod end configurations and cylinder bore & piston rod combinations used with square head industrial fluid power (pneumatic & hydraulic) cylinders as provided by the majority of manufacturers in the United States. This standard was listed for public review in the 1/14/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI B93.9M-1969 (R2006), Symbols for Marking Electrical Leads and Ports on Fluid Power Valves

*This standard offers symbols for identification of valve ports, identification of valve pilot and solenoid actuators and identification of valve solenoid leads.*

ANSI/(NFPA) T2.12.1-2002, Hydraulic fluid power – Systems and products – Method of measuring average steady-state pressure (to be used in conjunction with ANSI/(NFPA)T2.12.10)

*This standard is limited to the measurement of average steady-state static pressure in a closed conductor that meets the following criteria: must be transmitting hydraulic fluid power; average fluid velocities are less than 25 meters per second (82 ft/sec); average steady-state static pressure is less than 70 Mpa (10,000 psi); inside diameters are greater than 3.0 millimeters (0.120 in); and sensor is not flush-mounted with, or an integral part of, the closed fluid conductor wall.*

ANSI/(NFPA) T2.12.10-2002, Recommended practice – Hydraulic fluid power – Systems and products – Testing general measurement principles and tolerances (to be used in conjunction with ANSI/(NFPA)T2.12.1)

*Use of this recommended practice shall be limited to measurement situations encountered in the testing of hydraulic fluid power components or systems under static or average steady state conditions and include: general instrument calibration techniques; methods for assessing instrument uncertainties and measurement uncertainty; evaluation methods for error propagation in derived results; measurement system uncertainty assurance control techniques; and criteria for system measurement acceptance.*

ANSI/(NFPA) T2.12.5R1-2005, Information report - Fluid power - Laboratory guidelines

*1.1 This information report includes the following items: a) an accumulation of various practices and procedures for fluid power testing laboratories; b) references to or excerpts from published technical literature, applicable to fluid power testing laboratories; c) a subject index. 1.2 This information report is not intended to be a comprehensive guide to designing and operating a laboratory, but is a document with any or all portions optional to the user. Applicable local, state and federal codes and guidelines may supersede the information within this report.*

ANSI/(NFPA) T2.13.1 R3-1998, Use of Fire-Resistant Fluids for Industrial Hydraulic Fluid Power Systems, Practice for the

*Provides a general educational publication covering the aspects of each of the general industrial types of fire-resistant fluids used in hydraulic fluid power systems. This standard was originally listed for public review in the October 25, 1996 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/(NFPA) T2.13.4-1994 (R2001), Information Report – Recommendations for Conservation, Maintenance, and Disposal of Hydraulic Fluids

*Includes and establishes recommendations for reclamation, recycling, and disposal of hydraulic fluids.This information report includes and establishes recommendations for reclamation, recycling, and disposal of hydraulic fluids.*

ANSI/(NFPA) T2.13.5-1991 (R2001), Hydraulic Fluid Power – Industrial Systems – Practice for the Use of High Water Content Fluids

*Provides: a general educational publication covering many aspects of high water content fluids used in hydraulic fluid power systems; a composite reference of pertinent general data, properties & characteristics of the types of high water content fluids considered for use in fluid power systems; facilitate the design of industrial fluid power systems that use high water content fluids; improve the operation and increase the reliability of fluid power systems using High Water . Content Fluids; provide basic procedures for initial filling or changing types of High Water Content Fluids considered for use in fluid power systems; discuss the maintenance of High Water Content Fluids. This standard was listed for public review in the 1/14/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/(NFPA) T2.13.7 R1-1997 (R2005), Hydraulic Fluid Power – Petroleum Fluids – Prediction of Bulk Moduli

*This national standard specifies a procedure for predicting the bulk moduli of petroleum or hydrocarbon oils used as fluids (in the absence of air bubbles) in hydraulic fluid power systems and for other purposes. This national standard provides graphical techniques to obtain moduli of these fluids without extended calculations and with such accuracy as would be required for the practical calculation of hydraulic systems parameters.*

ANSI/(NFPA) T2.13.8-1997, Hydraulic Fluid Power – Fire Resistant Fluids – Definitions, Classifications, and Testing

*Covers various types of fire resistant fluids and methods that are used to evaluate their varying degrees of fire resistance.*

ANSI/(NFPA) T2.24.2-1997, Hydraulic Fluid Power Systems - Methods to Improve Sealing Reliability

*Applies to industrial and mobile hydraulic systems. The guidelines are intended to provide assistance to system designers, product designers, installation personnel and maintenance personnel by outlining established methods for minimizing external leakage.*

ANSI (NFPA) T2.25.1 R2-2005, Pneumatic Fluid Power - Systems Standard For Industrial Machinery - Supplement To ISO 4414:1998 - Pneumatic Fluid Power - General Rules Relating To Systems

*Provides general rules for pneumatic systems used in manufacturing. It is intended to guide suppliers and purchasers, with a view to ensuring safety, uninterrupted system operation, ease and economy of maintenance and long life of the system. This standard does not apply to air compressors and air distribution systems. This standard is based upon ISO 4414:1998, with certain exceptions. The user will require both standards for use on a pneumatic systems application in the USA.*

ANSI/(NFPA) T2.6.1 R2-2000 (R2005), Fluid Power Components - Method for Verifying the Fatigue and Establishing the Burst Pressure Ratings of the Pressure Containing Envelope of a Metal Fluid Power Component

*Provides: test and statistical methods for generating fatigue distribution data; test and statistical methods for conducting a verification of the pressure ratings on fluid power components; common requirements and an industry-wide philosophy in judging one type of pressure capability for fluid power components; and uniform methods of product comparison.*

ANSI/(NFPA) T3.10.17-1995 (R2004), Finite Life Hydraulic Filter Pressure/Life Rating – Method for Verifying the Fatigue Life Rating and the Burst Pressure Rating of the Pressure Containing Envelope of a Spin-On Hydraulic Filter

*To include methods for verifying the ratings of the burst and fatigue pressure strength of a finite life hydraulic filter, disposable element, container (spin-on filter). The purpose is to provide standard methods for verifying the fatigue and static burst pressure ratings of the metal housing of a finite life hydraulic filter with regard to cyclic and steady pressure loads. Because the service life of the element container for a finite life hydraulic filter (spin-on) is relatively short, a fatigue life of 100,000 cycles is judged significant for common industrial ratings.*

ANSI/(NFPA) T3.10.5.1 R2-2000 (R2005), Hydraulic filter/separator housing - Pressure rating supplement to NFPA/T2.6.1 R2-2000, Fluid power components - Method for verifying the fatigue and establishing the burst pressure ratings of the pressure

*Provides: test and statistical methods for generating fatigue distribution data; test and statistical methods for conducting a verification of the pressure ratings on fluid power hydraulic filter /separator housing(s); common requirements and an industry-wide philosophy in judging one type of pressure capability for fluid power hydraulic filter/separator housing(s); and uniform methods of product comparison.*

ANSI/(NFPA) T3.12.10 R2-2000 (R2005), Air line filter, regulator and/or lubricator - Pressure rating supplement to NFPA/T2.6.1 R2-2000, Fluid power components - Method for verifying the fatigue and establishing the burst pressure ratings of the pressure

*Provides: test and statistical methods for generating fatigue distribution data; test and statistical methods for conducting a verification of the pressure ratings on FRLs; common requirements and an industry-wide philosophy in judging one type of pressure capability for FRLs; and uniform methods of product comparison.*

ANSI/(NFPA) T3.16.2 R1-1997 (R2005), Hydraulic Fluid Power - Design for Nonintegral Industrial Reservoirs

*This standard establishes basic requirements for reservoir design, construction and selection; and outlines proper functions and maintenance features. Sealed and pressurized reservoirs are not included, nor are intensifiers or oil storage tanks.*

ANSI/(NFPA) T3.19.25 R1-2004, Information Report - Fluid Power Systems - Sealing Devices - Storage, Handling, and Installation of Elastomeric Seals and Exclusion Devices

*Addresses the storage, handling, and installation of elastomer seals in broad terms. Information regarding specific elastomers and seal geometries should be obtained in this document are molded preforms fabricated from thermoset elastomers which can either be thermoset or thermoplastic.*

ANSI/(NFPA) T3.20.8 R2-2000 (R2005), Quick-action coupling - Pressure rating supplement to NFPA/T2.6.1 R2-2000, Fluid power components - Method for verifying the fatigue and establishing the burst pressure rating of the pressure containing envelope of a metal fluid

*Provides: test and statistical methods for generating fatigue-distribution data; test and statistical methods for verifying the pressure ratings of quick-action couplings; common requirements and an industry-wide philosophy for judging one type of pressure capability for quick-action couplings; and uniform methods of product comparison.*

ANSI/(NFPA) T3.21.16-1997 (R2004), Pneumatic Fluid Power - Labeling and Communication of Pneumatic Products

*Provides a common reference for communicating information on a number of pneumatic components. This standard will include: descriptions for component manufacturers identification, product ratings, fluid power symbols and certain warning statements common to particular components; application only to service with air as the medium. The following pneumatic components: air-oil tanks, cylinders, directional control valves, filters, flow control valves, lubricators, regulators and relief valves. This standard will not include information on how to incorporate or apply components in a system.*

ANSI/(NFPA) T3.21.3-1990 (R1997), Pneumatic Fluid Power – Flow Rating Test Procedure and Reporting Method – for Fixed Orifice Components

*Provides test methods to measure the Cv rating and the sonic flow conductance parameters b and c. It will be expanded to include ISO sonic flow parameters. It will provide a common reference for test methods to be used on products.*

ANSI/(NFPA) T3.21.4 R2-2000 (R2005), Pneumatic valve - Pressure rating supplement to NFPA/T2.6.1 R2-2000, Fluid power components - Method for verifying the fatigue and establishing the burst pressure ratings of the pressure containing envelope of a metal fluid

*Provides: test and statistical methods for generating fatigue distribution data; test and statistical methods for conducting a verification of the pressure ratings on pneumatic valves; common requirements and an industry-wide philosophy in judging one type of pressure capability for pneumatic valves; and uniform methods of product comparison.*

ANSI/(NFPA) T3.28.9 R1-1989 (R2004), Fluid Power Systems and Products – Moving Parts Fluid Controls – Method of Diagramming

*Intended to include the updating of existing graphic symbols for fluid logic devices and circuits by developing symbols for the following: a) sensing and input devices; b) interface devices; c) accessory devices (all commonly used with fluid logic systems); d) logic symbols. 1.2 This standard is intended to select those symbols for publication with this revised standard along with the proper reference to existing standards in cases where symbols already exist in other standards. 1.3 This standard is intended to provide standard graphic symbols whereby complete fluid logic systems can be represented.*

ANSI/(NFPA) T3.29.2 R2-2000 (R2005), Pressure switch - Pressure rating supplement to NFPA/T2.6.1 R2-2000, Fluid power components - Method for verifying the fatigue and establishing the burst pressure ratings of the pressure containing envelope of a metal fluid

*Provides: test procedures for conducting a verification of the fatigue and establishment of burst pressure ratings on pressure switch envelopes; test and statistical methods for generating fatigue distribution data; common requirements and an industry wide philosophy in judging one type of pressure capability for fluid power pressure switches; and uniform methods of product comparison.*

ANSI/(NFPA) T3.4.7 R2-2000 (R2006), Accumulator - Pressure rating supplement to NFPA/T2.6.1 R2-2000, Fluid power components - Method for verifying the fatigue and establishing the burst pressure ratings of the pressure containing envelope of a metal fluid

*Provides: test and statistical methods for generating fatigue distribution data; test and statistical methods for conducting a verification of the pressure ratings on fluid power accumulators; common requirements and an industry-wide philosophy in judging one type of pressure capability for fluid power accumulators; and uniform methods of product comparison.*

ANSI/(NFPA) T3.5.14 R1-1997, Hydraulic Fluid Power - Directional Control Valve - Method for Determining the Metering Characteristics

*Includes the determination of the metering characteristics of a fluid power directional control valve and provides a uniform procedure for obtaining and reporting the metering characteristics of a fluid power directional control valve.*

ANSI/(NFPA) T3.5.26 R2-2000 (R2005), Hydraulic valve - Pressure rating supplement to NFPA/T2.6.1 R2-2000, Fluid power components - Method for verifying the fatigue and establishing the burst pressure ratings of the pressure containing envelope of a metal fluid

*Provides: test and statistical methods for generating fatigue distribution data; test and statistical methods for conducting a verification of the pressure ratings on fluid power hydraulic valves; common requirements and an industry-wide philosophy in judging one type of pressure capability for hydraulic valves typically used in fluid power applications; and uniform methods of product comparison.*

ANSI/(NFPA) T3.5.28 R1-1997 (R2004), Hydraulic Fluid Power - Valves - Pressure Differential-Flow Characteristic - Method of Measuring and Recording

*This national standard provides the determination of the pressure differential-flow characteristics of any fluid power valve; a uniform method of presenting the test data; standardized information for conducting comparative tests. This standard is intended to provide a uniform laboratory procedure for measuring the pressure losses associated with any given flow path in a hydraulic valve; provide a standard means of reporting the pressure losses measured; establish uniform specified values for comparing the pressure losses of different valve designs.*

ANSI/(NFPA) T3.5.29 R1-2007, Hydraulic fluid power solenoid-piloted industrial valves - Interface dimensions for electrical connectors

*This standard includes electrical plug-type connector interface dimensions and configurations (not intended for current interruption) used with a single or double electrically controlled fluid power control valve used in industrial (in-plant) applications. This standard is intended to: simplify variety and facilitate installation and servicing; promote interchangeability and greater use of electrically controlled fluid power controls. This standard applies to the dimensional criteria pin usage and installation requirements of products manufactured in conformance with this standard. It does not fully define their functional characteristics.*

ANSI/(NFPA) T3.6.29 R2-2000 (R2006), Tie rod or bolted cylinder - Pressure rating supplement to NFPA/T2.6.1 R2-2000, Fluid power components - Method for verifying the fatigue and establishing the burst pressure ratings of the metal pressure containing envelope of a tie rod

*This standard provides test and statistical methods for generating fatigue distribution data; test and statistical methods for conducting a verification of the pressure ratings on tie rod or bolted cylinder; common requirements and an industry-wide philosophy in judging one type of pressure capability for fluid power tie rod or bolted cylinders; and uniform methods of product comparison.*

ANSI/(NFPA) T3.6.31 R2-2000 (R2006), Telescopic cylinders and cylinders of non-bolted end construction - Pressure rating supplement to NFPA/T2.6.1 R2-2000 - Fluid power components - Method for verifying the fatigue and establishing the burst pressure ratings of

*This standard provides test and statistical methods for generating fatigue distribution data; test and statistical methods for conducting a verification of the pressure ratings on telescopic and nonbolted end fluid power cylinders; common requirements and an industry-wide philosophy in judging one type of pressure capability for telescopic and nonbolted end fluid power cylinders; and uniform methods of product comparison.*

ANSI/(NFPA) T3.6.37-1991 (R1998), Hydraulic Fluid Power – Cylinders – Method for Determining the Buckling Load

*Establishes a method to calculate the theoretical result and as such produces a critical buckling load higher that attainable in controlled laboratory tests. This standard is limited to pin-mounted fluid power cylinders and is not applicable to trunnion-mounted cylinders.*

ANSI/(NFPA) T3.6.54 R1-1997 (R2004), Hydraulic Fluid Power - Cylinder Ports - SAE Straight Thread O-Ring and Four-Bolt Flange Ports – ISO Straight Thread O-Ring and Four-Bolt Flange Ports - Heavy-Duty and Light-Duty Square Head Tie Rod Cylinders

*Includes recommended sizes of SAE and ISO straight thread O-ring and four-bolt flange ports in NFPA standard heavy duty and light duty hydraulic cylinders. This standard intends to: encourage the use of SAE O-ring sealed ports; promote cylinder interchangeability by establishing uniform O-ring port recommendations.*

ANSI/(NFPA) T3.6.59-1993 (R2001), Hydraulic Fluid Power – Cylinders – Cushion Performance

*Defines maximum energy absorption guidelines for ANSI/B93.15. This standard will develop a method of presenting hydraulic cushion suitability. This standard was listed for public review in the 1/14/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/(NFPA) T3.6.7R2-1996 (R2004), Fluid Power Systems and Products – Square Head Industrial Cylinders – Mounting Dimensions

*This standard includes: interchangeable mounting dimensions for pneumatic, light duty hydraulic, square head industrial fluid power cylinders; interchangeable mounting dimensions for heavy duty hydraulic square head industrial fluid power cylinders. This standard is intended to: promote interchangeability by establishing uniform mounting dimensions for various types of cylinder mountings; allow manufacturers freedom of design in cylinders without restricting the advancement of the art while still providing basic guidelines necessary for product interchangeability.*

ANSI/(NFPA) T3.9.17 R2-1997 (R2004), Hydraulic Fluid Power - Positive Displacement Pumps, Motors and Integral Transmissions - Method of Testing and Presenting Basic Performance Data

*This standard includes basic methods of test & methods for presenting performance data for rotary positive displacement hydraulic fluid power pumps used in industrial, mobile & marine applications. This standard: a) applies to variable displacement pumps when testing under fixed displacement conditions; b) excludes pumps containing integral valving; c) test method applies to the laboratory, not the production line or field d) provides a uniform & accurate means for determining & expressing pump performance capabilities in a standard form to guide the establishing of meaningful ratings; & to aid in accomplishing optimum product application.*

ANSI/(NFPA) T3.9.22 R2-2000 (R2005), Pump/motor - Pressure rating supplement to NFPA/T2.6.1 R2-2000, Fluid power components - Method for verifying the fatigue and establishing the burst pressure ratings of the pressure containing envelope of a metal fluid

*Provides: test and statistical methods for generating fatigue distribution data; test and statistical methods for conducting a verification of the pressure ratings of the pressure containing envelope on positive displacement fluid power pump/motor(s); common requirements and an industry-wide philosophy in judging one type of pressure capability for fluid power pump/motor(s); and uniform methods of product comparison.*

ANSI/(NFPA) T3.9.33-1997, Hydraulic Fluid Power - Pumps - Method of Testing and Presenting Basic Performance Data for Load Sensing Pumps

*Includes basic methods of testing and presenting performance data for rotary positive displacement, variable volume, and load sensing hydraulic fluid power pumps used in industrial, mobile, and marine applications.*

ANSI/FPS/CS 1-R2-2001, Fluid Power and Motion Control – Certification of Fluid Power Mechanics, Technicians, Specialists, and Engineers

*Establishes the procedure for:*
*- determining the knowledge and skill requirements for Certification;*
*- expressing those requirements in the form of a written or hands-on test or both;*
*- administering the tests;*
*- certifying applicants who satisfy the respective requirements for each category;*
*-appealing denial of Certification.*
*Includes the categories: Fluid Power Industrial Hydraulic Mechanic, Mobile Hydraulic Mechanic, Pneumatic Mechanic, Industrial Hydraulic Technician, Mobile Hydraulic Technician, Pneumatic Technician, Hydraulic Specialist, Pneumatic Specialist and Engineer. Provides a procedure for measuring and recognizing an individual's skills and knowledge as related to the technical aspects of Fluid Power and Motion Control Technology.*

## NFSI (National Floor Safety Institute)

## NGA (National Glass Association)

## NGCMA (National Golf Car Manufacturers Association)

ANSI/NGCMA Z130.1-2004, Golf Cars – Safety and Performance Requirements

*Developed to establish safety specifications for the design and operation of golf cars driven by electric motors and internal combustion engines with respect to speed, acceleration, stability, braking systems, operational controls, electrical systems, fuel systems, and general configurations. A specified safety warning label lists the major safety and precautionary operating measures to be observed. Safety codes and standards are intended to enhance public health and safety.*

ANSI/NGCMA Z135-2004, Personal Transport Vehicles - Safety and Performance Specifications

*Developed to establish safety specifications for the design and operation of electric and internal combustion engine powered personal transport vehicles, ("PTVs"), with respect to speed, acceleration, stability, braking systems, operational controls, electrical systems, lighting, fuel systems, and general configurations. A specified safety warning label lists the major safety and precautionary operating measures to be observed. Safety codes and standards are intended to enhance public health and safety.*

## NIMS (National Institute for Metalworking Skills)

ANSI/NIMS 100-2001, Duties and Standards: Machine Maintenance, Repair and Service Level II & Level III

*Covers, in level II, the skills required to perform preventative maintenance and minor repairs. Level III covers the skills required for the performance of major repairs, machine re-building, and the servicing of newly installed or manufacturers warranty covered machinery.*

ANSI/NIMS 101-2001, Duties and Standards for Machining Skills-Level I, Level II and Level III

*Comprises the Duties and Standards for Machining Skills, which was written in three levels and was first introduced in 1995. They were fully implemented beginning in 1997. The standards are statements of required proficiency levels needed for high performance manufacturing. Their purpose is to provide guidance to training programs in schools, in-house company training, and in apprenticeships. The metalworking skill standards program in order to stay current with technology changes must be reviewed and re-confirmed and revised when new skills needs are identified. The NIMS procedure calls for this review and update every four years. This submittal represents a complete review, necessary revisions and re-validation of the original standards following the Policies and Procedures for Revising Skill Standards as accepted by ANSI. The entire machining*

## NIRMA (Nuclear Information and Records Management Association)

ANSI/NIRMA CM 1.0-2000, Guidelines for Configuration Management for Nuclear Facilities

*The proposed standard will provide guidance, definitions and functional criteria for the cost-effective implementation of configuration management principles as they apply to nuclear facilities. It will include descriptions of objectives to be achieved for facility configuration management, i.e., consistency between design requirements, physical configuration and facility configuration information. While retaining the essence of classical configuration management principles, these objectives represent a variation from classical product (acquisition) configuration management. Guidance on the use of a graded approach to define facility configuration management requirements will be included. This standard will provide a "common basis" from which organizations can develop and implement effective configuration management at their respective facility(ies).*

## NISO (National Information Standards Organization)

ANSI/NISO TR-02-1997, Indexes, Basic Criteria for (NOT AN AMERICAN NATIONAL STANDARD)

*Provides guidelines and a uniform vocabulary for use in the preparation and evaluation of indexes. This standard seeks to deal with the principles of indexing regardless of the type of material indexed or the indexing method (manual or mechanical) used.*

ANSI/NISO Z39.14-1997 (R2002), Guidelines for Abstracts

*Assists authors and editors prepare abstracts by describing the components of an abstract and the appropriate styles and formats.*

ANSI/NISO Z39.18-2005, Scientific and Technical Reports - Preparation, Presentation and Preservation

*This outlines the elements, organization and design of scientific and techncial reports, including guidance for uniform presentation of front and back matter and tabs in print and digital formats.*

ANSI/NISO Z39.19-2005, Guidelines for the Construction, Format, and Management of Monolingual Thesauri

*This standard presents guidelines and conventions for the contents, display, construction, testing, maintenance and management of controlled vocabularies. It covers all aspects of constructing controlled vocabularies including extensive rules and guidelines for term selection and format, the use of compound terms, and establishing and displaying various types of relationships among terms.*

ANSI/NISO Z39.2-1994 (R2001), Information Interchange Format

*Specifies the requirements for a generalized interchange format that will accommodate data describing all forms of material. Describes generalized structure designed specifically for exchange of data between processing systems. May be used for the communication of records in any media.*

ANSI/NISO Z39.20-1999, Criteria for Price Indexes for Printed Library Materials

*Provides criteria for developing price indexes to measure as accurately as possible on a periodic basis the extent of price changes. A price index is an economic indicator that in systematic fashion for a period of time ans at fixed intervals of time (usually annual) provides for the derivation of average prices and citation of changes in terms of index numbers. Price indexes describe the essential characteristics of various forms of library mnaterials, so that the same characteristics are measured periodically. A set of price indexes is intended to meet administartive needs for budgeting, materials price analysis, and other purposes in libraries and other organizations with similar information needs. Price indexes represent a standard measurement of the market dynamics of a particular publication type (format) rather than reflecting exact pricing for a specific library, publisher, or situation.*

ANSI/NISO Z39.23-1997 (R2002), Standard Technical Report Number Format and Creation

*Defines a unique numbering system that improves access to scientific and technical reports. The STRN is an alphabetical code with a maximum length of 34; for international application an optional country code can be added. The standard shows where and how the code should be assigned and used.*

ANSI/NISO Z39.26-1997 (R2002), Micropublishing Product Information

*Details the information publishers should incorporate in advertising materials for micropublishing so users will have a full description of the product. Included is a section on guarantees and the publisher's policy on replacement of defective portion of the micropublication*

ANSI/NISO Z39.29-2005, Bibliographic References

*This standard provides rules, guidelines, and examples for the creation of bibliographic references to all types of print, audiovisual, and electronic materials, both published and unpublished, arranged in fifteen broad categories. This is intended for a broad audience, including the creators of bibliographic references, the processors who publish and otherwise display references, and the ultimate users of the references.*

ANSI/NISO Z39.32-1996 (R2002), Information on Microfiche Headers

*Defines the specific eye-legible information that should appear on the limited space available on microfiche so that fiche can be correctly identified and properly filed. The standard describes where to place the data, the order of the information, and a recommended type size and contrast to maximize readability. Examples are provided.*

ANSI/NISO Z39.41-1997 (R2002), Printed Information on Spines

*Describes how information is best presented on the spines of books or the containers that contain an information product, such as a CD-ROM, a microform, a disk, videotape or any audiotape. Explains what information to include and how to arrange it for maximum clarity.*

ANSI/NISO Z39.43-1993 (R2006), Standard Address Number (SAN) for the Publishing Industry

*The Standard Address Number (SAN) is a seven-digit numeric identifier used to identify organizations and businesses interacting with the publishing industry (including book and serial manufacturers, libraries, publishers, etc.). Originally created to expedite paper-based transactions such as purchase orders and returns, the SAN has been designated as the organizational identifier for use in EDI transactions in the publishing industry.*

ANSI/NISO Z39.47-1993 (R2003), Extended Latin Alphabet Coded Character Set for Bibliographic Use

*Establishes computer codes for an extended Latin alphabet character set to be used in bibliographic work when handling non-English items. The standard addresses specific characters in languages using the Latin alphabet as well as combining marks(diacritics) required for romanization and transliteration. The standard establishes the 7 and 8-bit code values.*

ANSI/NISO Z39.48-1992 (R2002), Permanence of Paper for Publications and Documents in Libraries and Archives

*Sets the basic criteria for coated ad uncoated papers that will last several hundred years under normal use. Covers pH value, tear resistance, alkaline reserve and lignin threshold.*

ANSI/NISO Z39.50-2003, Information Retrieval Application Service Definition and Protocol Specification for Open Systems Interconnection

*It specifies client/server based protocol for Information Retrieval. Specifies procedures and formats for a client to search a database provided by a server, retrieve database records, and perform related information retrieval functions. Addresses communication between information retrieval applications at the client and server.*

ANSI/NISO Z39.53-2001, Information Sciences – Codes for the Representation of Languages for Information Interchange

*Presents a standardized 3-character code to indicate language in the exchange of information is defined. Codes are given for languages, contemporary and historical.*

ANSI/NISO Z39.56-1996 (R2002), Serial Item and Contribution Identifier (SICI)

*The SICI is a variable length code to be used to identify print and electronic publications. It accommodate proprietary numbering schemes.*

ANSI/NISO Z39.62-2000, Eye-Legible Information on Microfilm Leaders and Trailers and on Containers of Processed Microfilm on Open Reels

*Specifies the eye readable information on leaders and trailers of microfilm and on the containers of processed microfilm. The standard specifies the location of elements, the order of elements in each location, and the minimum type size.*

ANSI/NISO Z39.64-1989 (R2002), East Asian Character Code for Bibliographic Use

*Establishes a computer coding structure for East Asian languages, (Chinese, Japanese and Korean), using 3-byte code values in a 8-bit environment.*

ANSI/NISO Z39.7-2004, Information Services and Use: Metrics & statistics for libraries and information providers--Data Dictionary

*Identifies categories for basic library statistical data reported at the national level, and provides associated definitions of terms. In doing so it deals with the following areas: reporting unit and target population, human resources, collection resources, infrastructure, finances, and services. In addition, the standard identifies new measures associated with networked services, databases, and performance. The standard is not intended to be comprehensive in scope. Instead, it presents a framework for comparable library data by describing common elements pertaining to libraries of various types in the US.*

ANSI/NISO Z39.71-2006, Holdings Statements for Bibliographic Items

*Specifies display requirements for holdings statements for bibliographic items to promote consistency in the communication and exchange of holdings information. The standard applies to holdings statements for bibliographic items in any physical or electronic medium. It may be applied to electronic resources available to an institution, either under its control, or available under other arrangements. It applies to both manual and automated means of recording holdings.*

ANSI/NISO Z39.73-1994 (R2001), Single-Tier Steel Bracket Library Shelving

*Establishes minimum performance requirements for freestanding single-tier steel bracket shelving for use primarily in libraries.*

ANSI/NISO Z39.74-1996 (R2002), Guides to Accompany Microform Sets

*Describes the basic requirements for user guides that accompany microform sets so microform publishers can provide the most useful and comprehensive guides to their publications.*

ANSI/NISO Z39.76-1996 (R2002), Data Elements for Binding Library Materials

*Defines almost three hundred required and optional elements that can be used in a binding record to enable automated library systems to communicate with a bindery's automated system.*

ANSI/NISO Z39.77-2000, Guidelines for Preservation of Product Information

*Specifies the information that should be included in advertisments, catalogs, and promotional material for products used for storage, binding or repair of library materials.*

ANSI/NISO Z39.78-2000 (R2005), Library Binding

*Describes the technical and materials specifications for first-time hardcover binding of serials publications and paperbound books for library use, and rebinding of hardcover books for librar use.*

ANSI/NISO Z39.79-2001, Environmental Conditions for Exhibiting Library and Archival Materials

*Establishes criteria to minimize the impact of environmental factors that contribute to the deterioration of library and archival materials on exhibit.*

ANSI/NISO Z39.82-2001, Title Pages of Conference Proceedings

*Describes data elements that publishers, authors, and editors should use to create title pages or chief sources of information for conference publications in all subjects, languages, and formats. This standard was first listed in the January 29, 1999 issue of Standards Action. It is being resubmitted due to substantive changes.*

ANSI/NISO Z39.83-2002, Circulation Interchange - Part 1: Protocol (NCIP) and Circulation Interchange Part 2: Protocol Implementation

*This standard defines a protocol that is limited to the exchange of messages between and among computer-based applications to enable them to perform the functions necessary to lend items, to provide controlled access to electronic resources, and to facilitate co-operative management of these functions.*

ANSI/NISO Z39.84-2005, Syntax for the Digital Object Identifier

*Defines the syntax for a character string called the Digital Object Identifier. Policies governing the assignment and use of DOI's are determined by the International DOI Fnd, (IDF) and are outside the scope of this standard.*

ANSI/NISO Z39.85-2001, The Dublin Core Metadata Element Set

*Defines fifteen metadata elements for resource discovery in a multidisciplinary information enviroment.*

ANSI/NISO Z39.86-2005, Specifications for the Digital Talking Book

*Defines the format and content of the electronic file set that comprises a digital talking book (DTB) and establishes a limited set of requirements for the DTB playback devices. DTBs are designed to make print material accessible and navigable for blind or otherwise print-disabled persons.*

ANSI/NISO Z39.87-2006, Data Dictionary-Technical Metadata for Digital Still Images

*This standard defines a set of metadata elements for raster digital images to enable users to develop, exchange, and interpret digital image files. The dictionary has been designed to facilitate interoperability between systems, services, and software as well as to support the longterm management of and continuing access to digital image collections.*

ANSI/NISO Z39.88-2004, OpenURL Framework for Context-Sensitive Services

*The OpenURL Framework standardizes the construction of certain packages of information and the methods by which they may be transported over networks. This Framework consists of ContextObject specifications, the OpenURL Registry, and the rules that govern the usage of the Registry. This standard also defines and registers the initial content of the OpenURL Registry.*

ANSI/NISO Z39.89-2003, The U.S. National Z39.50 Profile for Library Applications

*This standard specifies the use of the ANSI/NISO Z39.50-2003 in library applications. It specifies Z39.50 client and Z39.50 server behavior for search and retrieval across online library catalogs. The specifications included in this standard use The Bath Profile: A Z39.50 Specification for Library Applications and Resource Discovery (Release 2) as its foundation. Conformant use of this standard will improve interoperability between Z39.50 implementations.*

ANSI/NISO Z39.9-1992 (R2001), International Standard Serial Numbering (ISSN)

*Defines the structure and presentation of a standard code for the unique identification of serial publications: ISSN. The standard also designates a central authority for administration of the code.*

ANSI/NISO/ISO 12083-1995 (R2002), Electronic Manuscript Preparation and Markup

*In complete conformance with ISO 8879 (SGML-Standard Generalized Markup Language), this provides a toolkit for developing customized SGML applications. Four Document Type Definitions are specified for books, serials, articles, and mathematics. Instructions for the preparation of text for the near automatic conversion to grade-2 braille and for publication in large-print and computer voice editions are included.*

## NIST (National Institute of Standards and Technology/Information

ANSI/NIST-ITL 1-2000, Data Format for the Interchange of Fingerprint, Facial, and Scar Mark and Tattoo (SMT) Information

*This standard defines the content, format and units of measurement for the exchange of fingerprint, palmprint, facial/mugshot, and scar, mark, & tattoo (SMT) image information that may be used in the identification process of a subject. The information consists of a variety of mandatory and optional items, including scanning parameters, related descriptive and record data, digitized fingerprint information, and compressed or uncompressed images. This information is intended for interchange among criminal justice administrations or organizations that rely on automated fingerprint and palmprint identification systems or use facial or SMT data for identification purposes. [publish for 30-day changes sent via e-mail]*

## NPES (Association for Suppliers of Printing, Publishing and Converting

ANSI B65.1-2005, Graphic technology - Safety standard - Printing press systems

*This standard applies to printing press systems, including auxiliary equipment and finishing machines, in which all the machine actuators (e.g., drives) of the equipment in the system are controlled by the same control system. This standard provides safety requirements for the design, construction and use of printing press systems. It addresses recognized hazards specific to printing press systems in the following areas; mechanical; electrical; slipping, tripping, falling; ergonomics; noise; radiation; explosion; fire; temperature; impact.*

ANSI B65.2-2005, Graphic technology - Safety requirements for binding and finishing systems and equipment

*This standard provides safety specifications for the design and construction of binding and finishing equipment operated in a system configuration or in stand-alone mode.*

ANSI B65.3-2001 (R2006), Safety standard - Guillotine paper cutters, mill trimmers and integral handling equipment

*This standard specifies operational and mechanical safety specifications for the design and use of guillotine cutters, mill trimmers and integral handling equipment, when they are used as intended and under the conditions foreseen by the manufacturers.*

ANSI B65.4-2002 (R2007), Safety standard - Three-knife trimmers, including rotary, and single- and multiple-knife trimmers

*This standard specifies operational and mechanical safety specifications for the design and use of stand-alone trimmers.*

ANSI B65.5-2006, Safety Standard – Stand-Alone Platen Presses

*This standard provides operational and mechanical safety specifications for the design and use of webfed and sheetfed stand-alone platen press systems intended for diecutting, embossing, foil stamping and/or printing of paper, board and other materials processed in a similar manner. This standard applies to presses with a flat bed and platen (formerly known as job platen presses) driven by electro-mechanical means, often in conjunction with one or more flywheels.*

ANSI CGATS.17-2005, Graphic Technology - Exchange Format for Color and Process Control Data Using XML or ASCII text

*This standard defines an exchange format for color and process control data (and the associated metadata necessary for its proper interpretation) in electronic form using either XML or ASCII formatted data files. It is focused primarily on spectral measurement data, colorimetric data, and densitometric data.*

ANSI CGATS.20-2002, Graphic technology - Variable printing data exchange using PPML and PDF (PPML/VDX)

*Specifies the methods for the use of the Personalized Print Markup Language (PPML) and the Portable Document Format (PDF) for the exchange or identification of all elements necessary to render a variable data imaging job as intended by the sender. This standard specifies document layout and content data and makes provision for product intent specifications using the Job Definition Format (e.g., paper selection, binding, finishing, etc.).*

ANSI CGATS.4-2006, Graphic technology - Graphic arts reflection densitometry measurements - Terminology, equations, image elements and procedures

*This standard defines terms, equations and procedures for measurement, use, and communication of data obtained using reflection densitometry in the graphic arts.*

ANSI CGATS.5-2003, Graphic Technology – Spectral Measurement and Colorimetric Computation for the Graphic Arts

*This standard establishes a methodology for reflection and transmission spectral measurement, and computation of colorimetric parameters for graphic arts images. Graphic arts includes, but is not limited to, the preparation of material for, and volume production by, production printing processes that include offset lithography, letterpress, flexography, gravure and screen printing.*

ANSI CGATS.5-2003, Supplement 1-2005, Graphic technology - Spectral measurement and colorimetric computation for graphic arts images

*This standard establishes a methodology for reflection and transmission spectral measurement, and computation of colorimetric parameters for graphic arts images. Supplement 1 modifies informative annexes F and G, and adds a new informative annex I.*

ANSI CGATS.7-2003, Graphic Technology – Pallet Loading for Printed Materials

*Specifies the stacking, unitizing, protection and labeling of palletized printed materials. It also specifies the functional design of pallets used to transport printed materials, and gives specifications for their loading onto delivery vehicles.*

ANSI CGATS.9-2005, Graphic Technology – Graphic Arts Transmission Densitometry Measurements – Terminology, Equations, Image Elements, and Procedures

*This standard defines terminology, equations, process control elements, and procedures for measurement and communication of transmission densitometry data for graphic arts halftone images.*

ANSI CGATS TR 001-1995 (R2003), Graphic Technology – Color Characterization Data for Type 1 Printing (NOT AN AMERICAN NATIONAL STANDARD)

*Reaffirmed Technical Report*

ANSI CGATS/ISO 12640-1-2007, Graphic technology - Prepress digital data exchange - Part 1: CMYK standard color image data (CMYK/SCID)

*This standard specifies the CMYK digital data that represents a set of standard colour images to be used for evaluation of changes in image quality during coding, image processing (including transformation, compression, and decompression), film recording or printing which can be used for research, develoment,product evaluation, and process control.*

ANSI CGATS/ISO 12640-2-2007, Graphic technology - Prepress digital data exchange - Part 2: XYZ/sRGB encoded standard colour image data (XYZ/SCID)

*This part of ISO 12640 specifies a set of 15 standard colour images (encoded as both 16-bit XYZ and 8-bit RGB digital data provided in electronic data files) that can be used for the evaluation of changes in image quality during coding, image processing (including transformation compression and decompressing), displaying on a colour monitor or printing.*

ANSI CGATS/ISO 12640-3-2007, Graphic technology - Prepress digital data exchange - Part 3: CIELAB standard colour image data (CIELAB/SCID)

*This part of ISO 12640 specifies a set of standard large gamut colour images (encoded as 16-bit CIELAB digital data) that can be used for the evaluation of changes in image quality during coding, image processing (including transformation, compression and decompression), displaying on a colour monitor and printing.*

ANSI CGATS/ISO 12646-2005, Graphic technology - Displays for colour proofing - Characteristics and viewing conditions

*Specifies requirements for uniformity, size, resolution, convergence, refresh rate, luminance levels and viewing conditions for a colour display used to simulate a hard copy proofing system.*

ANSI CGATS/ISO 15930-1-2004/ISO 15930-1-2001 (R2006), Graphic technology - Prepress digital data exchange - Use of PDF - Part 1: Complete exchange using CMYK data (PDF/X-1 and PDF/X-1a)

*This part of CGATS/ISO 15930 specifies the methods for the use of the Portable Document Format (PDF) for the dissemination of compound CMYK digital data, in a single exchange, that is complete and ready for final print reproduction.*

ANSI CGATS/ISO 15930-3-2004/ISO 15930-3-2002, Graphic technology - Prepress digital data exchange - Use of PDF - Part 3: Blind exchange suitable for colour-managed workflows (PDF/X-3)

*This part of ISO 15930 specifies the use of the Portable Document Format (PDF) for the dissemination of complete digital data, in a single exchange, that contains all elements necessary for final print reproduction. These exchanges will support both colour-managed workflows and traditional CMYK workflows.*

ANSI CGATS/ISO 15930-4-2004/ISO 15930-4-2002, Graphic technology - Prepress digital data exchange using PDF - Part 4: Coomplete exchange of CMYK and spot colour printing data using PDF 1.4 (PDF/X-1a)

*This part of ISO 15930 specifies the use of the Portable Document Format (PDF) Version 1.4 for the dissemination of complete digital data, in a single exchange, that contains all elements ready for final print reproduction. CMYK and spot-colour data are supported in any combination.*

ANSI CGATS/ISO 15930-5-2004/ISO 15930-4-2003, Graphic technology - Prepress digital data exchange using PDF - Part 5: Partial exchange of printing data using PDF 1.4 (PDF/X-2)

*This part of ISO 15930 specifies the use of the Portable Document Format (PDF) Version 1.4 for the dissemination of digital data, where all elements necessary for final print reproduction are either included or provision is made for unique identification. Colour-managed, CMYK, and spot colour data are supported in any combination.*

ANSI CGATS/ISO15930-6-2004/ISO 15930-6-2003, Graphic technology - Prepress digital data exchange using PDF - Part 6: Complete exchange of printing data suitable for colour-managed workflows using PDF 1.4 (PDF/X-3)

*This part of ISO 15930 specifies the use of the Portable Document Format (PDF) Version 1.4 for the dissemination of complete digital data, in a single exchange, that contains all elements necessary for final print reproduction. Colour-managed, CMYK, gray, RGB or spot colour data are supported.*

ANSI IT8.6-2002, Graphic Technology – Prepress Digital Data Exchange – Die Cutting Data

*Establishes a data exchange format to enable transfer of numerical control information between diecutting systems and between diecutting systems and electronic prepress systems.*

ANSI IT8.7/1-1993 (R2003), Graphic Technology – Color Transmission Target for Input Scanner Calibration

*This standard defines an input test target that will allow any color input scanner to be calibrated with any film dye set used to create the target. It is intended to address the color transparency products that are generally used for input to the preparatory process for printing and publishing. The standard defines the layout and colorimetric values of a target that can be manufactured on any positive color transparency film and is that intended for use in the calibration of a photographic film/scanner combination.*

ANSI IT8.7/2-1993 (R2003), Graphic Technology – Color Reflection Target for Input Scanner Calibration

*This standard defines an input test target that will allow any color input scanner to be calibrated with any film dye set used to create the target. It is intended to address the color photographic paper products that are generally used for input to the preparatory process for printing and publishing. The standard defines the layout and colorimetric values of a target that can be manufactured on any color photographic paper and is that intended for use in the calibration of a photographic film/scanner combination.*

ANSI IT8.7/3-2005, Graphic Technology – Input Data for Characterization of 4-Color Process Printing

*This standard defines a data set of ink value combinations that may be used to characterize four-color process printing.*

ANSI IT8.7/4-2005, Graphic technology - Input data characterization for 4-color process printing - Expanded data set

*This standard defines a data set of ink value combinations that may be used to characterize four-color process printing. This data set is not optimized for any printing process or application area, but is robust enough for all general*
*applications. The needs of publication, commercial, and package printing with offse lithography, gravure, flexography, and other printing processes have been considere*
*While it is primarily aimed at process color printing with CMYK inks, it may also be used with any combination of three chromatic inks and a dark ink.*

ANSI NAPIM 177.2-2006, Safety standard - Printing ink vertical post mixers

*The purpose of this standard is to establish safety requirements with respect to the design and operation of vertial post mixers used in the manufacturing of printing inks.*

ANSI/CGATS 12639-2004, Graphic technology - Prepress digital data exchange - Tag image file format for image technology (TIFF/IT)

*This International Standard specifies a media-independent means for prepress electronic data exchange using a tag image file format. This International Standard defines image file formats for encoding colour continuous-tone picture images, colour line-art images, high-resolutin continuous-tone images, monochrome continuous-tone picture images, binary picture images, binary line-art images, screened data, and images of composite final pages.*

ANSI/CGATS/ISO 12639 Amd1-2006, Graphic technology - Prepress digital data exchange - Tag image file format for image technology (TIFF/IT) - Amendment 1

*The purpose of Amendment 1 is to add an informative annex relating to the incorporation of JBIG2-Amd2 compressed data into TIFF/IT.*

ANSI/CGATS/ISO 15790-2005, Graphic Technology - Certified Reference Materials for Reflection and Transmission Metrology - Documentation Requirements and Recommended Procedures

*This standard specifies the documentation requirements for certified reference materials (CRMs), procedures for the use of CRMs, and procedures for the computation and reporting of the combined standard uncertainty of reflectance and transmittance measurement systems used in graphic arts, photographic and other imaging industries.*

ANSI/NAPIM 177.1-2007, Three-Roller Printing Ink MIlls - Safety Requirements

*The requirements of this standard apply to all three-roll mills used in the printing ink manufacturing industry. The purpose of this standard is to establish safety requirements with respect to safety controls, operating procedures and design of three-roll mills.*

## NPPC (National Pork Producers Council)

ANSI/NPPC 0001-2002, Good Environmental Livestock Production Practices (GELPP): Concentrated Livestock Operations - General Site Conditions

*Reflects substantive revisions based on the initial Canvass review. While the revisions are considered substantive, they do not alter the basic scope and intent of the standard.*
*This standard includes GELPPs related to general site conditions at animal feeding operations (AFO). The standard was developed to address environmental challenges facing the livestock industry. This standard includes requirements that are based on best management practices developed by industry, governmental, and university experts. Operations that adhere to this standard will reduce the risk of adverse environmental and odor incidents resulting from their activities. The standard applies to all types of concentrated livestock operations including, but not limited to hogs, beef cattle, dairy, meat birds, and egg layers.*
*This standard is applicable to any livestock*

ANSI/NPPC 0002-2002, Good Environmental Livestock Production Practices (GELPP): Concentrated Livestock Operations - Production Areas

*Reflects substantive revisions based on the initial Canvass review. While the revisions are considered substantive, they do not alter the basic scope and intent of the standard.*
*This standard includes GELPPs related to livestock production areas at animal feeding operations (AFO). The standard was developed to address specific environmental challenges within livestock production areas of the livestock industry. This standard includes requirements that are based on best management practices developed by industry, government, and university experts. Operations that adhere to this standard will reduce the risk of adverse environmental and odor incidents resulting from their activities. The standard applies to all types of concentrated livestock operations including but not limited to hogs, beef cattle, dairy, meat birds, and egg layers.*

ANSI/NPPC 0003-2002, Good Environmental Livestock Production Practices (GELPP): Concentrated Livestock Operations - Outdoor Manure and Storm Water Storage

*Reflects substantive revisions based on the initial Canvass review. While the revisions are considered substantive, they do not alter the basic scope and intent of the standard.*
*This standard includes GELPPs for outdoor manure and storm water storage at animal feeding operations (AFO). The standard was developed to address environmental outdoor manure storage and treatment issues facing the livestock industry. This standard includes requirements that are based on best management practices developed by industry, governmental, and university experts. Operations that adhere to this standard will reduce the risk of adverse environmental and odor incidents resulting from their activities. The standard applies to all types of concentrated livestock operations including, but not limited to hogs, beef cattle, dairy, meat birds, and egg layers.*

ANSI/NPPC 0004-2002, Good Environmental Livestock Production Practices (GELPP): Concentrated Livestock Operations - Manure Utilization

*Reflects substantive revisions based on the initial Canvass review. While the revisions are considered substantive, they did not alter the basic scope and intent of the standard.*
*This standard includes GELPPs for manure utilization practices at animal feeding operations (AFO). The standard was developed to address environmental challenges related to land application of manure, composting, and other manure handling practices facing the livestock industry. This standard includes requirements that are based on best management practices developed by industry, governmental, and university experts. Operations that adhere to this standard will reduce the risk of adverse environmental and odor incidents resulting from their activities. The standard applies to all types of concentrated livestock operations including but not limited to hogs, beef cattle,*

ANSI/NPPC/GELPP 0005-2002, Good Environmental Livestock Production Practices (GELPP): Concentrated Livestock Operations - Mortality Management

*Reflects substantive revisions based on the initial Canvass review. While the revisions are considered substantive, they do not alter the basic scope and intent of the standard.*
*This standard includes GELPPs related to mortality management at animal feeding operations (AFO). The standard was developed to address environmental challenges facing the livestock industry. This standard includes requirements that are based on best management practices developed by industry, governmental, and university experts. Operations that adhere to this standard will reduce the risk of adverse environmental and odor incidents resulting from their activities. The standard applies to all types of concentrated livestock operations including but not limited to hogs, beef cattle, dairy, meat birds, and egg layers.*
*This standard is applicable to any livestock*

## NSAA (National Ski Areas Assc.)

ANSI B77.1-2006, Passenger Ropeways – Aerial Tramways, Aerial Lifts, Surface Lifts, Tows and Conveyors – Safety Requirements

*Deals with passenger transportation systems that use cables, ropes or other flexible elements for power transmission in the system. These systems include aerial tramways, detachable and fixed grip aerial lifts, surface lifts, tows, and conveyors. The design, manufacture, construction, operation and maintenance of different the systems are covered.*

ANSI B77.2-2004, Funiculars - Safety Requirements

*Establishes a standard for the design, manufacture, construction, operation, and maintenance of funiculars for passenger transport. Funicular systems may have a single carrier, or group of carriers, that move back and forth on a guideway. Carriers reciprocate between the terminals, propelled and controlled by a wire rope or other flexible element operating through drive and tensioning equipment installed in the terminals.*

## NSC (National Safety Council)

ANSI D16.1-1996, Manual on Classification of Motor Vehicle Traffic Accidents

*Provides common definitions and classifications for providers and users of traffic accident data. This is the third public review for this standard. It previously appeared in the October 13, 1995 and the July 5, 1996 issue of Standards Action. It is being resubmitted due to substantive changes made to the original text.*

*NOTE: All changes are listed here in their entirety.*

*The proposed revision of the draft dated May 1996 is as follows:*

*2.2.29 Median. A median is the area of a trafficway between parallel roads separating travel in opposite directions (see Figure 1). A median should be four or more feet wide.*

*Inclusions:*

## NSF (NSF International)

ANSI/NSF 12-2005 (i3), Automatic Ice Making Equipment

*Issue 3: To incorporate boilerplate language and update normative references.*

ANSI/NSF 12-2005 (i4), Automatic ice-making equipment

*Issue 4 – to include a new microbiological evaluation method that uses the most current microbiological techniques for IPC evaluation performance test, and to update normative references.*

ANSI/NSF 13-2001, Refuse Compactors and Compactor Systems

*Contains public health and sanitation requirements for refuse processing systems (Issue 1). These systems are intended to process refuse waste generated from single-family dwellings, multiple-family dwellings, apartment complexes, food service establishments, and other such facilities that may generate food wastes. These processors are not intended for compaction of hazardous or infectious material. Specifically excluded are refuse collection trucks and refuse processors intended for use at transfer stations and in industrial operations. This Standard will be reballoted a third time to resolve some comments and negative ballots as shown below, which are less than one page in length. This standard was listed for public review in the 4/6/2001 issue of Standards Action. The full text of the changes is being resubmitted in their entirety.*

ANSI/NSF 13-2005 (i2), Refuse processors and processing systems

*Issue 2: To incorporate boilerplate language and update normative references*

ANSI/NSF 14-2003, Plastics Piping System Components and Related Materials (i4)

*Complete revision.*

ANSI/NSF 14-2004 (i7), Plastics Piping System Components and Related Materials

*Issue 7: To clarify Table 10 and Table 13.*

ANSI/NSF 14-2004 (i7), Plastics Piping System Components and Related Materials

*Issue 7: To clarify Table 10 and Table 13.*

ANSI/NSF 14-2005 (i11), Plastics Piping System Components and Related Materials

*Issue 11: Add new reference and note to Normative References. Clarify Table 10. Add reference standard and update testing frequency to Table 20.*

ANSI/NSF 14-2006 (i10), Plastics Piping System Components and Related Materials

*Issue 10: Remove section on special chemical resistance.*

ANSI/NSF 14-2006 (i12r2), Plastics Piping System Components and Related Materials

*Issue 12 revision 2: To revise Section 9 to allow manufacturers to start producing parts, while still maintaining quality control.*

ANSI/NSF 14-2006 (i13), Plastic Piping System Components and Related Materials

*Issue 13: To update the tables in Standard 14 to address testing parameters such as thread length, crush, and impact testing.*

ANSI/NSF 14-2006 (i14), Plastics Piping System Components and Related Materials

*Issue 14: To update the normative reference section*

ANSI/NSF 14-2006 (i16), Plastic Piping System Components and Related Materials

*Issue 16: To clarify that the statement from Table 29 on cell class verification for materials suppliers and special compounders does not apply to the Hydrostatic Stress test.*

ANSI/NSF 143-2006, Environmentally Preferable Products: Hard Surface Cleaners

*Issue 1: The purpose is to establish requirements for a Product Development Process-Environmental Management System (PDP-EMS) to control the environmental impacts produced by hard surface cleaner products. Reballot*

ANSI/NSF 169-2005 (i1), Special purpose food equipment and devices

*Issue 1: This Standards establishes minmum food protection & sanitation requirements for the materials, design, construction, & performance of special purpose food handling & processing equipment & devices not fully covered by other individual standards.*

ANSI/NSF 170-2005, Glossary of Food Equipment Terminology

*Issue 3: To update the definitions.*

ANSI/NSF 173-2003, Dietary Supplements (Issue 1 & 2)

*Contains requirements for dietary supplements, intended to supplement the diet that bear or contains one or more of the following dietary ingredients: a vitamin, a mineral, a herb or other botanical, an amino acid, a dietary substance for use by man to supplement the diet by increasing the total dietary intake; or a concentrate, metabolite, constituent, extract, or combinations of these ingredients. This Standard does not include products represented for use as conventional foods. 'Products and ingredients deemed an imminent hazard to public health or safety by a regulatory agency having jurisdiction shall be excluded from the scope of this document. Conventional foods shall be excluded from the requirements of this Standard.*

ANSI/NSF 173-2004 (i3), Dietary supplements

*Issue 3: Chromium (IV) test method expansion.*

ANSI/NSF 173-2004 (i4), Dietary supplements

*Issue 4: Correct inadvertent omission of pentachlorophenol from 7.2.2 table*

ANSI/NSF 173-2004 (i5), Dietary supplements

*Issue 5: Revisions to section 6 test methods for identification & quantification of ingredients - raw materials & finsihed products*

ANSI/NSF 173-2004 (i8), Dietary supplements

*Issue 8: Inclusion of product requirements and evaluation associated with the common claims i.e. "gluten-Free"*

ANSI/NSF 173-2005 (i10), Dietary supplements

*Issue 10: Update Normative References, clarify label sroage, and reformat location of record retention is be included under GMPs.*

ANSI/NSF 173-2005 (i11), Dietary supplements

*Issue 11: Set limits for peroxides in Dietary Supplements.*

ANSI/NSF 173-2005 (i12), Dietary supplements

*Issue 12: Add section for Quality Assurance in Dietary Supplements.*

ANSI/NSF 173-2005 (i6), Dietary supplements

*Issue 6: Language is being added to address the issues raised by the Public Health Security and Bioterrorism Preparedness and Response Act of 2002. To alter the testing method for Escherichia coli provided in the standard so that the acceptance criteria for raw materials can be properly assessed. Issue 6 now contains the the revision from 173i9. Thus both issues are being balloted as 173i6.*

ANSI/NSF 173-2005a (i9), Dietary supplements

*Issue 9: To alter the testing method for Escherichia coli provided in the standard so that the acceptance criteria for raw materials can be properly assessed and a confirmation analysis method can be incorporated.*

ANSI/NSF 173-2006 (i13), Dietary Supplements

*Issue 13: To correct the multiple reference inconsistencies in Table 3 and Annex B of Standard 173.*

ANSI/NSF 173-2006 (i15), Dietary Supplements

*Issue 15 - To update test methods for Pesticides in Section 7.2.2.*

ANSI/NSF 173-2006 (i16), Dietary Supplements

*Issue 16: Update the Normative References and clarify the definition of Dietary Supplements*

ANSI/NSF 173-2006 (i17), Dietary Supplements

*Issue 17: To incorporate requirements to address Time-Release tablets.*

ANSI/NSF 173-2006 (i19), Dietary Supplements

*Issue 19: To define “absent” in microbial contaminants in raw materials and finished products.*

ANSI/NSF 173-2006 (i21), Dietary Supplements

*Issue 21: To allow the Soleris System to be used for the rapid screening of dietary supplements.*

ANSI/NSF 177-2004, Shower Filtration systems (i1)

*Issue 1: The point-of-use shower filtration systems designed for the reduction of specific substances in potable water. Systems are intended to reduce substances affecting the aesthetic quality of the water. Reballlot*

ANSI/NSF 18-2004 (i3), Manual food and beverage dispensing equipment

*Issue 3: Complete Revision. Reballot.*

ANSI/NSF 18-2005 (i5), Manual food and beverage dispensing equipment

*Issue 5: To incorporate boilerplate language and update normative references.*

ANSI/NSF 18-2005 (i6), Manual food and beverage dispensing equipment

*Issue 6: To update normative references and the IPC method.*

ANSI/NSF 18-2005 (i7), Manual food and beverage dispensing equipment

*Issue 7: To correct the CFR reference from 21 CFR 178.1010 to 40 CFR 180.940.*

ANSI/NSF 18-2006 (i8), Manual food and beverage dispensing equipment

*Issue 8: To establish requirements for dispensing equipment designed to maintain the safety of potentially hazardous foods held under controlled conditions without refrigeration.*

ANSI/NSF 184-2003, Residential Dishwashers

*Revise section 6. (see attached for 30-day*

ANSI/NSF 2-2005 (i1), Food Equipment

*(i1) Comprises Issue 1, which revises and updates the minimum sanitation requirements for food equipment including specific updates for food shields, hand sinks, and various hardware items. Also, the inclusion of new requirements for equipment previously not addressed within this Standard such as thermometers, light fixtures, and equipment intended for use in a marine environment.*

ANSI/NSF 2-2005a, Food equipment

*Issue 10: To correct the CFR reference from 21 CFR 178.1010 to 40 CFR 180.940.*

ANSI/NSF 2-2006 (i13), Food equipment

*Issue 13 - The purpose is to allow the use of ColiScan; MF and CHROMagarTM as equivalent, alternate, selective media to Chromocult; for the recovery and enumeration of E. coli 11229 for all In Place Cleaning assays.*

ANSI/NSF 20-2000, Commercial Bulk Milk Dispensing Equipment

*Revises Definition sections 3.1 and 3.12 (issue 2). Obtain an electronic copy from: email: service@cssinfo.com, web: www.cssinfo.com or: www.nsf.org*

ANSI/NSF 21-1996, Thermoplastic Refuse Containers

*Establishes minimum sanitation requirements for the materials, design, and construction of new thermoplastic refuse containers. This is the second Public Review for this standard. It was originally listed in the February 16, 1996 issue of Standards Action . It is being resubmitted due to substantive changes made to the original text.*

ANSI/NSF 222-2006, NSF 222 - Ozone Generators

*Issue 1: This standard provides a method to evaluate ozone generator production performance characteristics and establish minimum requirements for ozone generator materials of construction.*

ANSI/NSF 24-1988 (R1996), Plumbing System Components for Manufactured Homes and Recreational Vehicles

*Covers pipe, fittings, valves, traps, vents, tanks, pumps, connectors, fixtures, appliances, and similar appurtenances used in a plumbing system of a manufactured home and/or recreational vehicle.*

ANSI/NSF 24-2006 (i1), Plumbing System Components for Recreational Vehicles

*Issue 1: The language has been cleaned up and harmonized according to other acceptable standards. Content referring to manufactured homes has been completely removed.*

ANSI/NSF 25 (i2r3-0)-2002, Vending Machines for Food and Beverages

*New IPC evaluation method. Utilization of current microbilogical techniques.*

ANSI/NSF 25-2005, Vending Machines for Food and Beverages

*Issue 5: To correct the CFR reference from 21 CFR 178.1010 to 40 CFR 180.940.*

ANSI/NSF 29-2003, Detegent and Chemical Feeders for Commercial Spray-Type Dishwashing Machines

*Issue 1: Inclusion of FDA requirements for sanitizer alarms*

ANSI/NSF 3-2003, Commercial Spray-Type Dishwashing and Glasswashing Machines

*Issue 2: Inclusion of FDA requirements for sanitizer alarms*

ANSI/NSF 3-2005 (i3), Commercial warewashing equipment

*Issue 3:The purpose of this ballot is to incorporate “boilerplate" language from the revised NSF/ANSI 2.*

ANSI/NSF 3-2006 (i5), Commercial warewashing equipment

*Issue 5 - To A) remove the requirement for either a self-draining pump or a drain plug on the pump, and B) allow the final rinse pressure gauge to read 5 to 30 psi rather than 20 +/- 5 psi.*

ANSI/NSF 3-A 14159-1 (i4r1-1)-2002, Hygiene Requirements for the Design of Meat and Poultry Processing Equipment

*Complete revision of Standard.*

ANSI/NSF 3-A 14159-1-2002, Hygiene Requirements for the Design of Meat and Poultry Processing Equipment

*Complete revision of Standard.*

ANSI/NSF 3-A 14159-1999, Hygiene Requirements for the Design of Machinery

*This standard applies to all machines and associated equipment used in all applications where hygiene risks to the consumer of the product can occur. The standard includes hygiene requirements, including materials of construction and design and construction requirements, as well as, test methods for verification of hygiene measures, and cleaning and maintenance information.*

ANSI/NSF 3-A 14159-2-2003, Hygiene Requirements for the Design of Hand Held Tools Used in Meat and Poultry Processing

*This standard applies to hand held tools intended for use in the slaughter, processing, and packaging of meat and poultry products.*

ANSI/NSF 3-A 14159-3-2005, Hygiene Requirements for the Design of Mechanical Belt Conveyors Used in Meat and Poultry Processing (i2)

*Issue 2: To add further clarification to the procedure for belting and procedure for the drive components, and update normative references.*

ANSI/NSF 35-1999, Laminated Plastics for Surfacing Food Service Equipment

*This stand establishes minimum sanitation requirements for the materials and fabrication of high pressure decorative laminates (HPDL). Complete revision. (i1).*

ANSI/NSF 35-2005 (i2), High Pressure Decorative Laminates for Surfacing Food Service Equipment

*Issue 2: To incorporate boilerplate language and update normative references.*

ANSI/NSF 36-2001, Dinnerware

*Modifies the definition of accessible and the word tool.*

ANSI/NSF 36-2005 (i3), Dinnerware

*Issue 3: To incorporate boilerplate language and five-year review.*

ANSI/NSF 37-2002, Air Curtains for Entranceways in Food and Food Service Establishments

*Issue 1 - Revise entire standard. Reballot of changes from initial ballot to Joint Committee. This standard was listed for public review in the 1/12/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/NSF 37-2005 (i1r2-3), Air Curtains for Entranceways in Food and Food Service Establishments

*Issue 1 (i1r2-3) Revise entire standard. Reballot of changes from initial ballot to Joint*

*Committee. This standard was listed for public review in the 1/12/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/NSF 4-2002, Addendum 1, Commercial Cooking, Rethermalization and Powered Hot Food Holding and Transport Equipment

*New IPC evaluation method. Utilization of current microbilogical techniques.*

ANSI/NSF 4-2002, Commercial Cooking, Rethermalization and Powered Hot Food Holding and Transport Equipment

*Issue 7: revision of requirements for placement of thermocouples during performance testing for enclosed hot food holding equipment and hot food transport cabinets. This is a submission for 30 days and the draft is below. see email sent 1/3/2002*

ANSI/NSF 4-2005 (i10), Commercial cooking, rethermalization, and powered hot food holding and transport equipment

*Issue 10: To incorporate boilerplate language and five-year review.*

ANSI/NSF 4-2005 (i6), Commercial cooking, rethermalization, and powered hot food holding and transport equipment

*Issue 6: The purpose of this ballot is to add a hot-holding performance test for open heated merchandiser units.*

ANSI/NSF 4-2006 (i11), Commercial Cooking, Rethermalization and Powered Hot Food Holding and Transport Equipment

*Issue 11: Update normative references.*

ANSI/NSF 40-2000, Residential Wastewater Treatment Systems

*Revises the alarms and warranty requirements and modifies the foreword. This is a resolution ballot for a BSR 108 sent in June or July but was returned to the Joint Committee for resolution.*

ANSI/NSF 40-2004 (i10), Residential Wastewater Treatment Systems

*Issue 10: Include language in requiring a manufacturer to specify who is authorized to install their treatment system.*

ANSI/NSF 40-2004 (i11), Residential Wastewater Treatment Systems

*Issue 11: Change CBOD5 to BOD5 in the influent water characteristics.*

ANSI/NSF 40-2004 (i12), Residential Wastewater Treatment Systems

*Issue 12: Include language that the owner manuals will be added to the final report; detailed dimensional drawings representative of what was tested in the final report and pounds of BOD in influent and pounds removed.*

ANSI/NSF 40-2005 (i13r2), Residential Wastewater Treatment Systems

*Issue 13 (r2): Section 9, Performance Testing and Evaluation, currently requires a pH range of 6.0 to 9.0 and a maximum color of 15 units. The proposal is for the color requirement to only have to be reported.*

ANSI/NSF 40-2005 (i14), Residential Wastewater Treatment Systems

*Issue 14: Adjust scope to allow for bottomless systems and include clarification for sampling.*

ANSI/NSF 40-2005 (i15), Residential Wastewater Treatment Systems

*Issue 15: Clarify maximum dosage for design loading and incorporate definition and temperature for wash day stress.*

ANSI/NSF 40-2005 (i16), Residential Wastewater Treatment Systems

*Issue 16: Language needs to be included to clarify that the 7 day, 30 day and stress period requirements must be adhered to.*

ANSI/NSF 40-2005 (i17), Residential Wastewater Treatment Systems

*Issue 17: Clarify requirements of welding, infiltration and exfiltration resistance, and access ports.*

ANSI/NSF 40-2005 (i17), Residential Wastewater Treatment Systems

*Issue 17: Clarify requirements of welding, infiltration and exfiltration resistance, and access ports.*

ANSI/NSF 41-1999, Non-Liquid Saturated Treatment Systems

*Spreads the data plate requirements and revisions to sections 12-14 to make fecal coliform analyses consistent with methods used by EPA .*

ANSI/NSF 41-2005 (i3), Non-liquid saturated treatment systems

*Issue 3: Clarify requirements for solid and liquid end products.*

ANSI/NSF 42 (i34)-2002, Drinking water treatment units – Aesthetic Effects

*Issue 34: removal of term "permanent" when referring to pressure vessels.*

ANSI/NSF 42-2002 (i33), Drinking Water Treatment Units - Aesthetic Effects (i33)

*Issue 33: Revise acceptable arsenic concentration for material extraction testing*

ANSI/NSF 42-2002a, Drinking Water Treatment Units – Aesthetic Effects

*Issue 33: Revise acceptable arsenic concentration for material extraction testing*

ANSI/NSF 42-2002e, Addendum 1.0 Drinking water treatment units - Aesthetic effects (i40)

*Issue 40: 'To clarify influent challenge requirements for chemical reduction testing'*

ANSI/NSF 42-2004 (i46), Drinking water treatment units - Aesthetic effects

*Issue 46: Clarfication on 'without' media*

ANSI/NSF 42-2005 (i32), Drinking water treatment units - Aesthetic effects

*Issue 32: To provide a means for certification of commercial modular systems where multiple replacement cartridges may be interchangeably installed in to a manifold based upon the needs of the local establishment.*

ANSI/NSF 42-2005 (i48), Drinking water treatment units - Aesthetic effects

*Issue 48: To provide requirements for drinking fountain type outlets on DWTU devices.*

ANSI/NSF 42-2006 (i49), Drinking water treatment units – Aesthetic Effects

*Issue 49 – To rectify inaccuracies that occurred in the reformatting process in 2003.*

ANSI/NSF 42-2006 (i49), Drinking water treatment units – Aesthetic Effects

*Issue 49 – To rectify inaccuracies that occurred in the reformatting process in 2003.*

ANSI/NSF 44-2002 (i10, Residential Cation Exchange Water Softeners (i10)

*Issue 10: Revise acceptable arsenic concentration for material extraction testing*

ANSI/NSF 44-2002, Residential Cation Exchange Water Softeners

*Cpmprises Issue 8: Revisions to sections 3, 4, 6, and 7. This is a reballot.Issue 8: Revisions to sections 3, 4, 6, and 7. This is a reballot. This standard was listed for public review in the 5/18/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/NSF 44-2004 (i21), Residential cation exchange water softners (i21)

*Issue 21: Clarfication on 'without' media*

ANSI/NSF 44-2004, Residential cation exchange water softeners (i11)

*Issue 11: Revisions to parts of sections 2, 3, 4, 6 and 7 (reballot of BSR sent on 7/25/02 & 1/15/2003)*

ANSI/NSF 46-2004 (i5), Evaluation of Components and Devices Used In Wastewater Treatment Systems

*Issue 5: To add a section in NSF/ANSI 46 dealing with ultraviolet technology.*

ANSI/NSF 46-2004 (i6), Evaluation of Components and Devices Used in Wastewater Treatment Systems

*Issue 6: A new subsection under 9.5 Performance has been added that lists requirements similar to 9.5.1 Performance criteria for grinder pumps with two modifications to address the unique construction and performance of wobble stator grinder pumps.*

ANSI/NSF 46-2004 (i7), Evaluation Of Components And Devices Used In Wastewater Treatment Systems

*Issue 7: Clarify the application of Sections 1 through 8 as they relate to subsequent, component specific sections.*

ANSI/NSF 46-2005 (i10), Evaluation of Components and Devices Used in Wastewater Treatment Systems

*Issue 10: To incorporate language to ensure the structural integrity of filters stands up to field conditions.*

ANSI/NSF 46-2005 (i11), Evaluation of Components and Devices Used in Wastewater Treatment Systems

*Issue 11: To increase the range for the audible portion of an alarm used for grinder pumps to 70 to 90 dbA.*

ANSI/NSF 46-2005 (i9), Evaluation of components and devices used in wastewater treatment systems

*Issue 9: Adjust range in scope to allow chlorine dispensers and disinfection devices to be adjusted and operate at 200 gallons.*

ANSI/NSF 46-2006 (i12), Evaluation of components and devices used in wastewater treatment systems

*Issue 12: To incorporate a calibration procedure into Section 10.4.4, Synthetic Bead Test.*

ANSI/NSF 46-2006 (i13), Evaluation of components and devices used in wastewater treatment systems

*Issue 13: To incorporate requirements that the operation and maintenance manual address septic tank accessibility.*

ANSI/NSF 46-2006 (i15), Evaluation of components and devices used in wastewater treatment systems

*Issue 15: To clarify the Household Loading Test, Section 9.4.1.2.*

ANSI/NSF 46-2007 (i14), Evaluation of components and devices used in wastewater treatment systems

*Issue 14: To incorporate a buoyancy test method into section 10.4.5, Bypass Protection Test, and to include two particle size specifications for effluent filters; 1/8th inch and 1/16th inch.*

ANSI/NSF 49-2002, Class II (Laminar Flow) Biohazard Cabinetry

*Comprises Issue 2: This is a revision of the entire standard. This standard was listed for public review in the 6/15/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/NSF 49-2002 (i5), Class II (Laminar Flow) Biohazard Cabinetry

*Issue 5 - Ballot of revisions of normative references, inflow velocity test apparatus, and Annexes A and F test requirements*

ANSI/NSF 49-2004 (i7), Class II (laminar flow) Biosafety Cabinetry

*Issue 7: Revision to 3.11 and hepa filters*

ANSI/NSF 49-2004 (i7), Class II- Laminar Flow- Biosafety Cabinetry

*Issue 7: To revise 3.11to indicate that modern technologies have been shown to be at least equivalent to the 1950s technology in regards to HEPA filters.*

ANSI/NSF 49-2005 (i9), Class II (laminar flow) biosafety cabinetry

*Issue 9: Review of standard correcting significant figures between english and metric conversions.*

ANSI/NSF 49-2006 (i11), Class II (laminar flow) biosafety cabinetry

*Issue 11: To expand Section 3.11 to allow the use of the new types now defined within IEST-RP-CC00, and to modify Section 5.20 to include all current and new filters defined in Section 3.11.*

ANSI/NSF 5-2005, Water Heaters, Hot Water Supply Boilers, and Heat Recovery Equipment

*Issue 3: The purpose of this ballot is to incorporate "boilerplate" language from the revised NSF/ANSI 2.*

ANSI/NSF 50-2000, Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs

*This section contains requirements for multiport valves used on filters in public and residential swimming pools and spas/hot tubs. The requirements apply to the housing, valve, handle, and other components that are integral parts of the multiport valve.*

ANSI/NSF 50-2001 (i13, Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs

*Issue 13 - Section 7 and Annex D.*

ANSI/NSF 50-2001 (i14, Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs

*Issue 14 - Section 5 and Annex B; Section 6 and Annex C; Section 10 and Annex G.*

ANSI/NSF 50-2001 (i8, Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs

*Issue 8 -Provides information on Section 8 and Annex E.*

ANSI/NSF 50-2001 (i9, Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs

*Comprises section 9 and Annex F*

ANSI/NSF 50-2004 (i18), Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs

*Issue 18: Revision to the effective filtration area requirement, electrolytic generators chemical resistance test, and to add bromine as an acceptable alternative to hydrogen peroxide in NSF 50.*

ANSI/NSF 50-2005, Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs

*Issue 25: To revise sections 11, 13, 16 and Annex H to better describe and improve the analytical method. The method that is currently within the standard is obsolete.*

ANSI/NSF 50-2005 (i16), Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs

*Issue 16: To establish requirements for automated controllers that are used to control equipment such as chemical feeders, pumps, heaters and monitor water conditions such as pH, ORP, and/or other parameters specified by the manufacturer*

ANSI/NSF 50-2005 (i17), Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs (Issue 17)

*Issue 17: To establish separate test methods for flow-through feeders based on output capacity*

ANSI/NSF 50-2005 (i29), Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs (Issue 29)

*Issue 29: To update and change format of normative references, include additional information on formulation reviews, and include PVC hose requirements.*

ANSI/NSF 50-2005 (i30), Circulation system components and related materials for swimming pools, spas/hot tubs

*Issue 30: To incorporate powdered cellulose filter media (NSF performance, health and safety certified products only) as an acceptable substitute for DE in swimming pool and SPA filters.*

ANSI/NSF 50-2005 (i33), Circulation system components and related materials for swimming pools, spas/hot tubs

*Issue 33: Update normative references.*

ANSI/NSF 50-2006 (i39), Circulation system components and related materials for swimming pools, spa/hot tubs

*Issue 39: To incorporate language to validate pressure loss equipment installed in the main line.*

ANSI/NSF 50-2006 (i40), Circulation system components and related materials for swimming pools, spas/hot tubs

*Issue 40: To update Standard 50 normative references and update section 3.2 to accept components in compliance with NSF Standards 42 (Drinking water treatment units.*

ANSI/NSF 51-2002, Food Equipment Materials

*Issue 2: Complete revision of standard.*

ANSI/NSF 51-2005 (i4), Food Equipment materials

*Issue 4: To incorporate boilerplate language and update normative references.*

ANSI/NSF 52 (i1)-2003, Supplemental Flooring

*Issue 1: Complete revision. Establishes sanitation requirements for supplemental flooring. Included are requirements for cleanability and durability, and resistance to the use environment, microbiological growth, and vermin. Supplemental flooring covered by this Standard includes, but is not limited to, supplemental flooring for use in food preparation, dry storage, and warewashing areas.*

ANSI/NSF 52-1992, Supplemental Flooring

*This standard covers supplemental flooring for use in food preparation, dry storage, and warewashing areas. It includes requirements for cleanability, durability, resistance to the use environment, microbiological growth and vermin. Supplemental flooring is readily removable and not permanently attached to existing finished floors.*

ANSI/NSF 52-2005 (i2), Supplemental Flooring

*Issue 2: To incorporate boilerplate language and update normative references*

ANSI/NSF 53-2000a, Drinking Water Treatment Units - Health Effects

*Issue 26 r1- Revisions to definitions, extraction testing, chemical reduction parameters and section 7 requirements. (sections 3, 4, 7; tables 1, 2, 4, 5). To obtain an electronic draft: web: www.nsf.org/publications*

ANSI/NSF 53-2000a, Drinking Water Treatment Units - Health Effects

*Issue 27 - dynamic pressure during performance testing (sections 3, 6, figure 1)*

ANSI/NSF 53-2002, Drinking water treatment units – Health Effects (i21r1.1)

*Issue 21r1.1 – add health effects claim for chlorine reduction.*

ANSI/NSF 53-2002, Drinking Water Treatment Units - Health Effects

*Issue 36: removal of term "permanent" when referring to pressure vessels.*

ANSI/NSF 53-2002e, Addendum 1.0-2002e, Drinking water treatment units - Health effects (i35)

*Issue 35 To clarify the definition of the test water for the 8.5 pH mercury reduction testing.*

ANSI/NSF 53-2004, Drinking Water Treatment Units – Health Effects

*Issue 45: To remove additional testing requirements under Section 4 (Materials) for compounds that exceed the Advisory Concentrations and clarify that Advisory Concentrations are not pass/fail criteria*

ANSI/NSF 53-2004, Drinking water treatment units - Health effects

*Issue 47: Clarfication on 'without' media definition.*

ANSI/NSF 53-2004, Drinking Water Treatment Units - Health Effects

*Issue 32: Removal of the test dust procedure for cyst reduction and further characterization of microspheres.*

ANSI/NSF 53-2004, Drinking water treatment units - Health effects

*Issue 41: Refrigerator filters that do not have integral flow controllers clarifications.*

ANSI/NSF 53-2005, Drinking water treatment units - Health effects

*Issue 42: To provide a means for certification of commercial modular systems where multiple replacement cartridges may be interchangeably installed in to a manifold based upon the needs of the local establishment.*

ANSI/NSF 53-2005 (i52), Drinking Water Treatment Units - Health Effects (Issue 52)

*Issue 52: To clarify PID and how the test method is carried out for PIDs to determine when the PID activates.*

ANSI/NSF 53-2006 (i34), Drinking Water Treatment Units - Health Effects

*Issue 34: Addition of a trivalent arsenic method.*

ANSI/NSF 53-2006 (i39), Drinking water treatment units - Health effects

*Issue 39: To clarify influent challenge requirements for chemical reduction testing.*

ANSI/NSF 55 (i9)-2002, Ultraviolet Microbiological Water Treatment Systems

*'Issue 9: removal of term "permanent" when referring to pressure vessels.*

ANSI/NSF 55-2002 (i8, Ultraviolet Microbiological Water Treatment Systems (i8)

*Issue 8: Revise acceptable arsenic concentration for material extraction testing*

ANSI/NSF 55-2002, Ultraviolet Water Treatment Systems

*Issue 2 - Revision to sections 6.3.1.3 and 6.3.2.7. The addition of section 6.3.1.4. This is a reballot. This standard was listed for public review in the 9/21/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/NSF 55-2004 (i18), Ultraviolet microbiological water treatment systems (i18)

*Issue 18: Clarfication on 'without' media*

ANSI/NSF 55-2004 (i19), Ultraviolet microbiological water treatment systems

*Issue 19: To update the test methods in section*

ANSI/NSF 58 (i24)-2002, Reverse Osmosis Drinking Water Treatment Systems

*Issue 24: removal of term "permanent" when referring to pressure vessels.*

ANSI/NSF 58-2002 (i17), Reverse Osmosis Drinking Water Treatment Systems

*Issue 17- Revise existing testing protocol for arsenic reduction claims in sections 5, 6, and 7. This is a reballot.*

ANSI/NSF 58-2002 (i22), Reverse Osmosis Drinking Water Treatment Systems (i22)

*Issue 22: Revise acceptable arsenic concentration for material extraction testing*

ANSI/NSF 58-2003, Reverse Osmosis Drinking Water Treatment Systems

*Issue 34: To add the claim of Perchlorate Reduction to the Standard. Reballot*

ANSI/NSF 58-2004 (i30), Reverse Osmosis Drinking Water Treatment Systems

*Issue 30: To revise the specifications for Standard 58 TDS reduction test water.*

ANSI/NSF 58-2004 (i36), Reverse osmosis drinking water treatment systems

*Issue 36: Clarfication on 'without' media*

ANSI/NSF 58-2004 (i40), Reverse osmosis drinking water treatment systems

*Issue 40: Revision to section 7 in the data plate & replacement component regarding packaging & literature review.*

ANSI/NSF 58-2005 (i43), Reverse Osmosis Drinking Water Treatment Systems

*Issue 43: To provide consistency among the tables found in the DWTU Family of Standards and rectify inaccuracies that occurred in the reformatting process in 2003.*

ANSI/NSF 58-2006 (i28), Reverse Osmosis Drinking Water Treatment Systems

*Issue 28: To clarify influent challenge requirements for chemical reduction testing.*

ANSI/NSF 59 (i2r3.0) 2002, Mobile Food Carts

*New IPC evaluation method. Utilization of current microbilogical techniques.*

ANSI/NSF 59-2002, Mobile Food Carts

*New IPC evaluation method. Utilization of current microbilogical techniques.*

ANSI/NSF 6 (i2r2)-2002, Dispensing Freezers

*Issue 2: Updates microbial sampling techniques for in-place cleaning evaluation with more current and accurate methodologies. This standard was listed for public review in the 3/9/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/NSF 6-2002, Dispensing Freezers

*Updates microbial sampling techniques for in-place cleaning evaluation with more current and accurate methodologies. This standard*

*was listed for public review in the 3/9/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text. (Issue 2)*

ANSI/NSF 6-2005 (i3), Dispensing Freezers

*Issue 3: Incoproration of boilerplate language from NSF/ANSI 2.*

ANSI/NSF 6-2006 (i4), Dispensing Freezers

*Issue 4 - To update normative references, incorporate revised boilerplate language from NSF/ANSI 2, and correct an error in 6.1 - Cleaning and sanitization procedures.*

ANSI/NSF 60-2003, Drinking Water Treatment Chemicals - Health Effects

*Issue 27: To update Annex B.*

ANSI/NSF 60-2004, Addendum 1.0, Drinking Water Treatment Chemicals- Health Effects

*Issue 32: Exclude well cleaning aids that consist of biocides of the microbial growth test requirements*

ANSI/NSF 60-2004 (i29), Drinking Water Treatment Chemicals - Health Effects

*Issue 29: To incorporate recent additions of Organics/Pesticides considered contaminants by the U.S. Environmental Protection Agency and Health Canada. Both include a proposed change to the effective date of the lowering of the bromate SPAC.*

ANSI/NSF 60-2005 Addendum 1 (i35), Drinking Water Treatment Chemicals - Health Effects

*Issue 35: To provide guidance regarding the rounding method that should be used when evaluating analytical results.*

ANSI/NSF 60-2005 Addendum 1 (i41), Drinking Water Treatment Chemicals - Health Effects

*Issue 41 - To incorporate recent additions of Organics/Pesticides considered contaminants by the U.S. Environmental Protection Agency and Health Canada.*

ANSI/NSF 60-2005, Drinking water treatment chemicals - Health effects

*Issue 37: To increase the typical use level for carbon dioxide from 100 mg/l to 200 mg/l in Tab 5.1.*

ANSI/NSF 60-2005 (i33), Drinking water treatment chemicals - Health effects

*Issue 33: Incorporate an additional test method for validating positive results indicating microbial growth.*

ANSI/NSF 60-2005 (i34), Drinking water treatment chemicals - Health effects

*Issue 34: Changes providing more consistency and specificity in Annex B of Standard 60 for uniform application between laboratories.*

ANSI/NSF 60-2005 (i36), Drinking water treatment chemicals - Health effects

*Issue 36: To add the analytical method for Dimethylamine (DMA) analysis into Annex B to ensure consistent testing methods.*

ANSI/NSF 60-2006 (i40), Drinking water treatment chemicals - Health effects

*Issue 40: The purpose of this revision is to streamline the sampling procedures in Annex B.*

ANSI/NSF 61 (i27)-2002, Drinking Water System Components - Health Effects

*Issue 27: Add probability factor to Annex B.*

ANSI/NSF 61 (i40)-2003, Drinking Water System Components – Health Effects

*Issue 40: Table 3.1, update test requirements for cement.*

ANSI/NSF 61 (i40)-2003, Drinking Water System Components - Health Effects

*Issue 40: Table 3.1, update test requirements for cement.*

ANSI/NSF 61 (i46)-2003, Drinking Water System Components - Health Effects

*Issue 46 – Update Table D3 requirements. Reballot. To update the referenced tables to the requirements of NSF/ANSI 61, Annex A, as adopted in 2000.*

ANSI/NSF 61 (i48)-2003, Drinking Water System Components - Health Effects

*Issue 48 – Update Table D2 requirements. To update the referenced table to incorporate pass/fail criteria that have completed external peer review by the NSF Health Advisory Board.*

ANSI/NSF 61-2000 (i5), Drinking Water System Components – Health Effects

*Issue 5 - Complete revision of Barrier Materials requirements (Sections 3, 5, Annex B, tables B1, B2, section B.3, tables B4, B5, B6, section B.10.5, table B13) $35 per issue*

ANSI/NSF 61-2000a (i20), Drinking Water System Components - Health Effects

*Issue 20 - Updates to section 3 and annex B*

ANSI/NSF 61-2000a (i8), Drinking Water System Components - Health Effects

*Issue 8 - Annex A Toxicology review and evaluation procedures (annex a)*

ANSI/NSF 61-2001 (i25), Drinking Water System Components - Health Effects

*Issue 25 - Update of Section 4 requirements (Section 4, Annex B, section B.2.5.3, section B.11.4*

ANSI/NSF 61-2002 (i39), Drinking Water System Components - Health Effects

*Issue 39: Change to reagent water in Annex B.*

ANSI/NSF 61-2002 (i4r1), Drinking Water System Components - Health Effects

*Issue 4 - Annex B, section B.3*

ANSI/NSF 61-2004 , Drinking Water System Components - Health Effects

*'Issue 44: Revisions to parts of Table 4.4 - Copper pipe normalization factor*

ANSI/NSF 61-2004 (i50), Drinking water system components - Health effects

*Issue 50: To incorporate recent additions of Organics/Pesticides considered contaminants by the U.S. Environmental Protection Agency and Health Canada. Both include a proposed change to the effective date of the lowering of the bromate SPAC.*

ANSI/NSF 61-2004 (i53), Drinking Water System Components- Health Effects (Addendum 1.0)

*Issue 53: Standardize the age and storage of exposure waters.*

ANSI/NSF 61-2005 (i51), Drinking water system components - Health effects

*Issue 51: To have the roof (ceiling) area inside potable water tanks considered a contact area.*

ANSI/NSF 61-2005 (i52), NSF 61 - Drinking Water System Components- Health Effects

*Issue 52: To incorporate language regarding effective surface area to volume ratio, and include language to require the average coating application not to exceed the maximum dry film thickness per coat.*

ANSI/NSF 61-2005 (i61), Drinking Water System Components - Health Effects

*Issue 61:To include additional stainless steel materials used in the manufacture of drinking water pipe, tube, storage tanks, and process equipment into Annex C of NSF/ANSI Standard 61.*

ANSI/NSF 61-2005 (i62), Drinking Water System Components - Health Effects

*Issue 62: To add application temperature definitions to 8.2 of section 8, Mechanical devices and correct table references in section B.4.4 of that have gotten out of sync during the revision process.*

ANSI/NSF 61-2005 (i64), Drinking Water System Components - Health Effects

*Issue 64: To clarify that chemical extraction testing is required under both pH 5 and pH 10 extraction conditions when evaluating for metals in most products, components, and materials.*

ANSI/NSF 61-2006 (i11), Drinking Water System Components - Health Effects

*Issue 11: To identify requirements for side sprayers exposure, normalization, and evaluation of lead and non-lead contaminants*

ANSI/NSF 61-2006 (i58), Drinking Water System Components - Health Effects

*Issue 58: To incorporate requirements that the average coating application should not exceed the maximum dry film thickness per coat.*

ANSI/NSF 61-2006 (i65), Drinking Water System Components- Health Effects

*Issue 65: To clarify normalization for endpoint devices.*

ANSI/NSF 61-2007 (i59), Drinking Water System Components - Health Effects

*Issue 59:To provide guidance regarding the rounding method that should be used when evaluating analytical results.*

ANSI/NSF 61-2007 (i68), Drinking Water System Components - Health Effects

*Issue 68 - To incorporate recent additions of Organics/Pesticides considered contaminants by the U.S. Environmental Protection Agency and Health Canada.*

ANSI/NSF 61-A1-2001, Drinking Water System Components - Health Effects

*Comprises issue 33: Addition of TOE to Annex D, Table D4 andrevision of Annex A, A.10.2, Physical and chemical properties*

ANSI/NSF 62-1999, Drinking Water Distillation Systems

*Revises total trihalomenthane (TTHM) requirements (i2).*

ANSI/NSF 62-2004, Drinking water distillation systems

*Issue 14: Clarfication on 'without' media*

ANSI/NSF 62-2006 (i8), Drinking water distillation systems

*Issue 8: To clarify influent challenge requirements for chemical reduction testing.*

ANSI/NSF 7-2000, Commercial Refrigerators and Storage Freezers

*Proposes additions to current sections 2, 5.34, 5.35 and*
*Adds new section 5.36 (issue 2). Obtain an electronic copy from: email: service@cssinfo.com, web: www.cssinfo.com or www.nsf.org*

ANSI/NSF 75-2000, Non-Potentially Hazardous Foods

*This standard contains requirements for food products that (1) are intended to be held without temperature controls during transportation, holding, display, sale, or use; and (2) are considered to be potentially hazardous; and (3) are rendered non-potentially hazardous by formulation or through a manufacturing process or both; and (4) are included in one of the following categories: [I] specialty breads or pastries containing fresh, canned, frozen, or rehydrated vegetables or soft cheeses added prior to baking; [II] bakery products including specialty breads or pastries filled or topped with cream, crème, custard, or cheese after baking; [III] products filled prior to baking such as pumpkin, sweet potato, custard or meringue pies; and [IV] toppings, glazes, icings or fillings stored without temperature control prior to use in other products. The scope also includes food*

ANSI/NSF 8 (i4r2)-2002, Comercial Powered Food Preparation Equipment

*Updates microbial sampling techniques for in-place cleaning evaluation with more current and accurate methodologies. This standard was listed for public review in the 3/9/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text. (Issue 4.)*

ANSI/NSF 8-2000, Commercial Powered Food Preparation Equipment

*This Standard establishes minimum food protection and sanitation requirements for the materials, design, and construction of commercial food preparation equipment that is power operated. This Standard does not apply to manually-operated equipment. This Standard dos not contain safety requirements. To obtain an electronic draft: email: service@cssinfo.com, web: www.nsf.org/publications*

ANSI/NSF WSC PST-2005, Pressurized Water Storage Tank

*Issue 1: To establish a Standard for minimum performance and construction requirements for pressurized storage tanks for service in water well systems.*

ANSI/NSF/ISO 14020-2001, Environmental Labels and Declarations - General Principles

*Establishes guiding principles for the development and use of environmental labels and declarations.*

ANSI/NSF/ISO 14021-2001, Environmental Labels and Declarations - Self-Declared Environmental Claims (Type II Environmental Labelling)

*Specifies requirements for self-declared environmental claims, including statements, symbols and graphics, regarding products. It further describes selected terms commonly used in environmental claims and gives qualifications for their use. This standard also*

*describes a general evaluation and verification methodology for self-declared environmental claims and specific evaluation and verification methods for the selected claims in this standard.*

ANSI/NSF/ISO 14024-2001, Environmental Labels and Declarations - Type I Environmental Labelling - Principles and Procedures

*Establishes the principles and procedures for developing Type I environmental labelling programmes, including the selection of product categories, product environmental criteria and product function characteristics; and for assessing and demonstrating compliance. This standard also establishes the certification procedures for awarding the label. A Type I environmental labelling programmes is a voluntary, multiple-criteria-based third party programme that awards a license which authorizes the use of environmental labels on products indicating overall environmental preferability of a product within a particular product category based on life cycle considerations.*

## OEOSC (Optics and Electro-Optics Standards Council)

ANSI/OEOSC OP1.002-2006, Optics and Electro-Optical Instruments— Optical Elements and Assemblies— Appearance Imperfections

*This standard establishes uniform practices for stating,*
*interpreting, and inspecting appearance imperfections for*
*transmissive and reflective optical elements and assemblies.*
*The visibility and apparent severity of imperfections depends*
*upon the viewing conditions, illumination, cross section, and*
*the severity of surface and subsurface damage. This standard does not address the impact of imperfections on element or system performance.*

ANSI/OEOSC OP3.001-2001, Optical Glass

*Establishes uniform practices for stating and interpreting specifications, tolerances, and functional requirements for optical glass that is used to fabricate lenses and other optical elements, such as prisms, windows, light pipes, etc., used in optical assemblies, systems, instruments, or other related uses.*

## OLA (Optical Laboratories Association)

ANSI Z80.1-2005, Ophthalmics – Prescription Ophthalmic Lenses – Recommendations

*This standard applies to the processing of all prescription ophthalmic spectacle lenses in edged or assembled form. It is a processing guideline for optical laboratories applicable to prescription eyeware prior to transfer for dispensing, and for the dispenser prior to the delivery of the finished eyeware to the patient. Relevant optical specifications and tolerances of this standard should apply also to uncut lenses supplied by an optical laboratory to be used in filling a specific prescription. This standard does not apply to products covered by American National Standard Requirements for Nonprescription Sunglasses and Fashion Eyeware, ANSI Z80.23-2001.*

ANSI Z80.10-2003, Opthalmics Instruments – Tonometers – Requirements

*ISO/DIS 8612.2, together with ISO 15004, specifies minimum requirements and the design compliance procedure for tonometers intended for routine clinical use in the estimation of intraocular pressure (IOP) for the detection, diagnosis, and management of ocular abnormalities. This International Standard takes precedence over the ISO 15004, if differences exist.*

ANSI Z80.17-2001, Ophthalmics - Focimeters

*Specifies requirements for continuously indicating and digitally rounding focimeters with which the vertex powers and prismatic powers of spherical and astigmatic lenses, including lenses mounted in frames, can be measured and with which lenses can be oriented and marked.*

ANSI Z80.18-2003, Contact Lens Care Products: Vocabulary, Performance, Specifications and Test Methodology

*Applies to contact lens care products (CLCP) which are marketed for use with hard (PMMA), rigid gas permeable (RGP), and soft hydrophilic contact lenses. These products are intended for use in the care of contact lenses: e.g., rinsing, storing, disinfection, conditioning, neutralization, cleaning, hydration, and/or for alleviating discomfort of lens wear and improving lens tolerance by physical means.This standard provides test methodology to be used in developing performance specifications of CLCP by function and where appropriate provides acceptable performance specifications for specific products. It also addresses general requirements for CLCP based upon physical state of the marketed product (solutions, granules, and tablets), the packaging configuration (including conventional plastic container, aerosol container, form-fill-seal, or*

ANSI Z80.20-2004, Ophthalmics: Contact Lenses - Standard Terminology, Tolerances, Measurements and Physicochemical Properties

*Applies to contact lenses that have prescribed refractive and/or prismatic powers, which are devices worn over the front surface of the eye in contact with the preocular tear film. The standard covers rigid (hard) intracorneal and haptic (scleral) contact lenses, as well as flexible paralimbal contact lenses. Rigid lenses maintain their own shape unsupported and are made of transparent optical-grade plastics, such as polymethylmethacrylate (PMMA), cellulose acetate butyrate (CAB), polyacrylate/siloxane copolymers, rigid polysiloxanes (silicone resins), butylstyrenes, fluoropolymers, and fluorosiloxanes, etc. Flexible lenses are easily deformable and may require support for proper shape. A very large subset of flexible lenses are socalled "soft" (hydrophilic) contact lenses, which are made of transparent hydrogels containing water in concentrations greater than or equal to 10%.*

ANSI Z80.21-1992 (R2004), Ophthalmics – Instruments – General-Purpose Clinical Visual Acuity Charts

*Applies to all clinical visual acuity measurement systems using recognition of high contrast optotypes and which are designed for general use. It does not apply to special testing of visual acuity.*

ANSI Z80.23-1999, Opthalmics - Corneal Topography Systems - Standard Terminology - Requirements

*Applies to instruments, systems and methods that are intended to measure the shape of the cornea of the human eye over a majority of its anterior surface. Instruments classified as Opthalmometers or keratometers are not covered by this standard. This standard defines certain terms that are peculiar to the characterization of the corneal shape so that they may be standardized throughout the field of vision care and have common meaning for all those who have occasion to participate in this area.*

ANSI Z80.24-2002, Opthalmics - Information Interchange for Ophthalmic Optical Equipment

*This Standard establishes a method by which machines and computer software systems used in the fabrication of ophthalmic lenses can exchange information.*

ANSI Z80.25-1996 (R2002), Ophthalmics - Instruments: Fundamental Requirements and Test Methods

*Applies to non-invasive, active and non-active ophthalmic instruments. This standard includes low vision aids and tonometers, but excludes other instruments which are used in contact with the globe of the eye. This standard is not applicable to operation microscopes, endoscopes, and devices intended for laser treatment (surgery) of the eye. This standard takes precedent over the corresponding requirement of the other general standards quoted in clause 2, If differences exist. In addition to the requirements of this standard, the supplementary or modifies requirements specified in the relevant product-related standards will apply. They are listed in annex D.*

ANSI Z80.26-1996 (R2003), Ophthalmics - Data Processing and Information Interchange for Ophthalmic Instruments

*This communication standard is intended for use by all manufacturers of ophthalmic instruments and laboratory equipment. There is a broad range of different instrumentation within this category, and there are large systems that incorporate ophthalmic instruments within broader product manufacturing systems. The communications framework that is discussed in this specification is designed to allow ophthalmic instruments and systems to use a consistent means of communication, with a consistent set of comminication messages.*

ANSI Z80.27-2001, Ophthalmics - Aqueous Shunts for Glaucoma Application

*Applies to physical and mechanical properties and performance of finished aqueous shunts, their biocompatibility-propertiess and describes elements of a clinical protocol which may be used to assess the clinical perfomance of these devices for treatment of glaucoma.*

ANSI Z80.28-2004, Methods for Reporting Optical Aberrations of Eyes

*Defines standardized terms and symbols for reporting the aberratations of the eye, defines the standardized coordinate system to be used in reporting those aberrations, defines a standardized graphic representation of the results, offers guidance on converting measurement data to Zernike coefficient representation and in dealing with data in this form under a variety of conditions. In so doing, it collects in one place information on Zernike polynomial function use, some which is not available elsewhere. It standardizes the method of reporting aberration data in the form of wavefront gradients. It contains of list of the Zernike polynomial functions giving them in both polar and Cartesian form and gives their standardized common names.*

ANSI Z80.3-2001, Ophthalmics - Nonprescription Sunglasses and Fashion Eyewear - Requirements

*Applies to all nonprescription sunglasses and fashion eyeware, normally used for casual, dress, and recreational purposes, having lenses of substantially plano power. This standard specifically excludes products covered by ANSI Z87.1-1999, ANSI Z80.1-1999, ASTM F 803-1999 and high impact resistnace eyeware designed exclusively for designated sports use. Sunglass needs for aphakics may not be met by this standard.*

ANSI Z80.5-2004, Ophthalmics - Requirements for Ophthalmic Frames

*Applies to the manufacture of all frames intended for street wear as ophthalmic eyewear with prescription lenses, excluding specialty and novelty products such as lorgnetts and monocles. Specifically excluded are products designed to be occupational eyewear as defined in American National Standard Practice for Occupational and Educational Eye and Face Protection, ANSI Z87.1-2003, and frames for non-prescription sunglasses, and fashion eyewear as defined in American National Standard Requirements for Non-prescription Sunglasses and Fashion Eyewear, Z80.3-2001, and sport frames as defined in ASTM F803.*

ANSI Z80.7-2002, Ophthalmics – Intraocular Lenses

*Applies to the Physical & Mechanical Requirements, Optical Requirements, & Biocompatibility and Chemical Testing Requirements of Intraocular Lenses.*

ANSI Z80.9-2004, Opthalmics – Low Vision Aids – Requirements

*Applies to optical devices specified by the manufacturer for use by visually impaired persons as low vision aids. It specifies optical and mechanical requirements and test methods. It includes optical devices with electrical and or electronic components for image capture or display.*

## OPCC (Optical Product Code Council)

## OPEI (Outdoor Power Equipment Institute)

ANSI B175.1-2000, Gasoline Powered Chain Saws, Safety Requirements for

*Establishes safety requirements for the manufacture and use of portable, hand-held, gasoline-powered chain saws. It contains definitions of terms relevant to chain saws and their use, and guidelines for certain chain saw features. The standard also contains test procedures and specific performance requirements concerning vibration, sound levels and bar nose kickback.*

ANSI B175.2-2000 (R2005), Power Tools – Hand-Held and Backpack, Gasoline-Engine-Powered Blowers

*The requirements of this standard apply to new portable, backpack and hand-held, gasoline-engine-powered blowers, including those blowers that accept vacuum attachments.The purpose of this standard is to establish bystander sound level test procedures and labeling requirements for hand-held and backpack, gasoline-engine-powered blowers. This standard also includes requirements for operator manual(s) instructions.*

ANSI B175.3-2003, Outdoor Power Equipment - Grass Trimmers and Brushcutters - Safety Requirements

*Establishes minimum manufacturer requirements to reduce the risk of injury associated with the use of portable, hand-supported, gasoline-powered grass trimmers and brushcutters. This standard applies to portable hand-supported gasoline powered grass trimmers intended for use with flexible non-metallic line, or other types of non-metallic cutting attachments. It also applies to portable, hand-supported, gasoline-powered brushcutters intended for use with cutting blades and other cutting attachments.*

ANSI B175.4-2006, Portable, Handheld, Internal Combustion Engine Driven Cut-Off Machines - Safety Requirements

*This standard applies to portable, hand-held gasoline powered-machines using a rotating cut-off wheel that is centre mounted on and driven by a spindle shaft, which are designed for cutting construction materials such as asphalt, concrete, stone, and metal.*

ANSI B71.3-2005, Outdoor Power Equipment - Snow Throwers - Safety Specifications

*The safety specifications in this standard apply to (a) walk-behind power snow throwers, (b) ride-on power snow throwers, (c) lawn ride-on tractors with snow thrower attachments, (d) lawn and garden tractors with snow thrower attachments, and (e) lever-steer ride-on machines with snow thrower attachments. These specifications are intended to apply to products specifically intended as consumer products for the personal use of a consumer around a house. These specifications are not intended to apply to hand-held snow throwers nor to commercial products customarily produced and distributed for use by hired (professional) operators.*

ANSI B71.4-2004, Commercial Turf Care Equipment – Safety Specifications

*These safety specifications apply to powered pedestrian controlled, towed, and ride-on machines intended for marketing as commercial turf care equipment and that are customarily used by hired operators. Equipment covered may consist of two or more components that are functionally connected and may be produced by different manufacturers. Each functional component shall conform to each section of this standard as it logically applies. Additionally, this standard applies to all aftermarket parts, attachments and accessories provided by the original equipment manufacturer and others.*

ANSI/OPEI B71.1-2003, Consumer Turf Care Equipment – Walk-Behind Mowers and Ride-On Machines with Mowers – Safety Specifications

*These safety specifications are for reel and rotary walk-behind and reel and rotary ride-on power lawn mowers, ride-on power lawn tractors with mower attachments, ride-on power lawn and garden tractors with mower attachments, and lever steer ride-on mowers. These safety requirements help ensure uniform operator environments. They apply to products specifically intended as consumer products for the personal use of a consumer around a house. This standard also applies to all aftermarket parts and accessories not provided by the original equipment manufacturer.*

ANSI/OPEI B71.6-2000, Powered Shredder/Grinders and Shredder/Baggers, Safety Specifications

*Applies to rotary and hammermill shredder/baggers, shredder/grinders and chippers, and walk behind chipper vacuums that are sold for use as consumer products.*

ANSI/OPEI B71.8-1996 (R2005), Outdoor Power Equipment – Walk-Behind Powered Rotary Tillers and Hand Supported Cultivators – Safety Specifications

*The safety specifications given in this standard are for (a) walk-behind powered rotary tillers, and (b) hand supported cultivators. They are intended to provide safety requirements and to help ensure uniform operator environments. These specifications are intended to apply to products specifically intended as consumer products for personal use.*

## PCA (Portland Cement Association)

## PMI (Project Management Institute)

ANSI/PMI 99-001-2004, A Guide to the Project Management Body of Knowledge (PMBOK Guide)

*The major differences between editions are: improved writing style and grammar use; the distinction between project life cycles and product life cycles was clarified; PM Processes increased from 39 to 44; all graphics were labeled; the distinction between Process Groups and the Knowledge Areas clarified; renamed Chapter 3 and moved to a new section; the PM processes were mapped to show process integration; the glossary has been updated; all inputs, tools, techniques, and outputs have been revised and check for consistency and placement; process flow diagrams added to chapters 3-12.*

## PMMI (Packaging Machinery Manufacturers Institute)

ANSI/PMMI B155.1-2006, Packaging and Packaging-Related Converting Machinery, Safety Requirements for Construction, Care, and Use

*The requirements of this standard apply to new, modified or rebuilt industrial and commercial machinery which perform packaging functions for primary, secondary and tertiary packaging. Also included are: the conveying machinery used within the packaging functions; coordination of the packaging functions that take place in sequence on the production line; packaging related converting machinery.*
*This standard does not apply to packaging machinery used by retail consumers.*

## PRCA (Professional Ropes Course Association)

## PSA (Portable Sanitation Association International)

ANSI Z4.1-1986 (R2005), Sanitation - In Places of Employment - Minimum Requirements

*This standard applies to all permanent places of employment, except where domestic, mining or common carrier transportation work only is performed. It does not apply to family housing provided by the employer in one- or two-family dwellings, nor to temporary labor camps; the latter are covered by American National Standard Minimum Requirements for Sanitation in Temporary Labor Camps, ANSI Z4.4-1995. Measures to control toxic materials are also outside the scope of this standard.*

ANSI Z4.3-1995 (R2005), Sanitation - Nonsewered Waste-Disposal Systems - Minimum Requirements

*This standard applies to sanitary waste-disposal systems for all places of employment where such systems are not connected to a sanitary sewer, septic tank or on-site sewage-disposal treatment facility.*

ANSI Z4.4-1988 (R2005), Sanitation - In Fields and Temporary Labor Camps - Minimum Requirements

*This standard prescribes minimum environmental health requirements for camps (whether temporary or permanent) for temporary labor that will include persons with or without their families employed in any occupation or work for which labor-force quarters are provided and for field sanitation.*

## RESNA (Rehabilitation Engineering and Assistive Technology Society of

ANSI/RESNA WC Volume I (Section 19)-2000, Wheelchairs - Volume I: Requirements and Test Methods for Wheelchairs - Wheelchairs Used as Seats in Motor Vehicles

*Specifies general design requirements, test procedures, and performance requirements for wheelchairs that are designed for use by their occupants as forward-facing seats in a motor vehicle. The provisions of this standard apply to wheelchairs that may be used for seating in a wide range of transportation modes and vehicle types, including bus transit, paratransit, school bus, over-the-road coaches and personally licensed vehicles. Applies to wheelchairs that are designed for children with a body mass of 22 kg or more (about 6 years old), as well as for wheelchairs designed for adults.*
*The provisions of this standard are specific to wheelchairs intended to be secured in a motor vehicle using a four-point strap-type tiedown system when the wheelchair occupant is restrained by a belt-type occupant restraint system. They apply to a wide range of*

ANSI/RESNA WC Volume I-1998, Wheelchairs - Volume I: Requirements and Test Methods for Wheelchairs (including Scooters)

*Specifies tests and methods of measurement applicable to all wheelchairs (manual and electric). This standard specifies requirements and test methods for determining wheelchair performance. These test methods may be used to verify a manufacturer's claim that a product exceeds the minimum requirements of this standard. The ANSI/RESNA national standards on wheelchairs are being superseded by a series of international standards on wheelchairs.*

ANSI/RESNA WC Volume II-1998, Wheelchairs - Volume II: Additional Requirements for Wheelchairs (including Scooters) with Electrical Systems

*Specifies additional tests and methods of measurement applicable to electric-powered wheelchairs and to the electrical systems of all wheelchairs. This standard specifies requirements and test methods for determining sheelchair performance. These test methods may be used to verify manufacturers' claims that a product exceeds the minimum requirements of this standard. The ANSI/RESNA national standards on wheelchairs are being superseded by a series of international standards on wheelchairs.*

## RIA (Robotics Industries Association)

ANSI/RIA R15.05-1-1990 (R1999), Evaluation of Point-to-Point and Static Performance Characteristics of Industrial Robots and Robot Systems

*Facilitates understanding between manufacturers and users of industrial robots. Defines the most important performance criteria and method for evaluating these criteria. Provides meaningful technical information that robot users can utilize for the selection of the proper robot for their specific application.*

ANSI/RIA R15.05-2-1992 (R1999), Industrial Robots and Robot Systems – Path-Related and Dynamic Performance Characteristics – Evaluation

*Facilitates understanding between manufacturers and users of industrial robots. Defines the fundamental dynamic path-related performance characteristics and provides a method quantify dynamic performance. Provides meaningful technical information that robot users can utilize for the selection of the proper robot for their specific application. Provides information that can facilitate the comparison of the performance of different robots.*

ANSI/RIA R15.05-3-1992 (R1999), Industrial Robots and Robot Systems – Reliability Acceptance Testing – Guidelines

*Provides the minimum (reproducible) testing requirements that will qualify a newly manufactured or a newly rebuilt industrial robot to be placed into use without additional infant mortality testing.*

ANSI/RIA R15.06-1999, Industrial Robots and Robot Systems – Safety Requirements

*Provides requirements for industrial robot manufacture, remanufacture and rebuild; robot system integration/installation; and methods of safeguarding to enhance the safety of personnel associated with the use of robots and robot systems. This second review further limits the potential requirements for any retrofit of existing systems, revises the description of control reliable circuitry, and reorganizes several clauses to enhance understanding.*

## RMA (Rubber Manufacturers Association)

ANSI B28.1-2000, Safety Specifications for Mills and Calenders in the Rubber Industry

*This Standard covers the safety for mills and calenders at the point of operation. Such items of instillation and maintenance as are necessary for safe operation are also included. The following revisions have been made:*
*In section A2.1.6 Safety Switch Specifications add: "(5) The switch should require a set amount of tension applied by the cable; this sets the switch to the active mode. This precludes the mill from being operated without the cable and validates the condition of the switch.*
*In section A3.1.1 Pressure-Sensitive Body Bars, delete the words, "is also a barrier, preventing" and insert the words, "can activate with pressure towards the mill and in some situations away from the mill (double-action pressure sensitive body bar) and is also a barrier which prevents."*

ANSI/ASAE S521-FEB93 (R2007), Method of Determining Peanut Blanchability

*The purpose of this Standard is to: 1) Establish uniformity and consistency in terms used to describe the blanchability of peanuts. 2) Define a test procedure that can be used to quantify the blanchability of a sample of peanuts for comparison with other samples. 3) Describe test equipment that ensures accurate control of the test parameters.*

## RPTIA (Recreational Park Trailer Industry Association)

ANSI A119.5-2005, Park Trailers

*Covers fire and life safety criteria and plumbing for recreational park trailers considered necessary to provide a reasonable level of protection from loss of life from fire and explosion. It reflects situations and the state of the art prevalent at the time the Standard was issued. This Standard is not intended as a design specification or an instruction manual. Much of the material in this Standard has been taken from, or is based on, nationally recognized standards for fire and life safety.*

## RSTC (Recreational Scuba Training Council)

## RVIA (Recreational Vehicle Industry Association)

RVIA 12V-2004, Low-Voltage Systems in Conversion Vehicles

*Covers the installation of low voltage electrical systems and devices within recreational and conversion vehicles. In the absence of specific instructions from the OEM, this standard also covers any additions, deletions, or modifications to any part of the original equipment chassis manufacturer's electrical system.*

RVIA EGS-1-2003, Engine Generator Sets for Recreational Vehicles

*Sets forth safety requirements and standards for engine generators having a continuous rating of 15 kilowatts or less, intended for installation and operation in recreational vehicles and similar mobile applications. It is not intended to apply to emergency or standby generators for railroad car installations, military specification engine generators, marine use, or similar specialized equipment. Included in this standard are recommended safety measures for installations, use, and care.*

RVIA UPA-1-2000 (R2004), Uniform Plan Approval

*This standard covers minimum plan approval requirements to ensure a reasonable degree of safety and health for occupants using recreational vehicles.*

## SAE (Society of Automotive Engineers)

ANSI/SAE AIR 2000D, http://webstore.ansi.org/ansidocstore/product.asp?sku=IECEE+CB%2D98+Ed%2E+1%2E0+en%3A2000

*Withdrawn 5/19/2000*

ANSI/SAE J/ISO 10567-FEB98, Earthmoving Machinery - Hydraulic Excavators - Lift Capacity

ANSI/SAE J/ISO 13200-JUN98, Cranes - Safety Signs and Hazard Pictorials - General Principles

ANSI/SAE J/ISO 13333-SEP97, Earthmoving Machinery - Dumper Body Support and Operator's Cab Tilt Support

ANSI/SAE J/ISO 3449-APR98, Earthmoving Machinery - Falling-Object Protective Structures - Laboratory Tests and Performance Requirements

ANSI/SAE J/ISO 3450-JAN98, Earthmoving Machinery - Braking Systems of Rubber-Tired Machines - Systems and Performance Requirements and Test Procedures

ANSI/SAE J/ISO 6394-JUL98, Acoustics - Measurement of Airborne Noise Emitted by Earthmoving Machinery Operator's Position - Stationary Testing Condition

ANSI/SAE J/ISO 7135-JAN98, Earthmoving Machinery - Hydraulic Excavators - Terminology and Commercial Specifications

ANSI/SAE J/ISO 8813-SEP97, Earthmoving Machinery - Lift Capacity of Pipelayers and Wheeled Tractors or Loaders Equipped with Side Boom

ANSI/SAE J1061-OCT92 (RMAY00), Surface Discontinuities on General Application Bolts, Screws, and Studs

*This SAE Recommended Practice defines, illustrates, and specifies allowable limits for various types of surface discontinuities that may occur during the manufacture and processing of bolts, screws, and studs in sizes through 24 mm or 1 in diameter inclusive with lengths to 150 mm or 6 in inclusive, having specified minimum tensile strengths of 900 MPa or 120000 psi and greater, which are primarily intended for use in automotive assemblies. The basic recommended practice does not include inspection sampling requirements. It is intended that the purchaser shall specify, in the original inquiry and purchase order, the inspection sampling requirements which the producer must satisfy to demonstrate the acceptability of bolts and screws with respect to surface discontinuities.*

ANSI/SAE J1067-JUN98, Seven-Conductor Cable

*This SAE Standard establishes the minimum construction and performance requirements for seven-conductor 1/8-1/10-5/12 cable for use on trucks and trailers. Where appropriate, the standard refers to two types of cables, (Type F and S, described later in the standard), due to the variation in the performance demands of cables used in flexing and stationary applications.*

ANSI/SAE J1091-NOV96, Earthmoving Machinery-Operator's Field of View

*This SAE Standard specifies a stationary test method for determining the masking effect caused by parts of the base machine with equipment as specified by the manufacturer on a visibility test circle around the machine from the eye position point of a seated operator. It specifies a method for evaluating the maskings that may be present. It applies to earthmoving machines which have a specific operator's station. It does not consider evaluation of maskings which may be present with operational movement of working tools.*

ANSI/SAE J110-DEC97, Seals – Testing of Radial Lip

ANSI/SAE J1100-JUN98, Motor Vehicle Dimensions

ANSI/SAE J1113-13-OCT97, Electromagnetic Compatibility Measurement Procedure for Vehicle Components - Part 13: Immunity to Electrostatic Discharge

ANSI/SAE J1113-21-JAN98, Electromagnetic Compatibility Measurement Procedure for Vehicle Components - Part 21: Immunity to Electromagnetic Fields, 10 kHz to 18 GHz, Absorber-Lined Chamber

ANSI/SAE J1113/4-FEB98, Immunity to Radiated Electric Fields(Bulk Current Injection (BCI) Method

ANSI/SAE J1131-AUG98, Tubing and Fitting Assemblies Used in Automotive Air Brake Systems, Performance Requirements for SAE J844d Nonmetallic

*This SAE Standard is intended to establish uniform methods of testing SAEJ844 tubing and fitting assemblies as used in automotive air brake systems. This document also establishes minimum qualifications for tensile and pressure capabilities, vibrational durability under cyclic temperatures, serviceability, and fitting compatibility requirements. The specific tests and performance criteria applicable to the tubing are set forth in SAE J844. NOTE: The test values contained in this document are for test purposes only. For environmental and usage limitations see SAE J844. Fittings A type of fitting for use with SAE J844 nonmetallic tubing is included in SAE J246; however, it is not intended to restrict or preclude the use of other designs of fittings that comply with this document.*

ANSI/SAE J1163-AUG97 (RMAY00), Determining Seat Index Point

*This SAE Standard specifies a method and the device for use in determining the position of the Seat Index Point (SIP) for any kind of seat.*

ANSI/SAE J1167-JUL98, Motorcycle Stop Lamp Switch

*This SAE Recommended Practice establishes test procedures and performance requirements for stop lamp switches intended for use in an AC or a DC circuit on motorcycles. In service use may impose specific conditions on the switch which can affect its functional life. Those conditions should be replicated, as necessary, during the testing described in this document to ensure the adequate functioning of the device.*

ANSI/SAE J1169-MAY98, Light Vehicle Exhaust Sound Level under Stationary Conditions, Measurement of

*This SAE Standard establishes the test procedure, environment, and instrumentation to be used for measuring the exhaust sound level for passenger cars, multipurpose vehicles, and light trucks under stationary conditions. Measurements are taken under steady-state conditions. In this respect, this procedure differs from ISO 5130 which includes measurements under the dynamic conditions of an engine deceleration. This sound level measurement procedure has been developed as a guide for governmental agencies establishing vehicle in-service sound level regulations and enforcement measurement procedures. It is directed at the assessment of vehicle exhaust noise and is not intended to determine maximum vehicle sound levels.*

ANSI/SAE J1183-FEB98, Recommended Guidelines for Fatigue Testing of Elastomeric Materials and Components

*The purpose of this SAE Recommended Practice is to review factors that influence the behavior of elastomers under conditions of dynamic stress and to provide guidance concerning laboratory procedures for determining the fatigue characteristics of elastomeric materials and fabricated elastomeric components.*

ANSI/SAE J1200-MAY98, Blind Rivets Break Mandrel Type

*This SAE Standard establishes the dimensional, mechanical, and performance requirements of inch and metric break mandrel blind rivets suitable for use in joining the component parts of an assembly.*

ANSI/SAE J122-MAY98, Surface Discontinuities on Nuts

ANSI/SAE J1231-JUL98, Beaded Tube Hose Fittings

*This SAE Standard provides general and dimensional specifications for formed tube ends and hose fittings. These connections are intended for general applications in low pressure automotive and hydraulic systems on automotive, industrial, and commercial products. The fittings shown in Figures 2 and 3 are intended to be retained by hose clamps as specified in SAE J1508. It is recommended that where step sizes or additional types of fittings are required, they be designed to conform with the specifications of this document insofar as they may apply. The following general specifications shall supplement the dimensional data contained in the tables with respect to all unspecified detail.*

ANSI/SAE J1238-JUL98, Rating Lift Cranes on Fixed Platforms Operating in the Ocean Environment

*The scope of this SAE Recommended Practice is limited to cranes mounted on a fixed platform lifting loads from a vessel alongside. The size of the vessel is assumed not to exceed that of a work boat as defined in 3.14. The purpose of this document is to establish the design dynamic loads, the calculation procedures, and a load rating chart format for lift cranes operating in a variety of sea conditions.*

ANSI/SAE J1248-APR98 (RMAY00), Performance Requirements for Parking Stability of Motorcycles

*This SAE Recommended Practice presents performance requirements for the parking stability of two-wheeled motorcycles intended for highway use.*

ANSI/SAE J1287-JUL98 (RMAY00), Stationary Motorcycles, Measurement of Exhaust Sound Levels of

*This SAE Standard establishes the test procedure, environment, and instrumentation for determining the sound levels of motorcycles under stationary conditions. This test will measure primarily exhaust noise and does not represent the optimum procedure for evaluating total vehicle noise. For this purpose, SAE J331 or SAE J47 is recommended.*

ANSI/SAE J131-OCT97, Motorcycle Turn Signal Lamps

ANSI/SAE J1318-MAY98, Gaseous Discharge Warning Lamp for Authorized Emergency, Maintenance, and Service Vehicles

*This SAE Recommended Practice provides test procedures, requirements, and guidelines for single-color Gaseous Discharge Warning Lamps.*

ANSI/SAE J1362-JUL97, Graphical Symbols for Operator Controls and Displays on Off-Road Self-Propelled Work Machines

ANSI/SAE J1368-OCT97 (RMAY00), Child Restraint Anchorages and Attachment Hardware

*The purpose of this SAE Recommended Practice is to provide design guidelines to vehicle manufacturers by establishing characteristics of anchorages and attachment hardware provisions at the passenger front seat outboard seating location for securing a child seating system in vehicles equipped with automatic (passive) restraint systems that are not suitable for use with a child seating system. Further, it is intended to provide interface information to child restraint manufacturers. The anchorage and hardware configuration and location as well as interface parameters are described along with performance and identification requirements.*

ANSI/SAE J1369-OCT97 (RMAY00), Anchorage Provisions for Installation of Child Restraint Tether Straps in Rear Seating Positions

*This SAE Recommended Practice provides design guidelines to vehicle manufacturers by establishing the characteristics of top tether anchorage provisions required for securing child restraints so equipped in forward facing rearmost designated passenger seating positions of all passenger cars, multipurpose passenger vehicles, and trucks and buses of 4500 kg (10000 lb) Gross Vehicle Weight Rating or less, accommodating size occupants or less. Further*

ANSI/SAE J1375-DEC97, Cranking Motor Application Considerations

*This SAE Recommended Practice identifies some basic and general conditions that should be considered when making electrical starter motor applications*

ANSI/SAE J1394-JUN98, Metric Nonmetallic Air Brake System Tubing

*This SAE Standard covers the minimum requirements for metric sizes of nonmetallic tubing as manufactured for use in air brake systems. Nonreinforced products are designated type A and reinforced products type B. It is not intended to cover tubing for any portion of the system that operates below ñ40 C (ñ40 F), above +93 C (+200 F), above a maximum working gage pressure of 1.0 MPa (150 psi), or in an area subject to attack by battery acid. This tubing is intended for use in the brake system for connections that maintain a basically fixed relationship between components during vehicle operation. Coiled tube assemblies required for those installations where flexing occurs are covered by this standard and SAE J1131 to the extent of setting minimum requirements on the essentially straight tube and tube fitting connections, which are used in the construction*

ANSI/SAE J1409-SEP98, Air Brake Valves Test Procedure

*This SAE Recommended Practice establishes uniform test procedures for air brake systems pneumatic valves with respect to: a. Input-Output Characteristics b. Leakage Measurement c. Low Temperature Evaluation d. Elevated Temperature Evaluation e. Corrosion Resistance Evaluation f. Endurance Testing g. Structural Integrity*

ANSI/SAE J141-JUN95, Seat Belt Hardware Performance Requirements

ANSI/SAE J1410-SEP98, Air Brake Valve - Performance Requirements

*This SAE Recommended Practice establishes minimum performance requirements for pneumatic valves when tested in accordance with the test procedure outlined in SAE J1409. The performance requirements will include: The document establishes uniform performance requirements for pneumatic valves designed to operate at 862 kPa (125 psi) nominal pressure in commercial air brake vehicles. a. Input - output performance b. Leakage test c. Low temperature performance d. Elevated temperature performance e. Corrosion resistance performance f. Endurance testing g. Structural integrity*

ANSI/SAE J1441-MAR98 (RMAY00), Subjective Rating Scale for Vehicle Handling

*This SAE Recommended Practice establishes a rating scale for subjective evaluation of vehicle handling. The scale is applicable for the evaluation of specific vehicle handling properties in specific maneuvers on the proving grounds and highways. The validity of the evaluation is restricted to the individual handling disciplines defined by these maneuvers and to the particular combination of conditions of the vehicle (e.g., equipment, degree of maintenance) and of the environment (e.g., road, weather). This document is intended as a guide toward standard practice and is subject to change to keep page with experience and technical advances.*

ANSI/SAE J1453-JUN98, Fitting – O-Ring Face Seal

ANSI/SAE J1459-AUG97, V-Ribbed Belts and Pulleys

*This SAE Standard covers dimensions, tolerances, and methods of measurement of V-ribbed belts and pulleys for use on automotive drives.*

ANSI/SAE J1461-SEP98 (RMAY00), Manual Slack Adjuster Test Procedure

*This SAE Recommended Practice is intended for testing of manual slack adjusters as they are used in service, emergency, or parking brake systems for vehicles that can be licensed for on-road use.*

ANSI/SAE J1463-JAN98, Pull-Type Clutch – Transmission Installation Dimensions

*This SAE Recommended Practice documents the typical transmission interface dimensions that are used with 14-in and larger pull-type clutches.*

ANSI/SAE J1470-JUN98, Measurement of Noise Emitted by Accelerating Highway Vehicles

*This SAE Standard is equivalent to ISO Standard 362 - 1997 except for the differences details in Appendix A, and includes the modifications adopted by WP 29 in ECE R51 Revision 1 and EEC 92/97 and EEC 96/20. This document specifies an engineering method for measuring the noise emitted by accelerating highway vehicles of all types (except motorcycles) in intermediate gears with full utilization of the available engine power. The method is designed to meet the requirements of simplicity and reproducibility of results under realistic vehicle operating conditions.*

ANSI/SAE J1472-JAN98, Braking Performance - Roller Compactors

*This SAE Standard specifies brake system performance and test criteria to enable uniform evaluation of the braking capability of self-propelled, ride-on vibratory steel wheel, static steel wheel, and rubber-tire roller compactors with maximum level surface machine speeds of 25 km/h or less. Service, secondary, and parking brakes are included. Machines with maximum level surface machine speeds greater than 25 km/h shall conform to the requirements of SAE J/ISO 3450.*

ANSI/SAE J1488-AUG97, Emulsified Water/Fuel Separation Test Procedure

ANSI/SAE J1492-MAY98, Measurement of Light Vehicle Stationary Exhaust System Sound Level Engine Speed Sweep Method

*This SAE Recommended Practice establishes the test procedure, environment, and instrumentation to be used for measuring the exterior exhaust sound level for passenger cars, multipurpose vehicles, and light trucks under stationary conditions providing a continuous measure of exhaust system sound level over a range of engine speeds. This sound level measurement procedure has been developed for use in engineering evaluation of the sound level performance of passenger car and light truck exhaust systems. It provides the means for detecting exhaust system resonances with the potential to affect both exterior and interior sound quality. This document incorporates certain provisions of ISO 5130-1982-02-15, for measuring the sound level of exhaust systems.*

ANSI/SAE J1493-NOV97, Shielding of Starter Systems Energization

*This SAE Standard specifies the requirements to help prevent inadvertent and to discourage deliberate electrical connection at the starter motor solenoid or starter relay which may result in the starter pinion engaging the ring gear. This document applies to off-road, self-propelled work machines, as identified in SAE J1116, which have the potential of powered movement as a direct result of the starter pinion engaging the ring gear.*

ANSI/SAE J1494-OCT97, Battery Booster Cables

*The purpose of this SAE Recommended Practice is to establish minimum performance and user information requirements for battery booster cable sets. Such sets may be used to provide a temporary connection of a surface vehicle battery to another similar battery to provide emergency power when required. This recommended practice DOES NOT ENDORSE NOR RECOMMEND the potentially hazardous procedure of jump starting a vehicle.*

ANSI/SAE J1495-SEP98 (RMAY00), Test Procedure for Battery Flame Retardant Venting Systems

*This SAE Standard details procedures for testing lead-acid SLI (starting, lighting, and ignition), Heavy-Duty, EV (electric vehicle) and RV (recreational vehicle) batteries to determine the effectiveness of the battery venting system to retard the propagation of an externally ignited flame of battery gas into the interior of the battery where an explosive mixture is usually present.*

ANSI/SAE J1503-JAN98, Performance Test for Air-Conditioned, Heated, and Ventilated Off-Road Self-Propelled Work Machines

*This SAE Standard applies to off-road, self-propelled work machines used in construction, general-purpose industrial, agricultural, forestry, and specialized mining machinery as defined in SAE J1116 JUN86, and establishes the following minimum performance levels in the operator's environment for the seated position: Minimum operator enclosure pressurization and ventilation levels in the operator's environment for the seated position. Maximum temperature differential under air conditioning operation. Minimum temperature differential under heater operation.*

ANSI/SAE J1578-JUL97, Motorcycle Side Stand Retraction Test Procedure

*This test procedure provides a standard method for evaluating the side stand retraction performance of a side stand/motorcycle combination. This test procedure applies to any two-wheeled motorcycle without a sidecar, equipped with a side stand, and intended for highway use. This SAE Recommended Practice is intended as a guide toward standard practice but may be subject to frequent change to keep pace with experience and technical advances. This should be kept in mind when considering the use of this document.*

ANSI/SAE J1579-APR98 (RMAY00), Motorcycle Side Stand Retraction Performance Requirements

*These requirements define minimum recommended levels of side stand retraction performance of a Create new standard side stand/motorcycle combination when tests according to the procedures of SAE J1578. These requirements apply to any Create new standard two-wheeled motorcycle without a sidecar, equipped with a side stand, and intended for highway use. This SAE Recommended Practice is intended as a guide toward standard practice but may be subject to frequent change to keep pace with experience and technical advances. This should be kept in mind when considering use of this document.*

ANSI/SAE J1588-APR98 (RMAY00), Internal Combustion Engines – Piston Rings – Vocabulary

*Differences, where they exist, are shown in Appendix A with associated rationale. This SAE Standard defines the most commonly used terms for piston rings. These terms designate either types of piston rings or certain characteristics and phenomena of piston rings. The terms and definitions apply to piston rings for reciprocating internal combustion engines and compressors working under analogous conditions.*

ANSI/SAE J1589-APR98, Internal Combustion Engines – Piston Rings – Inspection Measuring Principles

*Differences, where they exist, are shown in Appendix A. This SAE Standard defines the measuring principles to be used for measuring piston rings. It applies to piston rings up to and including 200 mm diameter for reciprocating combustion engines. These inspection measuring principles may also be used for piston rings for compressors working under analogous conditions.*

ANSI/SAE J1590-APR98, Internal Combustion Engines - Piston Rings - Material Specifications

*Differences, where they exist, are shown in Appendix A. This SAE Standard establishes a classification of materials intended for the manufacture of piston rings based on mechanical properties and the stresses that these materials are capable of withstanding. This document applies to the manufacture of piston rings up to and including 200 mm diameter for reciprocating internal combustion engines. It also applies to piston rings for compressors working under similar conditions.*

ANSI/SAE J1591-APR98 (RMAY00), Internal Combustion Engines – Piston Rings – General Specifications

*Differences, where they exist, are shown in Appendix A. This SAE Standard specifies the general characteristics of piston rings and individual dimensional criteria, which are specified as appropriate in the documents in Section 2. This document also provides a system for coding, designation, and marking of piston rings. This document applies to the manufacture of piston rings up to and including 200 mm diameter for reciprocating internal combustion engines. It also applies to piston rings for compressors working under similar conditions.*

ANSI/SAE J1611-AUG98, Trenchless Equipment (Horizontal Earthboring Machines) – Operator Control Definitions

*This SAE Standard applies to horizontal earthboring machines of the following types: a. Auger Machines b. Pipe Pushers c. Rotary Rod Machines d. Impact Machines e. Directional Boring/Drilling Machines Additional information on machines of this type may be found in SAE J2022 and SAE J2023. This document does not apply to specialized mining machinery such as conveyors, tunnel-boring machines, pipe-jacking systems, and microtunnelers.*

ANSI/SAE J1614-MAR98, Wiring Distribution Systems for Construction, Agricultural, and Off-Road Work Machines

ANSI/SAE J1616-FEB94, Recommended Practice for Compressed Natural Gas Vehicle Fuel

*Presents the more important physical and chemical characteristics of compressed natural gas vehicle fuel and describes pertinent test methods for defining or evaluating these properties. In order for Compressed Natural Gas Vehicles (NGVs) to effectively provide satisfactory and safe operation for users, there is a need to address specific issues relative to the use of natural gas as a vehicle fuel. The two primary areas relate to (1) compressed storage of natural gas and (2) vehicle fuel system and engine performance issues. These provisions have been derived through a joint effort of the SAE TC-7 Natural Gas Vehicle Task Force and the Technology Committee on the Natural Gas Vehicle Coalition. This standard was listed for public review in the 2/16/1996 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/SAE J1635-AUG98 (RMAY00), Cold Start and Driveability Procedure

*To subjectively evaluate engine starting behavior and driveability characteristics of a motor vehicle which has been soaked at ambient temperature for a given time period after attaining a stabilized engine coolant temperature. This SAE Recommended Practice also defines driveability defects and the rating system.*

ANSI/SAE J1644-OCT98, Metallic Tube Connections for Fluid Power and General Use - Test Methods for Threaded Hydraulic Fluid Power Connectors

ANSI/SAE J1650-OCT97, Seamless Copper-Nickel 90-10 Tubing

ANSI/SAE J1674-JUN98, Early Acquisition and Preservation of Information in a Motor Vehicle Accident

ANSI/SAE J1699/2-JAN98, OBD-II Related SAE Specification Verification - Test Procedures

ANSI/SAE J1713-JAN98, Structural Testing of Passenger Car and Truck Disc Brakes

ANSI/SAE J1737-AUG97, Test Procedure to Determine the Hydrocarbon Losses from Fuel Tubes, Hoses, Fittings, and Fuel Line Assemblies by Recirculation

ANSI/SAE J174-MAY98, Torque - Tension Test Procedure for Steel Threaded Fasteners - Inch Series

ANSI/SAE J1742-MAR98, Connections for High Voltage On-Board Road Vehicle Electrical Wiring Harnesses - Test Methods and General Performance Requirements

ANSI/SAE J1748-JAN98, Methods for Determining Physical Properties of Polymeric Materials Exposed to Gasoline/Oxygenate Fuel Mixtures

ANSI/SAE J174M-MAY98, Torque - Tension Test Procedure for Steel Threaded Fasteners - Metric Series

ANSI/SAE J1766-JUN98, Recommended Practice for Electric and Hybrid Electric Vehicle Battery Systems - Crash Integrity Testing

ANSI/SAE J1790-JUN98, Self-Propelled Sweepers and Scrubbers Steering Requirements - Single-Circuit Hydraulic Servo-Assisted Systems

ANSI/SAE J1817-FEB98, Long Stroke Air Brake Actuator Marking

ANSI/SAE J182-AUG97, Motor Vehicle Fiducial Marks and Three-Dimensional Reference System

ANSI/SAE J1824-(RJUL98, Specification Definitions – Clam Bunk Skidder

*This SAE Recommended Practice identifies and defines the specifications most commonly used to describe high-speed steel track and articulated rubber-tired clam bunk skidders. The illustrations used are not intended to be descriptive of any existing machine or dictate a combination needed for a particular logging situation. The dimensions indicated are basic and may be supplemented by the individual machine manufacturer.*

ANSI/SAE J1829-DEC97, Stoichiometric Air/Fuel Ratios of Automotive Fuels

ANSI/SAE J1846-JUN98, Characterizing a Test Surface for Motorcycle Side Stand Retraction Performance Testing

ANSI/SAE J1850-MAR98, Class B Data Communication Network Interface

ANSI/SAE J188-JAN98, Power Steering Pressure Hose – High Volumetric Expansion Type

ANSI/SAE J189-JAN98, Power Steering Return Hose – Low Pressure

ANSI/SAE J1892-SEP98, Recommended Practice for Bar-Coded Vehicle Emission Configuration Label

ANSI/SAE J19-AUG97, Latex-Dipped Goods and Coatings for Automotive Applications

ANSI/SAE J190-MAY98, Power Steering Pressure Hose-Wire Braid

ANSI/SAE J191-MAY98, Power Steering Pressure Hose – Low Volumetric Expansion Type

ANSI/SAE J1930-MAY98, Electrical/Electronic Systems Diagnostic Terms, Definitions, Abbreviations, and Acronyms

ANSI/SAE J1939/31-DEC97, Network Layer

ANSI/SAE J1953-FEB98, Brake-Stroke Indicator Design Guideline for Cam or Disc Air-Brake Actuators

ANSI/SAE J1962-FEB98, Diagnostic Connector

ANSI/SAE J1965-DEC97, Road Vehicles - Wheels for Commercial Vehicles and Multipurpose Passenger Vehicles - Fixing Nuts - Test Methods

ANSI/SAE J1978-FEB98, OBD II Scan Tool

ANSI/SAE J1979-SEP97, E/E Diagnostic Test Modes

ANSI/SAE J1982-AUG98, Nomenclature - Wheels for Passenger Cars, Light Trucks, and Multipurpose Vehicles

ANSI/SAE J1987-JAN98, Force and Movement Test Method

ANSI/SAE J1996-(RAPR98, Internal Combuston Engines - Piston Rings, Quality Requirements

ANSI/SAE J1997-(RAPR98, Internal Combustion Engines – Piston Rings – Rectangular Rings

ANSI/SAE J1998-(RAPR98, Internal Combustion Engines – Piston Rings – Rectangular Rings with Narrow Ring Width

ANSI/SAE J1999-(RAPR98, Internal Combustion Engines – Piston Rings – Scraper Rings

ANSI/SAE J20-OCT97, Coolant System Hoses

*This SAE standard covers reinforced and flexible hoses intended for use in water and ethylene glycol-based engine-coolant system applications.*

ANSI/SAE J200-MAR98, Classification System for Rubber Materials

ANSI/SAE J2000-(RAPR98, Internal Combustion Engines – Piston Rings – Keystone Rings

ANSI/SAE J2001-(RAPR98, Internal Combustion Engines – Piston Rings – Half Keystone Rings

ANSI/SAE J2002-(RAPR98, Internal Combustion Engines – Piston Rings – Oil Control Rings

ANSI/SAE J2003-(RAPR98, Internal Combustion Engines – Piston Rings – Coil Spring Loaded Oil Control Rings

ANSI/SAE J2004-(RAPR98, Internal Combustion Engines – Piston Rings – Expander/Segment Oil Control Rings

ANSI/SAE J2027-JUN98, Preliminary Standard for Protective Covers for Gasoline Fuel Line Tubing

ANSI/SAE J2044-DEC97, Quick Connector Specification for Liquid Fuel and Vapor/Emissions Systems

ANSI/SAE J2045-FEB98, Tube/Hose Assemblies

*This SAE Standard encompasses the recommended minimum requirements for non-metallic tubing and/or combinations of metallic tubing to non-metallic tubing assemblies manufactured as a liquid- and/or vapor-carrying systems designed for use in gasoline, alcohol blends with gasoline, or diesel fuel systems. This SAE Standard is intended to cover tubing assemblies for any portion of a fuel system which operates above ñ40 C (ñ40 F) and below 115 C (239 F), and up to maximum working gage pressure of 690 kPa (100 psi). The peak intermittent temperature is 115 C (239 F). For long-term continuous ''sage, the temperature shall not exceed 90 C (194 F). It should be noted that temperature extremes can affect assemblies in various manners and every effort must be made to determine the operating temperature to which a specific fuel line assembly will be exposed, and*

ANSI/SAE J2064-AUG98, R134a Refrigerant Automotive Air Conditioning Hose

*This SAE Standard covers hose and hose assemblies intended for conducting liquid and gaseous R134a refrigerant in automotive air-conditioning systems. The hose shall be designed to minimize permeation of R134a refrigerant, contamination of the system, and to be functional over a temperature range of ñ30 to 125 C. Specific construction details are to be agreed upon between user and supplier. A hose marked ìJ2064î signifies that is have been coupled, tested, and has met the requirements of SAE J2064. It si the hose assembly manufacturerís responsibility to see that the assemblies meet the specified acceptance criteria for this specification.*

ANSI/SAE J2081-AUG97, Resistance of Safety Glazing Materials, of which One Surface Is Plastic, to Simulated Weathering, Test Procedure for Determining

*This SAE Recommended Practice determines whether plastic and glass-plastic safety glazing materials will successfully withstand exposure to simulated weathering conditions.*

ANSI/SAE J212-JAN98, Brake System Dynamometer Test Procedures - Passenger Car

ANSI/SAE J2130-OCT97, Self-Propelled Sweepers

*This SAE Standard applies to all self-propelled machines that are designed to clean material from highways, parking lots, and floors in non-residential buildings. Primary methods for removing material can be by mechanical means, pneumatic, washing system, or a combination. To identify self-propelled cleaning equipment, which are grouped into street and industrial sweepers and scrubbers.*

ANSI/SAE J2162-MAY98, Spark Plug Heat Rating Classifications

*This SAE Standard details a uniform method for classifying heat ratings of unshielded spark plugs.*

ANSI/SAE J2178-2-MAY97, Class B Data Communication Network Messages - Part 2: Data Parameter Definitions

ANSI/SAE J2178/3-JUN98, Class B Data Communication Network Messages - Part 3: Frame IDs for Single-Byte Forms of Headers

ANSI/SAE J2194-SEP97, Roll-Over Protective Structures (ROPS) for Wheeled Agricultural Tractors

ANSI/SAE J220-JUL98, Crane Boomstop

ANSI/SAE J2214-FEB97, Vehicle Electronic Programming Stations (VEPS) System Specification for Programming Components at OEM Assembly Plants

*This system specification, SAEJ2214, revises the requirements for Vehicle Electronics Programming Stations (VEPS) set forth in SAE J1924, OEM/Vendor Interface Specification for Vehicle Electronic Programming Stations. The requirements of SAE J2214 supersede the requirements defined by SAE J1924. The SAE J2214 specification describes the application of the MS-DOS"! environment to the customization of programmable components*

ANSI/SAE J2221-JUN98, Standardized Symbols for Electrical Circuit Diagrams

*This SAE Recommended Practice identifies graphic symbols used in electrical circuit diagrams. The symbols aid troubleshooting electrical systems.*

ANSI/SAE J2226-APR98 (RMAY00), Internal Combustion Engines - Piston Rings - Steel Rectangular Rings

*There is no standard equivalent to this SAE Standard. However, SAE J2226 is similar to and represents an extension of SAE J1998 (equivalent to ISO Standard 6622/2 TR). The SAE Standard specifies the essential dimensional features of Type B barrel faced steel rectangular piston rings. Only fully faced and inlaid coated rings are included, consistent with current U.S. practice. The requirements of this SAE Standard apply to steel piston rings of reciprocating internal combustion engines, up to and including 200 mm diameter and 4.5 mm width.*

ANSI/SAE J2244/3-JUN98, Connections for Fluid Power and General Use-Ports and Stud Ends with ISO 261 Threads and O-Rings Sealing - Part 3: Light-Duty (L Series) Stud Ends - Dimensions, Design, Test Methods, and Requirements

ANSI/SAE J2270-OCT98, Ship Systems and Equipment - Threaded Fasteners - Inspection, Test, and Installation Requirements

ANSI/SAE J2282-JUN98, Distributed Lighting Systems (DLS)

*This SAE Recommended Practice applies to motor vehicle Distributed Lighting Systems (DLS) which use light generated by remote sources. It provides test methods, requirements, and guidelines applicable to these systems. This document is intended to be a guide to standard practice and is subject to change dependent upon additional experience and technical advances. This document applies to headlamp lighting only.*

ANSI/SAE J2286, Vendor Component Program Data File Interface for OEM Assembly Operations

*This interface document SAE J2286 revises the requirements for file formats as described in SAE J1924. This document describes Interface 1 (I/F 1) in SAE J2214. This document does not imply the use of a specific hardware interface, but may be used with other hardware interfaces such as SAE J1939. The requirements of SAE J2286 supersede the requirements defined by SAE J1924.*

ANSI/SAE J2293/2-JUN97, Energy Transfer System for Electric Vehicles - Part 2: Communication Requirements and Network Architecture

*SAE J2293 establishes requirements for Electric Vehicles (EV) and the off-board Electric Vehicle Supply Equipment (EVSE) used to transfer electrical energy to an EV from an Electric Utility Power System (Utility) in North America. This document defines, either directly or by reference, all characteristics of the total EV Energy Transfer System (EV-ETS) necessary to insure the functional interoperability of an EV and EVSE of the same physical system architecture. The ETS, regardless of architecture, is responsible for the conversion of AC electrical energy into DC electrical energy that can be used to charge the Storage Battery of an EV. The different physical ETS system architectures are identified by the form of the energy that is transferred between the EV and EVSE. It is possible for an EV and EVSE to support more than one architecture. This document does not*

ANSI/SAE J2295-OCT98, Fasteners - Part Standard Cap Screws, Hex Bolts, and Hex Nuts

*This SAE Part Standard covers selected screws, hex bolts, and nuts manufactured in accordance with American Society for Testing and Materials (ASTM) fastener standards. This document covers materials often used in ship systems and equipment but is use may be applied wherever fasteners of the covered materials are used. This document permits the fasteners covered to be identified and ordered by a part or identifying number (PIN) as defined in this document.*

ANSI/SAE J2315-FEB98, Wheel Nut Seat Strength

*The purpose of this test is to evaluate the axial strength of the nut seat of wheels intended for use on passenger cars, light trucks, and multipurpose vehicles. In addition, a minimum contact area is recommended to ensure enough strength for the rotational force in tightening a nut against the nut seat. While this test ensures the minimum strength of the nut seat, the wheel must also have degree of flexibility. This flexibility, as well as bolt tension, are important to maintain wheel retention.*

ANSI/SAE J2316-JAN98, Wheel Nut Seat System Test Procedures and Performance Requirements for Passenger Cars and Light Trucks

*This SAE Recommended Practice provides minimum performance requirements and uniform procedures for nut seat system strength of wheels intended for normal highway use on passenger cars, light trucks, (except dual wheels, which are covered by SAE J1965) and multipurpose passenger vehicles. The nut seat system includes the wheel, wheel bolts, and wheel nuts as applicable. Many factors must be considered in design and validation of wheel attachments for each specific vehicle. The individual components should be evaluated per the SAE standards referenced.*

ANSI/SAE J2333-MAR98, Ship Systems and Equipment Hydraulic Systems - Filter Selection Parameters

*This SAE Recommended Practice identifies and examines the various parameters which must be considered in selecting hydraulic system filters, their locations within the system and the dirt capacity of the filter elements.*

ANSI/SAE J2375-AUG97, The Selection of Adhesives for the Attachment of Exterior Aftermarket Accessories

ANSI/SAE J2376-JUN98, New-Vehicle Collision Repair Information

ANSI/SAE J238-MAY98, Nut and Conical Spring Washer Assemblies

ANSI/SAE J2380-JAN98, Vibration Testing of Electric Vehicle Batteries

ANSI/SAE J2383-MAR98, Air Dryer Installation Procedure

ANSI/SAE J2387-OCT97, Dimensions and Tolerances for Coolant System Hoses

ANSI/SAE J2393-JUN98, Swing Performance and Rating Procedure, Material Handlers, Knuckle Boom Log Loaders and Certain Forestry Equipment

ANSI/SAE J2394-JUN98, Seven-Conductor Cable for ABS Power

ANSI/SAE J2403-OCT98, Medium/Heavy-Duty E/E Systems Diagnosis Nomenclature

ANSI/SAE J2405-AUG97, Low-Permeation Fuel Fill and Vent Tube

ANSI/SAE J2407-OCT97, Clutch Installation and Release Linkage Requirements for Truck and Bus Applications

ANSI/SAE J2409-JUN98, Strain-Life Fatigue Data Exchange File Format

ANSI/SAE J2417-JUN98, Lift Capacity Calculation Method Knuckle-Boom Log Loaders and Certain Forestry Equipment

ANSI/SAE J2418 JAN98, Occupant Restraint System Evaluation Frontal Impact Component Level - Heavy Trucks

ANSI/SAE J2419-JAN98, Occupant Restraint System Evaluation Frontal Impact System Level - Heavy Trucks

ANSI/SAE J2420-JAN98, COE Frontal Strength Evaluation Dynamic Loading Heavy Trucks

*This SAE Recommended Practice describes the test procedures for conducting dynamic frontal strength test for COE heavy truck applications. Its purpose is to establish recommended test procedures which will standardize the procedure for heavy trucks. Descriptions of the test set-up, test instrumentation, photographic/video coverage, and the test fixtures are included.*

ANSI/SAE J2421-JAN98, COE Frontal Strength Evaluation Quasi-Static

*This SAE Recommended Practice describes the test procedures for conducting quasi-static frontal strength test for COE heavy truck applications. Its purpose is to establish recommended test procedures which will standardize the procedure for heavy trucks. Descriptions of the test set-up, test instrumentation, photo/video coverage, and the test fixtures are included.*

ANSI/SAE J2422-JAN98, Cab Roof Strength Evaluation Quasi-Static Loading Heavy Trucks

*This SAE Recommended Practice describes the test procedures for conducting quasi-static cab roof strength tests for heavy-truck applications. Its purpose is to establish recommended test procedures which will standardize the procedure for heavy trucks. Descriptions of the test set-up, test instrumentation, photographic/video coverage, and the test fixtures are included.*

ANSI/SAE J2423-JAN1998, Cab Roof Strength Evaluation Dynamic Loading - Heavy Trucks

*This SAE Recommended Practice describes the test procedures for conducting dynamic cab roof strength tests for heavy-truck applications. Its purpose is to establish recommended test procedures which will standardize the procedure for heavy trucks. Descriptions of the test set-up, test instrumentation, photographic/video coverage, and the test fixtures are included.*

ANSI/SAE J2424-JAN98, Free Motion Headform Impact Tests of Heavy Truck Cab Interiors

*This SAE Recommended Practice describes the test procedures for conducting free motion headform testing of heavy truck cab interior surfaces and components. A description of test set-up, instrumentation, impact configuration, target locations, and data reduction is included.*

ANSI/SAE J2425-JAN98, Steering Control Systems Laboratory Test Procedure Heavy Trucks

*This SAE Recommended Practice describes a laboratory test procedure for evaluating the characteristics of heavy truck steering control systems under simulated driver impact conditions. The test procedure employs a torso-shaped body block that is impacted against the steering wheel.*

ANSI/SAE J2426-JAN98, Occupant Restraint System Evaluation Lateral Rollover System-Level Heavy Trucks

*This SAE Recommended Practice describes the test procedures for conducting simulated dynamic lateral rollover restraint system tests for heavy truck applications. Its purpose is to establish recommended test procedures that will standardize restraint system testing for heavy trucks. Descriptions of the test set-up, test instrumentation, photographic/video coverage, and the test fixtures are included.*

ANSI/SAE J2429-JAN98, Free-Rolling Cornering Test for Truck Tires

ANSI/SAE J2455-JAN98, Drivetrain Systems Vibration Analysis - Data Requirements

ANSI/SAE J2456-MAY98, Mercury Switch Removal Process

ANSI/SAE J2458-JUL98, Exhaust Brake Dynamometer Test and Capability Rating Procedure

ANSI/SAE J30-JUN98, Fuel and Oil Hoses

*This SAE standard covers fuel and oil hose, coulped and uncoupled, for use with gasoline, oil, diesel fuel, lubrication oil, or the vapor present in either the fuel system or in the crankcase of internal combustion engines in mobile, stationary, and marine applications. Section 7 covers hose primarily intended to met the demands of fuel injection systems.*

ANSI/SAE J3000-AUG97, Thermoplastic Elastomer Classification System

*This classification system tabulates the properties of thermoplastic elastomers (TPEs) that are intended for, but not limited to, use in automotive applications. This classification system is based on the premise that the properties of TPEs can be arranged into characteristic material designations. These designations are determined by type, based on resistance to heat aging; and class, based on resistance to volume change resulting from oil immersion. Basic levels are thus established which, together with values describing additional requirements, permit complete description of the properties of all TPEs. In all cases where provisions of this classification system would conflict with those of the detailed specifications for a particular product, the latter shall take precedence.*

ANSI/SAE J306-JUL98, Automotive Gear Lubricant Viscosity Classification, Axle and Manual Transmission

ANSI/SAE J312-JUL98, Automotive Gasolines

ANSI/SAE J313-MAR98, Diesel Fuels

ANSI/SAE J318-AUG97, Automotive Air Brake Line Couplers (Gladhands)

ANSI/SAE J323-JUL98, Test Method for Determining Cold Cracking of Flexible Plastic Materials

ANSI/SAE J370-MAY98, Bolt and Capscrew Sizes for Use in Construction and Industrial Machinery

ANSI/SAE J377-MAY98, Performance of Vehicle Traffic Horns

ANSI/SAE J386-NOV97, Seat Belts for Construction Machines

ANSI/SAE J405-JUN98, Chemical Compositions of SAE Wrought Stainless Steels

ANSI/SAE J406-MAY98, Methods of Determining Hardenability of Steels

ANSI/SAE J423-FEB98, Methods of Measuring Case Depth

ANSI/SAE J429-MAY98, Mechanical and Material Requirements for Externally Threaded Fasteners

ANSI/SAE J430-MAY98, Mechanical and Chemical Requirements for Nonthreaded Fasteners Carbon Steel Solid Rivets

ANSI/SAE J47-JUL98, Maximum Sound Level Potential for Motorcycles

ANSI/SAE J482-MAY98, Hexagon High Nuts

ANSI/SAE J483-MAY98, Crown (Blind, Acorn) Nuts

ANSI/SAE J485-MAY98, Holes in Bolt and Screw Shanks and Slots in Nuts for Cotter Pins

ANSI/SAE J51-AUG98, Automotive Air Conditioning Hose

ANSI/SAE J514-JUN98, Hydraulic Tube Fittings

ANSI/SAE J516-DEC97, Hydraulic Hose Fittings

ANSI/SAE J517-FEB98, Hydraulic Hose

ANSI/SAE J534-JUL98, Lubrication Fittings

ANSI/SAE J551-5-DEC97, Performance Levels and Methods of Measurement of Magnetic and Electric Field Strength from Electric Vehicles, Broadband, 9 kHz to 30 MHz

ANSI/SAE J551/17-OCT97, Vehicle Electromagnetic Immunity - Power Line Magnetic Fields

ANSI/SAE J560-JUL98, Seven Conductor Electrical Connector for Truck-Trailer Jumper Cables

ANSI/SAE J567-MAR98, Lamp Bulb Retention System

ANSI/SAE J573-JUN98, Miniature Lamp Bulbs

ANSI/SAE J58-MAY98, Flanged 12-Point Screw

*Included in this SAE standard are the detailed general dimensional specifications applicable to flanged 12-point screws recognized as SAE standard and intended for general use in automotive and other ground-based vehicles and industrial equipment. Also included is Appendix A, covering runout sleeve gages and gaging.*

ANSI/SAE J581-JUN98, Auxiliary Driving Lamps

ANSI/SAE J584-JUN98, Motorcycle Headlamps

ANSI/SAE J594-JUL95, Reflex Reflectors

ANSI/SAE J599-AUG97, Lighting Inspection Code

ANSI/SAE J626-AUG98, Diesel Fuel Injection – End Mounting Flanges for Fuel Injection Pumps

ANSI/SAE J631-SEP98, Radiator Nomenclature

ANSI/SAE J636-AUG97, V-Belts and Pulleys

ANSI/SAE J637-AUG97, Automotive V-Belt Drives

ANSI/SAE J661-FEB97, Brake Lining Quality Test Procedure

ANSI/SAE J67-JUL98, Shovel Dipper, Clam Bucket, and Dragline Bucket Rating

*The purpose of this document is t provide a uniform method for determining the SAE rated capacity and SAE struck capacity for shovel dippers and clam buckets, and the SAE rated capacity fo dragline buckets.*

ANSI/SAE J684-JUN98, Trailer Couplings, Hitches, and Safety Chains - Automotive Type

ANSI/SAE J694-AUG98, Disc Wheel/Hub or Drum Interface Dimensions – Commercial Vehicles

*This SAE Recommended Practice contains dimensions and their tolerances concerning disc wheel to hub or drum interface areas for commercial vehicles and multipurpose passenger vehicles. Stamped disc wheels for single applications and special or less common applications are not covered in this document.*

ANSI/SAE J773-MAY98, Conical Spring Washers

*This SAE Standard covers dimensional, material, and general specifications and methods of test for two types of general purpose conical spring washers, designated type L and type H, for use as loose washers over screws and bolts, and also for use as pre-assembled washers in screw and washer assemblies.*

ANSI/SAE J78-MAY98, Steel Self-Drilling Tapping Screws

ANSI/SAE J81-SEP97, Thread Rolling Screws

ANSI/SAE J82-MAY98, Mechanical and Quality Requirements for Machine Screws

ANSI/SAE J820-JUL98, Crane Hoist Line Speed and Power Test Code

*This code applies primarily to mobile cranes that lift loads by means of a drum and hoist line mechanism. It can be used to determine the hoist line speed and power of other hoist line mechanisms, if load can be held constant and hoist line travel distance is sufficient for the accuracy of the line speed measurements prescribed.*

## ANSI/SAE J831-MAR98, Electrical Definitions

*This SAE Standard contains the industry standard definitions for electrical equipment used in the generation of electric power onboard today's conventional road vehicles. It is intended to complement the electronic terminology that was formerly documented in SAE J1213 (canceled) and/or in other industry glossaries of electrical/electronic devices.*

## ANSI/SAE J839-SEP98, Passenger Car Side Door Latch Systems

*This SAE Recommended Practice establishes minimum performance requirements and test procedures for evaluating and testing passenger car side door latch systems. It is limited to tests that can be conducted on uniform test fixtures and equipment in commercially available laboratory test facilities. The test procedures and minimum performance requirements outlined in this document are based on currently available engineering data. It is intended that all portions of the document will be periodically reviewed and revised, as additional knowledge regarding vehicle latch performance under impact conditions is developed.*

## ANSI/SAE J840-JUN98, Test Procedures for Brake Shoe and Lining Bonds

*This SAE Recommended Practice covers equipment and procedures for qualification of bonded or integrally molded drum and disc shoe and lining assemblies. It also provides some short, semi-quantitative test procedures for checking bonding or molding process control.*

## ANSI/SAE J844-JUN98, Nonmetallic Air Brake System Tubing

*This SAE Standard covers the minimum requirements for nonmetallic tubing as manufactured for use in air brake systems. Nonreinforced products are designated type A and reinforced products type B. It is not intended to cover tubing for any portion of the system which operates below -40 °C (-40 °F), above +93 °C (+200 °F), above a maximum working gage pressure of 1030 kPa (150 psi), or in an area subject to attack by battery acid. This tubing is intended for use in the brake system for connections which maintain a basically fixed relationship between components during vehicle operation. Coiled tube assemblies required for those installations where flexing occurs are covered by this document and SAE J1131 to the extent of setting minimum requirements on the essentially straight tube and tube fitting connections which are used in the construction*

## ANSI/SAE J845-MAY97, 360 Degree Warning Lamp for Authorized Emergency Maintenance and Service Vehicles

*This SAE Recommended Practice provides test procedures, requirements, and guidelines for single color, optical warning devices.*

## ANSI/SAE J891-MAY98, Spring Nuts

## ANSI/SAE J911-MAR98, Surface Roughness and Peak Count Measurement of Cold-Rolled Steel Sheet

*This SAE Recommended Practice describes a method for measuring Roughness Average (Ra) and Peak Count (PC) of the surface of cold-rolled steel sheet. The method includes a system for equipment configuration, calibration, and procedures for determining average surface roughness, Ra (µm or µin), and average peak count, PC (peaks per cm or peaks per inch) on cold-rolled steel sheet surfaces.*

## ANSI/SAE J933-MAY98, Mechanical and Quality Requirements for Tapping Screws

*This SAE Recommended Practice covers the mechanical and quality requirements for steel tapping screws used in automotive and related industries. It does not apply to corrosion resistant (stainless) steel screws. (Dimensional requirements for most types of screws mentioned herein are covered in SAE J478.) The primary objective of the specification is to insure that screws form or cut mating threads in materials of construction into which they are normally driven, without deforming their own thread and without breaking during assembly or service. NOTE: Certain limitations on basic material and manufacturing processes have been incorporated because the size and configuration of the parts under consideration make them vulnerable to relatively small variations in chemistry, heat treatment, etc., and because experience has shown that in processing it is difficult to keep these variables*

## ANSI/SAE J934-SEP98, Vehicle Passenger Door Hinge Systems

*The scope of this SAE Recommended Practice is to establish recommended uniform test procedures and minimum static load requirements for vehicle passenger door hinge systems. Tests are described that can be conducted on test fixtures and equipment in laboratory test facilities. The test procedures and minimum performance requirements outlined in this document are based on currently available engineering data. It is intended that all portions of the document be periodically reviewed and revised as additional knowledge regarding vehicle hinge system performance under impact conditions is developed.*

## ANSI/SAE J964-JAN98, Test Procedure for Determining Reflectivity of Rear-View Mirrors

*This SAE Recommended Practice describes methods for determining total and specular reflectance for mirrors with flat and curved surfaces and a method for determining diffuse reflectance and haze for mirrors with flat surfaces.*

ANSI/SAE J972-AUG97, Moving Rigid Barrier Collision Tests

*Collision tests are conducted on automotive vehicles to obtain information of value in evaluation of structural integrity and in reducing the risk of occupant injuries. The deformation resulting from a moving rigid barrier impact is more severe at a given speed than that produced by using an actual vehicle, but is more readily reproducible than that occurring during vehicle to vehicle impacts. The purpose of this SAE Recommended Practice is to establish sufficient standardization of such moving barriers and moving barrier collision methods so that results of tests conducted at different facilities may be compared.*

ANSI/SAE J986-MAY98, Sound Level for Passenger Cars and Light Trucks

ANSI/SAE J999-JUL98, Crane Boom Hoist Disengaging Device

*This SAE Standard applies to cranes which are equipped to adjust the boom angle by hoisting and lowering means through rope reeving.*

ANSI/SAE JA1000-JUN98, Reliability Program Standard

ANSI/SAE JA1002-JUL98, Software Reliability Program Standard

ANSI/SAE JA1004-JUL98, Software Supportability Program Standard

ANSI/SAE Z26.1-1996, Safety Glazing Materials for Glazing Motor Vehicles and Motor Vehicle Equipment Operating on Land Highways - Safety Standard

## SBS (Society for Biomolecular Sciences)

ANSI/SBS 1-2004, Microplates - Footprint Dimensions

*Describes the footprint dimensions required of a microplate that is considered to meet the standards. Also outlines the conditions required for making necessary measurements*

ANSI/SBS 2-2004, Microplates - Height Dimensions

*Describes the height dimensions required of a microplate that is considered to meet the standards. This standard also outlines the conditions required for making necessary measurements.*

ANSI/SBS 3-2004, Microplates - Bottom Outside Flange Dimensions

*Describes the bottom outside flange dimensions required of a microplate that is considered to meet the standards. This standard also outlines the conditions required for making necessary measurements.*

ANSI/SBS 4-2004, Microplates - Well Positions

*Describes the well positions required of a microplate that is considered to meet the standards. This standard also outlines the conditions required for making necessary measurements.*

## SCTE (Society of Cable Telecommunications Engineers)

ANSI/SCTE 01-2006, “F” Port (Female Outdoor) Physical Dimensions

*The purpose of this document is to specify requirements for female outdoor “F” ports that are used in the 75 ohm RF broadband communications industry. This specification applies to SCTE drop cable specifications ANSI/SCTE 74 2003, ANSI/SCTE 71 2003, ANSI/SCTE 100 2004, IPS SP 005 and IPS SP 006.*

ANSI/SCTE 02-2006, Specification for” F” Port, Female, Indoor

*The purpose of this document is to specify requirements for female indoor “F” ports that are used in the 75 ohm RF broadband communications industry. This specification applies to SCTE drop cable specifications ANSI/SCTE 74 2003, ANSI/SCTE 71 2003, ANSI/SCTE 100 2004, IPS SP 005 and IPS SP 006.*

ANSI/SCTE 03-2003, Test Method for Coaxial Cable Structural Return Loss

*The purpose of this procedure is to provide instructions to measure cable structural return loss (SRL). There are two test methods presented, variable bridge method and fixed bridge method, as the accuracy, ease-of-use and required test equipment differs for each test method.*

ANSI/SCTE 04-1997, Test Method for “F” Connector Return Loss

*Provides instructions to measure cable structural return loss (SRL). Two methods are presented: Variable Bridge Method and Fixed Bridge Method, each with major advantages and delinquencies described.*

ANSI/SCTE 05-1999, Test Method for “F” Connector Return Loss In-Line Pair

*Measures the return loss characteristics of a pair of the type “F” connector and the cable interference, inserted in the middle of a cable, from 5 MHz to 1000 MHz. This test method makes use of the time domain gating feature of the network analyzer to remove the near and far end test set connector effects.*

ANSI/SCTE 06-1999 (R2005), Composite Distortion Measurement (Composite Triple Beat & Composite Second Order)

*This document describes a test procedure for the laboratory and production measurement of composite distortion products. There are two types of composite distortions considered: Composite Second Order and Composite Triple Beat. In order to obtain a stable, repeatable measurement, this test procedure describes testing performed with continuous wave (CW) carriers. See ANSI/SCTE 96 2003 for a discussion of the selection of CW carrier frequencies.*

ANSI/SCTE 07-2006, Digital Video Transmission for Cable Television

*This standard describes the framing structure, channel coding, and channel modulation for a digital multi-service television distribution system that is specific to a cable channel. The system can be used transparently with the distribution from a satellite channel, as many cable systems are fed directly from satellite links.*

ANSI/SCTE 09-2005, Test Method for Cold Bend

*The purpose of this procedure is to provide instructions on testing the cold bend properties of flexible outdoor polyvinyl chloride (PVC) or polyethylene (PE) cable.*

ANSI/SCTE 10-2001, Test Method for Flexible Coaxial Cable Impact Test

*Establishes that specified flexible RF coaxial drop cables are capable of withstanding an impact at low temperatures.*

ANSI/SCTE 100-2004, Specification for 75 Ohm Smooth Aluminum Subscriber Access Cable

*Applies to the material, electrical and mechanical properties of seventy-five ohm smooth aluminum outer conductor coaxial cables. Seventy-five ohm smooth aluminum outer conductor coaxial cables are used to distribute radio frequency (R.F.) signals and power for voice, data, and video applications as applicable.*

ANSI/SCTE 101-2006, Mainline Splice Connector Return Loss

*This document describes a procedure to measure the Return Loss characteristics of a single Mainline Splice Connector interfaced between (2) mainline cables. It implements the time domain-gating features of the network analyzers, which removes the interfaces, and far end termination from the DUT (device under test) measurement.*

ANSI/SCTE 102-2005, Cable Retention Force Testing of Trunk & Distribution Connectors

*The purpose of this document is to define a standard test procedure to prepare, test and document the retention forces of a given connector/cable assembly, as whole or separate components.*

ANSI/SCTE 103-2004, Test Method for DC Contact Resistance, Drop cable to F-Connectors and F81 Barrels

*The purpose of this test procedure is to measure the contact resistance or intimacy of contact between an F connector and the drop cable shield (outer conductor contact resistance) or the cable center conductor and the F81 barrel (inner conductor contact resistance.). This method is used to evaluate the tendency for unwanted high-resistance contacts. Depending on the application, high resistance contacts may cause excessive energy losses, overheating and possibly, in Cable Telecommunications systems, common path distortions. In any case however, it is most desirable to have contact resistance as close to zero as possible.*

ANSI/SCTE 104-2005, Automation System to Compression System Communications Applications Program Interface (API)

*This Standard defines the Communications API between an Automation System and the associated Compression System that will insert SCTE 35 2004 private sections into the outgoing Transport Stream. This document serves as a companion to both SCTE 35 2004 and SCTE 30 2001.*

ANSI/SCTE 105-2005, Uni-Directional Receiving Device Standard for Digital Cable

*The goal of this standard is to define certain requirements for host devices that are interoperable across cable systems in North America. Information is presented in this document to define the minimum requirements for Uni-Directional Receiving Devices (“UDRDs”) to operate on North American Digital Cable systems.*

ANSI/SCTE 106-2005, DOCSIS Set-Top Gateway (DSG) Specification

*The DOCSIS Set-top Gateway (DSG) specification defines the interface requirements on a DOCSIS CMTS and DOCSIS CM to support the configuration for transport of a class of service known as "Out-Of-Band (OOB) messaging" between a Set-top Controller (or application servers) and the customer premise equipment (CPE).*

ANSI/SCTE 107-2005, Embedded Cable Modem Device Specification

*This specification defines additional features that must be added to a DOCSIS Cable Modem for implementations that embed the Cable Modem with another application, such as an IPCablecom MTA.*

ANSI/SCTE 108-2006, Test Method for Dielectric Withstand of Coaxial Cable

*The purpose of this document is to provide a test standard for detecting flaws in the insulation (sometimes referred to as the dielectric) of a completed coaxial cable. This test, usually referred to as a Hipot or Dielectric Withstand Test, verifies that the insulation can withstand a specified voltage applied between the center conductor and outer conductor for a specified time interval, without resulting in a dielectric breakdown. Upon successful completion of this hipot test, it can be concluded that the inner and outer conductors are properly insulated from each other.*

ANSI/SCTE 109-2005, Test Procedure for Common Path Distortion (CPD)

*The purpose of this document is to establish the standard methodology used to measure Common Path Distortion (CPD) in Cable Telecommunications Systems.*

ANSI/SCTE 11-2001 (R2006), Test Method for Aerial Cable Corrosion Protection Flow

*This test is to determine that moisture blocking material used in cables intended for indoor and aerial applications, does not flow or drip out of the cable.*

ANSI/SCTE 110-2005, Hybrid Fiber Coax Outside Plant Status Monitoring: Alternative Power Supply to Transponder Interface Bus (PSTIB) for HMS Transponders

*The Power Supply to Transponder Interface Bus (PSTIB) was defined by ANSI/SCTE 25-3 2002 (formally HMS 022). Some applications have been identified that may have under certain conditions a powering requirement which exceeds those defined by HMS 022. This specification will not delete or replace the ANSI/SCTE 25-3 2002 specification. It will be a supplement to and will coexist with HMS022.*

ANSI/SCTE 111-2005, Specification for 5/8-24 Plug, Male Adapters

*The purpose of this specification is to serve as a recommended guideline for the physical dimensions of 5/8 - 24 plug (male) hard-line adapters that are used as interconnects in the 75 ohm RF broadband communications industry.*

ANSI/SCTE 112-2005, HMS/DOCSIS® TPower Supply Transponder

*This document contains the requirements for a HMS / DOCSIS® Transponder for Outside Plant Power Supply. The HMS / DOCSIS® transponder is defined to be a device where the DOCSIS component has been developed or modified specifically for the HMS / DOCSIS® application. This requirement leverages various HMS specifications and MIBS, as well as the DOCSIS® 1.1 specifications and MIBS.*

ANSI/SCTE 113-2006, HMS Digital Transport Management Information Base SCTE-HMS-HE-DIG-TRANSPORT-MIB

*This document provides MIB definitions for HMS Digital Transport equipments present in the headend (or indoor) and is supported by a SNMP agent.*

ANSI/SCTE 114-2006, Test Method for Dimensions of Corrugated Subscriber Access Cable

*The purpose of this document is to measure one or more of the following characteristics related to corrugated subscriber access cables: Center Conductor Diameter, Corrugation Pitch, Corrugation Major OD, Corrugation Minor OD, Corrugation Root Diameter, Corrugation Crest Diameter, Diameter Over Jacket.*

ANSI/SCTE 115-2006, Test Method for Reverse Path (Upstream) Intermodulation Using Two Carriers

*This test procedure defines a method of measurement of intermodulation distortion in the reverse “upstream” path of Cable Telecommunications equipment.*

ANSI/SCTE 116-2006, Specification for 5/8-24 Port, Female Adapters

*The purpose of this specification is to serve as a recommended guideline for the physical dimensions of female 5/8 - 24 port that is used on hard-line adapters for interconnection in the 75 ohm RF broadband communications industry.*

ANSI/SCTE 117-2006, Specification for Braided 75 Ohm, Mini-Series Broadband Coaxial Cable

*1.1 This specification defines the required performance with regards to electrical and mechanical properties of 75-ohm, Braided, Mini-Series Coaxial Cable for Broadband applications. 1.2 These cables are used in the transmission of RF signals and power for voice, data and video applications.*

ANSI/SCTE 118-1-2006, Program-Specific Ad Insertion - Data Field Definitions, Functional Overview and Application Guidelines

*This document defines the functionality associated with Program-Specific Ad Insertion. Program-Specific Ad Insertion is the scheduling and insertion of a spot into a digital broadcast program based on the program identifier passed in the SCTE 35 cue message. The usage of specific data fields defined in SCTE 35 are defined in this document.*

ANSI/SCTE 118-2-2006, Program-Specific Ad Insertion - Content Provider to Traffic Communication Applications Data Model

*This document describes the information that is required to communicate the program and avail structure from a Network to an Affiliate's SCTE 35 compliant Traffic System. Additionally, this document describes the information required to comply with the Tier 0, Tier 1 and Tier 2 Program Specific Ad Insertion models as defined by SCTE 118-1.*

ANSI/SCTE 118-3-2006, Program-Specific Ad Insertion - Traffic System to Ad Insertion System File Format Specification

*This document defines the information that shall be passed from an Affiliate's Traffic system to an Affiliate's Ad Insertion System for communications of ad insertion schedules, including Unique Program Identifiers where specified. It specifies the required data for Multi-Tiered, Program Specific Insertion, as well as the file format for the data communications.This document only describes digital ad insertion with SCTE 35 cue messages.*

ANSI/SCTE 119-2006, Measurement Procedure for Noise Power Ratio

*This procedure defines a method of measurement for Noise Power Ratio (NPR) of active Cable Telecommunications equipment. It is intended for measurement of 75-ohm devices having type "F" or 5/8-24 KS connectors. See the Cable Telecommunications Testing Guidelines document, SCTE 96 2003 (formerly IPS TP 200), for a discussion of proper testing techniques. This procedure uses a spectrum analyzer to measure the noise power in a narrow frequency band. Other means of measurement such as a narrow band filter followed by a power meter may be used as long as the results can be shown to correlate to this method.*

ANSI/SCTE 12-2001 (R2006), Center Conductor Bond to Dielectric for Trunk, Feeder and Distribution Coaxial Cables

*This test is to etermine the bond strength etween the center conductor and dielectric for specified semi-flexible coaxial cables.*

ANSI/SCTE 120-2006, Test Method for Balance Ratio of 75-300 Ohm Matching Transformer

*This test procedure provides a method for measuring the balance ratio of broadband radio frequency (RF) devices whose primary purpose is to provide an impedance and connector match between 75 W, coaxial, type “F” and 300 W twin-lead open screw connectorized devices.*

ANSI/SCTE 121-2006, Test Method for Downstream Bit Error Rate

*The purpose of this test is to measure Bit Error Rate (BER) of downstream (forward path) broadband telecommunications QAM signals. This procedure will address mainly pre-Forward Error Correction BER results for 64 and 256 QAM.*

ANSI/SCTE 122-2006, SCTE Recommended Optical Fiber Cable Types for Outside Plant Drop Applications

*The purpose of this document is to provide guidance in selection of a suitable outside plant (OSP) optical drop cable with respect to different application environments.*

ANSI/SCTE 123-2006, Specification for “F” Connector, Male, Feed-Through

*The purpose of this document is to specify requirements for male “F” feed-through connectors that are used in the 75 ohm RF broadband communications industry.*

ANSI/SCTE 124-2006, Specification for “F” Connector, Male, Pin Type

*The purpose of this document is to specify requirements for male “F” pin type connectors that are used in the 75 ohm RF broadband communications industry.*

ANSI/SCTE 125-2007, Test Method for Mainline PIN (Plug) Connector Return Loss

*Describes a procedure to measure the Return Loss characteristics of a single Mainline Pin Connector interfaced between (1) mainline cable and a precision airline.*

ANSI/SCTE 13-2001 (R2006), Dielectric Air Leakage Test Method For Trunk, Feeder and Distribution Coaxial Cable

*The purpose of this test is to detect voids in the dielectric and the bond between the dielectric and the center conductor.*

ANSI/SCTE 14-2001, Test Method for Hex Crimp Tool Verification/Calibration

*Determines and verifies the actual crimp dimension of hex crimp tools, the measurement technique for determining the final hex size that may effect pull-off performance of the cable-to-connector interface, and the calibration technique for adjusting hex crimp tools.*

ANSI/SCTE 15-2002 (R2006), Specification for Trunk, Feeder, and Distribution Coaxial Cable

*This specification applies to material, electrical and mechanical properties of seventy-five ohm coaxial cables as defined herein.*

ANSI/SCTE 16-2001, Test Procedure for Hum Modulation

*Defines and measures hum modulation in active and passive broadband telecommunications equipment. This procedure presents two methods for measuring hum modulation in the time domain, with a sensitivity exceeding -80 dB. These methods are referred to as the 1dB delta and the differential voltage method. A mathematical relationship between time domain and frequency domain measurement methods is also provided*

ANSI/SCTE 17-2001, Test Procedure for Carrier to Noise (C/N, CCN, CIN, CTN)

*Defines the measurement procedure for determining the ratio of carrier to thermal noise and "noise-like" intermodulation product levels, relative to the carrier level of a CS signal. The noise contribution of the test equipment is also measured to allow for correction of readings near the test equipment noise floor. The Test Procedures Introduction document (IPS TP 200) has additional definitions common to this and other SCTE test procedures.*

ANSI/SCTE 19-2006, Methods for Isochronous Data Services Transport

*This proposal represents transmission format for the carriage of isochronous data services compatible with digital multiplex bitstreams constructed in accordance with ISO/IEC 13818-(MPEG-2 Systems). Bit rates for the data services extend from 19.2 kbps to 9.0 Mbps.*

ANSI/SCTE 20-2004, Method for Carriage of Closed Captions and Non-real Time Sampled Video

*This document defines a standard for the carriage of Vertical Blanking Interval (VBI) services in MPEG-2 compliant bitstreams constructed in accordance with ISO/IEC 13818-2.*

ANSI/SCTE 21-2002 (R2006), Carriage of National Television System Committee (NTSC) Vertical Blinking Interval (VBI) Data in Cable Digital Transport Streams

*This document defines a standard for the carriage of Vertical Blanking Interval (VBI) services in MPEG-2 compliant bitstreams constructed in accordance with ISO/IEC 13818-2. The approach builds upon a data structure defined in the ATSC A/53 Digital Television Standard, and is designed to be backwards-compatible with that method.*

ANSI/SCTE 22-1-2002, DOCSIS 1.0 Radio Frequency Interface

*Maintenance of the DOCSIS 1.0 Radio Frequency Interface Specification (RFI) developed by CableLabs. The RFI specification defines the radio-frequency interface specifications for high-speed data-over-cable systems.*

ANSI/SCTE 22-2-2002, DOCSIS 1.0 Baseline Privacy Interface

*Maintenance of the DOCSIS 1.0 Baseline Privacy Interface Specification (BPI) developed by CableLabs. The BPI specification describes a simple Data Privacy function for a Cable Modem Termination System (CMTS) for high-speed data-over-cable systems.*

ANSI/SCTE 22-3-2002, DOCSIS 1.0 Operations Support System Interface

*Maintenance of the DOCSIS 1.0 Operations Support Systems Interface Specification (OSSI) developed by CableLabs. The OSSI outlines the operations support system interface for high-speed data-over-cable systems.*

ANSI/SCTE 23-1-2005, DOCSIS 1.1 Part 1: Radio Frequency Interface

*This document defines the radio-frequency interface specifications for high-speed data-over-cable systems.*

ANSI/SCTE 23-2-2002, DOCSIS 1.1 Part 2: Baseline Privacy Interface Plus

*Outlines the Management Information Bases (MIBs) for high-speed systems developed by the DOCSIS working group. Three Simple Network Management Protocol MIBs are defined. 1. DOCSIS Radio Frequency Interface MIB and defines objects that enable management of the Cable Television Media Access Control and physical layer interfaces. 2. DOCSIS Cable Device MIB and defines objects that enable management of CMs and Cable Modem Termination Systems. 3. DOCSIS Base Line Interface MIB and defines objects that enable management of security features in the Cable Modem and Cable Modem Termination System.*

ANSI/SCTE 23-3-2005, DOCSIS 1.1 Part 3: Operations Support System Interface

*This standard defines the Network Management requirements for support a DOCSIS® 1.1 environment. More specifically, the specification details the SNMP v3 protocol and how it coexists with SNMP V1/V2. The RFCs and Management Information Base (MIB) requirements are detailed as well as interface numbering, filtering, event notifications, etc. Basic network management principals such as account, configuration, fault, and performance management are incorporated in this specification for better understanding of managing a high-speed cable modem environment.*

ANSI/SCTE 24-1-2006, IPCablecom 1.0 Part 1: Architectural Framework for the Delivery of Time Critical Services Over Cable Television Networks Using Cable Modems

*This document provides the architectural framework that will enable cable television operators to provide time critical services over their networks that have been enhanced to support cable modems.*

ANSI/SCTE 24-10-2006, IPCablecom Part 10: Security Specification

*Authentication, access control, signaling and media content integrity, confidentiality, and non-repudiation security services must be provided as defined herein for each of the network element interfaces.*

ANSI/SCTE 24-11-2006, IPCablecom Part 11: Internet Signaling Transport Protocol (ISTP)

*This document addresses the protocol to implement SS7 signaling interconnection in a distributed IPCablecom PSTN Gateway architecture. Specifically, it defines the messages and procedures for transporting SS7 ISUP, TCAP, and TUP messages between the IPCablecom control functions (Media Gateway Controller and Call Management Server) and the SS7 Signaling Gateway.*

ANSI/SCTE 24-12-2006, IPCablecom Part 12: Trunking Gateway Control Protocol (TGCP)

*This document describes an IPCablecom profile of an Application Programming Interface (API) called a Media Gateway Control Interface (MGCI) and a corresponding protocol (MGCP) for controlling Voice-over-IP (VoIP) PSTN Gateways from external call control elements. The MGCP assumes a call control architecture where the call control “intelligence” is outside the gateways and handled by external call control elements. The IPCablecom profile as described in this document will be referred to as the IPCablecom Trunking Gateway Control Protocol (TGCP.*

ANSI/SCTE 24-13-2006, IPCablecom Part 13: Electronic Surveillance Standard

*This specification defines the interface between a telecommunications carrier that provides telecommunications services to the public for hire using IPCablecom capabilities (a “PC/TSP”) and a Law Enforcement Agency (LEA) to assist the LEA in conducting lawfully authorized electronic surveillance. Companies using IPCablecom capabilities will not in the normal case be “telecommunications carriers.” Instead they will be providers of information services.*

ANSI/SCTE 24-14-2002, IPCablecom Embedded MTA Primary Line Support

*This standard defines the E-MTA requirements necessary to support primary line communications service. An E-MTA is a Cable Modem (CM) integrated with an IPCablecom Media Terminal Adapter (MTA).*

ANSI/SCTE 24-15-2002, IPCablecom Interdomain Quality of Service

*This standard describes a set of Quality-of-Service(QoS) mechanisms for the IPCablecom project. The objective of this standard is to define an architectural model for end-to-end Quality of Service for IPC Inter-and Intra-Domain environments. The standar*

ANSI/SCTE 24-16-2002, IPCablecom Management Event Mechanism

*This standard defines the Management Event Mechanism that IPCablecom elements can use to report asynchronous events that indicate malfunction situations and notification about important non-fault situations. Events are defined in this standard as condit*

ANSI/SCTE 24-17-2002, IPCablecom Audio Server Protocol

*This standard describes the architecture and protocols that are required for playing announcements in voice-over-IP IPCablecom networks. Different carrier feature sets require different announcement sets and announcement formats. Announcements can be as*

ANSI/SCTE 24-18-2004, IPCablecom CMS to CMS Signaling

*This document describes the IPCablecom Call Management Server (CMS) to CMS Signaling protocol intended for use by a CMS to communicate with another CMS in order to support packet-based voice and other real-time multimedia applications.*

ANSI/SCTE 24-19-2004, IPCablecom CMS Subscriber Provisioning Specification

*The scope of this document is limited to the provisioning of an IPCablecom 1.0 CMS by a single service provider.*

ANSI/SCTE 24-2-2006, IPCablecom 1.0 Part 2: Audio Codec Requirements for the Provision of Bi-directional Audio Service Over Cable Television Networks Using Cable Modems

*This standard specifies the audio (voice) codecs that are to be used in the provisioning of bi-directional audio services over cable television distribution networks using IP technology (i.e., IPCablecom service). The standard also addresses codec options and packetization issues.*

ANSI/SCTE 24-20-2005, Requirements for Preferential Telecommunications over IPCablecom Networks

*This Standard defines requirements for Preferential Telecommunications over IPCablecom networks. The essential aspects of Preferential Telecommunications over IPCablecom that this Standard covers can be grouped into two areas: prioritization and authentication. These two areas include capabilities to support telecommunications in IPCablecom that may require preferential treatment (e.g. Telecommunications for Disaster Relief and Emergency Telecommunications Service.*

ANSI/SCTE 24-21-2006, BV16 Speech Codec Specification for Voice over IP Applications in Cable Telephony

*This document contains the description of the BV16 speech codec. BV16 compresses 8 kHz sampled narrowband speech to a bit rate of 16 kb/s by employing a speech coding algorithm called Two-Stage Noise Feedback Coding (TSNFC.*

ANSI/SCTE 24-3-2006, IPCablecom Part 3: Network Call Signaling Protocol for the Delivery of Time-Critical Services over Cable Television Using Data Modems

*This specification describes a profile of the Media Gateway Control Protocol (MGCP) for IPCablecom embedded clients, which we will refer to as the IPCablecom Network-based Call Signaling (NCS) protocol. MGCP is a call signaling protocol for use in a centralized call control architecture, and assumes relatively simple client devices. The call signaling protocol is one layer of the overall IPCablecom suite of specifications and relies upon companion protocol specifications to provide complete end-to-end IPCablecom functionality.*

ANSI/SCTE 24-4-2006, IPCablecom Part 4: Dynamic Quality of Service for the Provision of Real-Time Services over Cable Television Networks Using Cable Modems

*This document addresses requirements for a client device to obtain access to IPCablecom network resources. In particular, it specifies a comprehensive mechanism for a client device to request a specific Quality of Service from the DOCSIS® network. Extensive examples illustrate the use of the specification.*

ANSI/SCTE 24-5-2006, IPCablecom Part 5: Media Terminal Adapter (MTA) Device Provisioning Requirements for the Delivery of Real-Time Services over Cable Television Using Cable Modems

*The scope of this document is limited to the provisioning of an IPCablecom 1.0 embedded-MTA device by a single provisioning and network management provider. An attempt has been made to provide enough detail to enable vendors to build an embedded-MTA device that is interoperable in an IPCablecom 1.0 network configuration. This document defines the provisioning of MTA components of the embedded MTA device (unless stated otherwise.*

ANSI/SCTE 24-6-2006, IPCablecom Part 6: IPCablecom Management Information Base (MIB) Framework

*This specification describes the framework in which IPCablecom MIB (Management Information Base) modules are described. It provides information on the management requirements of IPCablecom compliant devices and functions and how these requirements are supported in the MIB modules. It is intended to support and complement the actual MIB module documents, which are issued separately.*

ANSI/SCTE 24-7-2006, IPCablecom Part 7: Media Terminal Adapter (MTA) Management Information Base (MIB) Requirements

*This standard describes the IPCablecom MTA MIB requirement.*

ANSI/SCTE 24-8-2006, IPCablecom Part 8: Signaling Management Information Base (MIB) Requirements

*This specification describes the IPCablecom Signaling (SIG) MIB requirements.*

ANSI/SCTE 24-9-2006, IPCablecom Part 9: Event Message Requirements

*This specification describes the concept of Event Messages used to collect usage for the purposes of billing within the IPCablecom architecture. It details a transport protocol independent Event Message attribute TLV format, an Event Message file format, mandatory and optional transport protocols, the various Event Messages, lists the attributes each Event Message contains, and lists the required and optional Event Messages associated with each type of end-user service supported. In order to support vendor interoperability, implementations must minimally support RADIUS as a transport protocol.*

ANSI/SCTE 25-1-2002, Hybrid Fiber/Coax Outside Plant Status Monitoring - Physical (PHY) Layer

*The HMS Physical (PHY) Layer Specification v 1.0 describes the physical layer portion of the protocol stack used for communication between HMS-compliant transponders and the centralized headend element.*

ANSI/SCTE 25-2-2002, Hybrid Fiber/Coax Outside Plant Status Monitoring - Media Access Control (MAC) Layer

*The HMS Media Access Control (MAC) Layer Specification v1.0 describes the messaging and communications protocols that support reliable and efficient communications between HMS-compliant transponders that interface to managed outside plant network elements and a centralized headend element. The MAC specifications will also include a standard set of HMS SNMP MIBs to support standard communications from higher level network managers.*

ANSI/SCTE 25-3-2005, Hybrid Fiber/Coax Outside Plant Status Monitoring Part 3: - PS to T Interface SCTE Subcommittee Code: HMS 022

*This specification describes the PSTIB PHY and DLL layer requirements and protocols that must be implemented to support reliable communications between all Type 2 and Type 3 compliant OSP HMS transponders on the HFC plant and managed OSP power supplies and related hardware.*

ANSI/SCTE 25-4-2002, Hybrid Fiber/Coax Outside Plant Status Monitoring Part 4: HMS Power Supply to Transponder Interface Acceptance Test

*The Acceptance Test Procedures (ATP) is a collection of test procedures used to demonstrate that a power supply (PS) or transponder (XP) complies with the SCTE 25-3 standard. ATP does not require opening the equipment under test to access special test points or to invoke test modes of operation.*

ANSI/SCTE 26-2004, Home Digital Network Interface Specification with Copy Protection

*This specification contains requirements and options for an IEEE 1394 digital interface between a cable TV set top box (called a Host Device in this standard because it “hosts” a removable security module), and a DTV receiver.*

ANSI/SCTE 27-2003, Subtitling Methods for Broadcast Cable

*This document defines a standrd for a transmission protocol supporting multilingual subtitling services to augment video and audio within MPEG-2 multiplexes.*

ANSI/SCTE 28-2004, Host-POD Interface

*Defines the characteristics and normative specifications for the interface between Point of Deployment (POD) security modules owned and distributed by cable operators, and commercially available consumer receivers and set-top terminals (“Host devices”) that are used to access multi-channel television programming carried on North American cable systems.*

ANSI/SCTE 29-2002, Torque Requirements for Bond Wire Penetration of Bonding Set Screw

*This test procedure is to determine the mechanical force needed to penetrate bonding wire to the appropriate depth. Bonding wire penetration should be less than 25% of wire O.D.*

ANSI/SCTE 30-2006, Digital Program Insertion Splicing API

*This Application Program Interface (API) creates a standardized method for communication between Servers and Splicers for the insertion of content into any MPEG-2 Output Multiplex in the Splicer. This API is flexible enough to support one or more Servers attached to one or more Splicers. Digital Program Insertion includes content such as spot advertisements of various lengths, program substitution, public service announcements or program material created by splicing portions of the program from a Server.*

ANSI/SCTE 31-2002, Test Method for Measuring Diameter Over Core

*To document sample preparation, sample testing, and test procedure for off line measurement of diameter over tape and ovality over tape of messenger cables.*

ANSI/SCTE 32-2002, Test Method for Ampacity

*Provides the current carrying capacity of ampacity of coaxial cables used in the telecommunications industry. (Formerly IPS TP 010)*

ANSI/SCTE 33-2002, Diameter of Drop Cable

*To determine one or more of the following characteristics relating to flexible coaxial drop cables: Cable jacket outside diameter; Average core diameter over foil; Center conductor diameter; Percentage of braid coverage. (Formerly IPS TP 015)*

ANSI/SCTE 34-2002, Test Method for Core Depth Verification

*Purpose is to determine the cored depth of semiflex aluminum sheath cable. The core depth is the internal measured distance between the dielectric foam and the square-cut end of the outer aluminum sheath. This test method will define the suggested method for core depth measurement. (Formerly IPS TP 500)*

ANSI/SCTE 35-2004, Digital Program Insertion Cueing Message for Cable

*Supports the splicing of MPEG-2 streams for the purpose of Digital Program Insertion, which includes advertisement insertion and insertion of other content types. An in-stream messaging mechanism is defined to signal splicing and insertion opportunities and it is not intended to ensure seamless splicing.*

ANSI/SCTE 36-2002, SCTE-ROOT Management Information Base (MIB) Definitions

*Defines a root Management Information Base (MIB) for use by all SCTE Hybrid Management Sub-Layer (HMS) Subcommittee standards documents*

ANSI/SCTE 37-2003, Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-ROOT Management Information Base (MIB) Definition

*(HMS 072) This document provides the branch object identifiers for each of the MIBs within the SCTE HMS Tree.*

ANSI/SCTE 38-1-2004, Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-PROPERTY-MIB Management Information Base (MIB) Definition

*Defines the "properties" that may be associated with each parameter in HMS MIBs.*

ANSI/SCTE 38-10-2003, Hybrid Management Sub-layer Management Information Base (MIB) - Part 10: SCTE-HMS-RFAMPLIFIER-MIB

*Describes the Management Information Protocol within the SCTE HMS cable plant system for the outside plant amplifiers.*

ANSI/SCTE 38-11-2004, Hybrid Management Sub-layer Management Information Base Part 11: SCTE-HMS-HEADENDIDENT-MIB

*This document provides the branch object identifiers for each of the MIBs within the SCTE HMS HEADENDIDENT Tree.*

ANSI/SCTE 38-2-2005, Hybrid Fiber Coax/Outside Plant Status Monitoring SCTE-HMS-ALARMS-MIB Management Information Base (MIB)

*This document defines the historical list of alarms detected by the transponder, as well as the SNMP trap generated for these alarms.*

ANSI/SCTE 38-3-2002, Hybrid Fiber Coax/Outside Plant Status Monitoring SCTE-HMS-COMMON-MIB Management Information Base (MIB)

*Defines the Common Management Information Base (MIB) for Hybrid Fiber-Coax management systems, and provides common information about Network Elements. This includes administrative information such as name, ID, model number, serial numbers vendor, and location; health indicators such as status and service state; and functional information such as power level and frequency range.*

ANSI/SCTE 38-4-2002, Hybrid Fiber Coax/Outside Plant Status Monitoring SCTE-HMS-PS-MIB Management Information Base (MIB)

*Defines information commonly available from HFC power supplies. Its structure permits multiple power supplies to be monitored by a single transponder.*

ANSI/SCTE 38-5-2002, Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-FIBERNODE-MIB Management Information Base

*HMS 025: Intended for use on all fiber node equipment, includes the US strand mount or outside plant fiber nodes, and some pedestal models. It does not apply to the pedestal racks used in the European cable networks*

ANSI/SCTE 38-6-2005, Hybrid Fiber/Coax Outside Plant Status Monitoring - SCTE-HMS-GEN-MIB Management Information Base (MIB) Definition

*This document provides the branch object identifiers for each of the MIBs within the SCTE HMS Tree.*

ANSI/SCTE 38-7-2002, Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-Transponder Interface Bus (TIB)-MIB Management Information Base (MIB) Definition

*Specific MIBs*

ANSI/SCTE 38-8-2002, Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-DOWNLOAD-MIB Management Information Base (MIB) Definition

*Specific MIBs*

ANSI/SCTE 39-2002, Test Method for Static Minimum Bending Radius for Coaxial Trunk, Feeder, and Distribution Cables

*This test procedure is to be used for initially establishing or alternatively verifying the minimum static bend radius for coaxial distribution cable products.*

ANSI/SCTE 40-2004, Digital Cable Network Interface Specification

*Defines the characteristics and normative specifications for the network interface between a cable television plant and commercially available consumer equipment that is used to access multi-channel television programming.*

ANSI/SCTE 41-2004, POD (Point of Deployment Copy Protection System)

*This standard defines the characteristics and normative specifications for the system that prevents unrestricted copying of such high value content as it crosses the POD-Host interface.*

ANSI/SCTE 42-2002, IP Multicast for Digital MPEG Networks

*The standard describes two methods to transmit IP datagrams over MPEG 2 digital transport streams. It describes the use of Digital Video Broadcasting (DVB) Multi-Protocol Encapsulation (MPE) Datagram Sections and the Advanced Television Systems Committee's (ATSC) Addressable Sections, to encapsulate IP datagrams for subsequent segmentation into fixed length MPEG transport packets. It also describes how the encapsulated data will be included within an MPEG Program in a manner that allows a digital MPEG Decoder to efficiently locate the data PID streams carrying multicast IP content.*

ANSI/SCTE 43-2005, Digital Video Systems Characteristics Standard for Cable Television

*Describes the characteristics and normative specifications for the Video Subsystem Standard for Cable Television.*

ANSI/SCTE 44-2005, Test Method for DC Loop Resistance

*This method is intended for use in determining the DC Loop Resistance of coaxial cables. Due to low resistances a four-wire test method is used.*

ANSI/SCTE 45-2002, Test Method for Group Delay

*Defines the test procedure to measure the group delay and group delay variation of a properly terminated device. This procedure is applicable to testing of 75W components.*

ANSI/SCTE 46-2002, Test Method for AC to DC Power Supplies

*This standard is to characterize, document and define test methods for AC to DC power supplies. These tests involve the measurement of AC input parameters and DC output parameters. The application of uniform test methods for power supplies will allow fair performance comparisons to be made between different power supplies. There are repetitive tests throughout this test document, in which many of the tests can be combined and performed at the same time.*

ANSI/SCTE 48-2-2003, Test Procedure for Measuring Relative Shielding Properties of Active and Passive Coaxial Cable Devices Using H-P Magnetic Close Field Probe

*This document outlines the procedures for determining the relative Shielding Effectiveness of cable telecommunication system devices employing a combination of Close Field probes and various Scalar Test equipment packages, through the use of defined, repeatable test practices.*

ANSI/SCTE 48-3-2004, Test Procedure for Measuring Shielding Effectiveness of Braided Coaxial Drop Cable Using the GTEM Cell

*This document details the procedure for measuring the Shielding Effectiveness (S.E.) of coaxial cable using the Gigahertz Transverse ElectroMagnetic (GTEM) cell. More particularly, this procedure applies to measuring the S.E. of 75 Ohm braided coaxial drop cables presently used within the broadband communications industry. S.E. measurements can be performed with or without the coaxial connectors removed from the measurement.*

ANSI/SCTE 49-2002, Test Method for Velocity of Propagation

*IPS TP 114 The method described in this procedure provides a means to measure the velocity of propagation (Vp), in coaxial cables. This method is for use with cables having low-loss dielectrics as noted in SCTE IPS SP-100 and SP-001 that have relative permittivity nearly constant with frequency.*

ANSI/SCTE 50-2002, Test Procedure for Measuring Regularity of Impendance of Coaxial Cable

*This document outlines the procedure for determining the regularity of impedance for coaxial cables using telemetry methods. The regularity of impedance is return loss in the time domain. With basic expertise in the use of time domain reflectometers (TDR), the tester can determine return loss of discontinuities (impedance changes) at specific points along a coaxial cable.*

ANSI/SCTE 51-2002, Test Method for Determining Drop Cable Braid Coverage

*IPS TP 116: Provides instruction on the calculation of braid coverage for braided coaxial drop cables. Braid coverage is expressed as a percentage of optical coverage of the underlying core by the braid wires. It is a function of the diameter of the cable core, the diameter of the wire braid, the number of carriers (groups of wire ends), the number of individual wires in each carrier and the picks per inch (distance between each carrier crossing.)*

ANSI/SCTE 52-2003, Data Encryption Standard Cipher Block Chaining Packet Encryption

*Data Encryption Standard (DES) Cipher Block Chaining (CBC) specifies the encryption and decryption of packet data in digital audio, video and data signals. It provides guidelines for implementing and using the modes of operation.*

ANSI/SCTE 53-2002, Methods for Asynchronous Data Transport

*Standards represents transmission format for the carriage of asynchronous data services, compatible with digital multiplex bitstreams constructed in accordance with ISO/IEC 13818-1 (MPEG-2 Systems). Bit rates for the data services extend from 300 bps to 288 kbps including some common high speed modem rates of 115200 bps to 230400 bps. The proposal also covers the entire set of rates specifice by the ITU-T Series-V Recommendations (V.22, V.23, V.26, V.27 ter, V.29, V.32, V.32 bis, V.32 ter and V.34).Standards represents transmission format for the carriage of asynchronous data services, compatible with digital multiplex bitstreams constructed in accordance with ISO/IEC 13818-1 (MPEG-2 Systems). Bit rates for the data services extend from 300 bps to 288 kbps including some common high speed modem rates of 115200 bps to 230400 bps.*

ANSI/SCTE 54-2004, Digital Video Service Multiplex and Transport System for Cable Television

*Describes the transport subsystem characteristics and normative specifications of the in-band Service Multiplex and Transport Subsystem Standard for Cable Television.*

ANSI/SCTE 55-1-2002, Digital Broadband Delivery System: Out of Band Transport Part 1: Mode A

*DVS 178: Specification of the Data Link Layer and Physical Layer of the Out-of Band cable system transport*

ANSI/SCTE 55-2-2002, Digital Broadband Delivery System: Out of Band Transport Part 2: Mode B

*DVS 167: Specification of Quadruature Phase-Shift Key (QPSK) out-of-band channels based on DAVIC*

ANSI/SCTE 56-2004, Digital Multiprogram Distribution By Satellite

*With the aim to promote the convergence on a worldwide standard for satellite digital multi-program reception systems for television, sound and data services, the systems for the reception of Digital Multiprogram Distribution by Satellite are described. These descriptions configure the universal elements of the satellite Integrated Receiver Decoder (IRD.*

ANSI/SCTE 57-2003, System Information for Satellite Distribution of Digital Television for Cable and MMDS

*This document defines a Standard for System Information (SI) compatible with MPEG-2 compliant digital multiplex bitstreams constructed in accordance with ISO/IEC 13818-1 (MPEG-2) and transmitted over satellite for distribution on cable and MMDS. The document defines the standard protocol that carries relevant System Information (SI) tables contained within packets carried in the transport multiplex. The term SI will be used to refer to system-wide information in the Network Packet Identifier (PID).*

ANSI/SCTE 58-2003, AM Cross Modulation Measurement

*This document describes a test procedure for the laboratory and production measurement of Amplitude Modulation Cross Modulation (or AM-XMOD) that is present in Broadband Systems which carry Frequency Division Multiplexed (FDM), amplitude modulated, analog video channels. A more in-depth theoretical discussion of cross modulation, including a description of the physical generation and manifestations, is given in Appendix A. An outline of a derivation for an expression of PM-XMOD is given therein.*

ANSI/SCTE 59-2003, Center Conductor Bond to Dielectric Bond

*This test is to determine the amount of bond between the center conductor wire to the dielectric (by measuring the force in pounds required to break the bond) for specified flexible RF coaxial drop cables at room temperature.*

ANSI/SCTE 60-2004, Test Method For Interface Moisture Migration Double Ended

*Provides a method for detecting moisture penetration into the connector/cable and or the connect/port interface for drop and hardline cable.*

ANSI/SCTE 61-2002, Test Method for Jacket Web Separation

*The purpose of this test procedure is to provide a test method for measuring the force required to separate webbed or " figure-eight" coaxial cable constructions. These designs are commonly referred to as messenger, dual, or Siamese cables for the two members that are joined by a web and common overall outer jacket. This procedure is for use in a lab environment to evaluate design and record forces required to remove one member from another.*

ANSI/SCTE 62-2002, Measurement Procedure for Noise Figure

*This procedure defines a method of measurement for Noise Figure of active Cable Telecommunications equipment. It is intended for measurement of 75-ohm devices having type "F" or 5/8-24KS connectors, and for the measurement of true broadband noise as opposed to narrowband disturbances. Test equipment characteristics limit this procedure to frequencies no lower than 10 MHz.*

ANSI/SCTE 63-2003, Test Method for Voltage Withstand of Outer Jacket

*This procedure specifies the spark test method to be used in determining if the outer jacket of a coaxial cable will withstand a specified voltage.*

ANSI/SCTE 65-2002, Service Information Delivered Out-of-Band for DTV (DVS 234)

*Specification of the Service Information (SI) delivered out-of-band on cable. Defines the syntax and semantics for a standard set of tables providing the data necessary or such a device to discover and access digital and analog services offered on cable.*

ANSI/SCTE 66-2003, Test Method for Coaxial Cable Impedance

*The purpose of this procedure is to provide instructions for measuring cable impedance. The following two test methods are presented, variable bridge method and fixed bridge method. The accuracy, ease of use and required test equipment differ for each test method.*

ANSI/SCTE 67-2006, Applications Guidelines for SCTE 35 2001

*The goal of this Interpretation document is to serve as an informational enhancement to SCTE 35 2004, Digital Program Insertion Cueing Message for Cable (formerly DVS/253). This document serves as a companion to SCTE 35 2004.*

ANSI/SCTE 68-2003, Drop Passives: Matching Transformers 75 ohm to 300 ohm

*The purpose of this document is to specify recommended mechanical and electrical standards for broadband radio frequency (RF) devices whose primary purpose is to provide impedance and connector match between 75 ohm coaxial type F and 300 ohm twin-lead open screw connectorized devices. The most common use for such devices is matching coaxial input cables from distribution systems to 300 ohm balanced screw antenna terminals on indoor receivers.*

ANSI/SCTE 69-2003, Test Method for Moisture Inhibitor Corrosion Resistance

*This test is designed to measure the corrosion resistance of flooded coaxial drop cables, trunk, feeder, and distribution cables.*

ANSI/SCTE 70-2003, Insulation Resistance Megohmmeter Method

*This method is intended for use in determining the Insulation Resistance of insulated dielectric for coaxial cables by the megohmmeter method.*

ANSI/SCTE 71-2003, Specification for Braided, 75 ohm, Coaxial, Multi-Purpose Cable

*This specification defines the materials, electrical and mechanical properties of 75 ohm Braided, Low Loss Subscriber Access Cable.*

ANSI/SCTE 72-2002, Test Method for Axial Load Temperature Cycling of Drop Cable/Connector Interface

*IPS TP 404: This test procedure is intended to evaluate the connection between the connector and the coaxial drop cable when it is subjected to a continuously varying environmental cycle. The cable/connector assembly has an axial load of 15 pounds applied to them during the environmental cycling.*

ANSI/SCTE 73-2002, Test Method for Insertion Force of Connector to Drop Cable Interface

*This test procedure is designed to measure the amount of linear force required to install a drop ("F") connector onto a drop cable of the proper size. Because this performance parameter involves, and is influenced by, two separate and distinct components (connector and cables) it is desirable to create a unified procedure to evaluate each for its individual contribution to the total interface. This procedure will, therefore, necessarily diverge into two alternate paths at the appropriate junctures.*

ANSI/SCTE 74-2003, Specification for Braided 75 Ohm Flexible RF Coaxial Drop Cable

*This specification defines the materials, electrical and mechanical properties of flexible braided 75 ohm coaxial drop cables.*

ANSI/SCTE 75-2002, Test Method - Test Point Accuracy

*IPS TP 219 Describes a procedure for evaluating the accuracy of internal and external RF test points as used to monitor input and output ports of Cable Telecommunications equipment. A Test Point is any accessible connection that represents the actual signal to be measured. The test point has isolation, which allows viewing of the signal at a reduced level without interaction.*

ANSI/SCTE 76-2003, Antenna Selector Switches

*The purpose of this document is to specify recommended mechanical and electrical standards for broadband radio frequency (RF) devices whose primary purpose is to allow signals presented to an input port to be routed selectively to one of two or more output ports. Alternately, such devices can be used to select which one of the multiple input sources is routed to the common output port. Its scope is limited to 75 ohm devices whose ports are provided with F connectors. The most common use for such devices is on-premises RF signal distribution.*

ANSI/SCTE 77-2002, Specification for Underground Enclosure Integrity

*SCTE CMS WG4-0001 Covers conformance test and requirements for the integrity of grade level enclosures containing telecommunication or other low voltage apparatus that may be exposed to the public. The purpose of this standard is to describe the requirements for a comprehensive integrity system for grade level enclosures providing long installation like and minimal maintenance.*

ANSI/SCTE 78-2003, Test Method for Transfer Impedance

*This procedure is for the measurement of transfer impedance of coaxial drop cables from 5 MHz to 1,000 MHz.*

ANSI/SCTE 79-2-2002, DOCS 2.0 Operations Support System Interface

*Outlines the Management Information Bases (MIBs) for high-speed systems developed by the DOCSIS working group. Three Simple Network Management Protocol MIBs are defined. 1. DOCSIS Radio Frequency Interface MIB and defines objects that enable management of the Cable Television Media Access Control and physical layer interfaces. 2. DOCSIS Cable Device MIB and defines objects that enable management of CMs and Cable Modem Termination Systems. 3. DOCSIS Base Line Interface MIB and defines objects that enable management of security features in the Cable Modem and Cable Modem Termination System.*

ANSI/SCTE 79.1-2003, DOCS 2.0 Part 1: Radio Frequency Interface

*This document defines the second generation of radio frequency interface specifications for high-speed data-over-cable systems.*

ANSI/SCTE 80-2003, In-Band Data Broadcast Standard including Out of Band Announcements

*This document defines the characteristics and normative specifications for the signaling of data broadcast for in-band data broadcasting. It applies extensions, modifications, and constraints to the syntax and semantics for a standard set of tables providing the data necessary for receivers to discover and access data services offered on cable. The data transmission infrastructure is compatible with digital multiplex bit streams constructed in accordance with ISO/IEC 13818-1 (MPEG-2 Systems).*

ANSI/SCTE 81-2003, Surge Withstand Test Procedure

*Describes a procedure for subjecting a broadband device to surge conditions as specified in IEEE C62.41. All AC powered and/or hardline RF ports (typically 5/8-24 (KS) ports) shall be tested in compliance with IEEE C62.41 Category B3 Combination Waveform. All RF ports (typically 3/8-32 (F) ports) shall be tested in compliance with IEEE C62.41 Category A3 Ring Waveform.*

ANSI/SCTE 82-2003, Test Method for Low Frequency and Spurious Disturbances

*The purpose of this procedure is to define and measure low frequency and spurious disturbances caused by switched mode power supplies or other active devices in broadband Cable Telecommunications equipment.*

ANSI/SCTE 83-1-2003, HMS Inside Plant Management Information Base (MIB) - Part 1: SCTE-HMS-HE-OPTICS-MIB

*Provides the branch object identifiers for the headend optics management information base within the SCTE HMS Headend subtree.*

ANSI/SCTE 83-1-2006, HMS Inside Plant Management Information Base (MIB) - Part 1: SCTE-HMS-HE-OPTICS-MIB

*The MIB module provides the branch object identifiers for the headend optics MIBs within the SCTE HMS Headend subtree.*

ANSI/SCTE 83-3-2004, Hybrid Fiber/Coax Inside Plant Status Monitoring SCTE-HMS-HMTS-MIB Management Information Base (MIB) Definition

*Provides the MIB definitions for management of an HMTS system and defines how to address the HMS transponders connected to the HTMS system.*

ANSI/SCTE 83-4-2004, HMS Common Inside Plant Management Information Base (MIB) SCTE-HMS-HE-RF-MIB

*Provides MIB definitions for HMS RF equipments present in the headend (or indoor) and is supported by a SNMP agent.*

ANSI/SCTE 84-1-2003, HMS Common Inside Plant Management Information Base (MIB) - Part 1: SCTE-HMS-HE-COMMON-MIB

*For representing optical equipment present in the headend (or indoor) and is supported by a Simple Network Management Protocol Agent. It defines the root object identifier for indoor optic device MIBs such as optical transmitters, receivers, amplifiers and textual convention across indoor optical devices.*

ANSI/SCTE 84-2-2004, HMS Inside Plant Management Information Base (MIB) SCTE-HMS-HE-POWER-SUPPLY-MIB

*Provides MIB definitions for HMS Indoor Power Supplies present in the headend (or indoor) and supported by a SNMP agent.*

ANSI/SCTE 84-3-2004, HMS Inside Plant Management Information Base (MIB) SCTE-HMS-HE-FAN-MIB

*Provides the branch object identifiers for each of the Fan MIBs within the SCTE HMS Tree.*

ANSI/SCTE 85-1-2003, HMS HE Optics Management Information Base (MIB) - Part 1: SCTE-HMS-HE-OPTICAL-TRANSMITTER-MIB

*For representing optical transmitters present in the headend (or indoor) and are supported by a simple network management protocol agent.*

ANSI/SCTE 85-2-2003, HMS HE Optics Management Information Base (MIB) - Part 2: SCTE-HMS-HE-OPTICAL-RECEIVER-MIB

*For representing optical receivers present in the headend (or indoor) and are supported by a simple network management protocol agent.*

ANSI/SCTE 85-3-2004, HMS Inside Plant Management Information Base (MIB) SCTE-HMS-HE-OPTICAL-AMPLIFIER-MIB

*Provides MIB definitions for HMS optical amplifiers present in the headend (or indoor) and supported by a SNMP agent.*

ANSI/SCTE 85-4-2003, HMS Common Inside Plant Managment Information Base (MIB) SCTE-HMS-HE-OPTICAL-SWITCH-MIB

*This document provides MIB definitions for HMS optical switch equipment present in the headend (or indoor) and is supported by a SNMP agent*

ANSI/SCTE 86-2005, SCTE Recommended Optical Fiber Cable Types for Outside Plant Trunk and Distribution Applications

*The purpose of this document is to provide guidance in selection of a suitable outside plant (OSP) optical cable with respect to different application environments.*

ANSI/SCTE 87-1-2003, Graphic Symbols for Cable Telecommunications - Part 1: HFC Symbols

*The standard contains symbols for common elements in cable networks. The symbols for devices represent the function of the device, and permit easy additon of model or type numbers within or near their outline.*

ANSI/SCTE 88-2003, Test Method for Polyethylene Jacket Longitudal Shrinkage

*The purpose of this procedure is to determine the amount of shrinkage of the jacketing material used on coaxial drop and distribution cables. This test procedure is applicable for use on either drop or distribution coaxial cables employing polyethylene (PE) jacketing material.*

ANSI/SCTE 89-1-2004, IPCable2Home Standard Part 1: Cable Home Networking 1.0

*Provides a set of IP based features that may be added to a Cable Modem or incorporated into a stand alone device, that will enable cable operators to provide an additional set of enhanced services to their customers including support for IPCablecom Quality of Service (QoS), enhanced security, additional management and provisioning features, and improved addressing and packet handling.*

ANSI/SCTE 89-2-2005, IPCable2Home Standard Part 2 - Cable Home Networking 1.1

*This document creates a Residential Gateway by providing a set of IP based features that may be added to a Cable Modem or incorporated into a stand alone device. This document represents an enhancement to SCTE 89-1, retaining a majority of its functionality as a foundation, and building upon this base to provide additional advanced features.*

ANSI/SCTE 90-1-2005, SCTE Application Platform Standard OCAP 1.0 Profile

*This document defines the SCTE Application Platform Standard, OCAP 1.0 Profile (OCAP 1.0), a minimal profile specification for the next generation of middleware software for digital cable television set-top boxes and other digital devices to be deployed by cable operators in North America: OpenCable Application Platform 1.0 (OCAP 1.0). The OCAP 1.0 Profile is based on the DVB-GEM 1.2.1 [8] and DVB-MHP 1.0.3 [9] specification.*

ANSI/SCTE 91-2004, Specification for 5/8-24 RF & AC Equipment Port, Female

*The purpose of this specification is to serve as a recommended guideline for the physical dimensions of all female 5/8 – 24 equipment ports for RF and AC powering that are used in the 75 ohm RF broadband communications industry.*

ANSI/SCTE 92-2003, Specification for 5/8-24 Plug (Male), Trunk & Distribution Connectors

*The purpose of this specification is to serve as a recommended guideline for the physical dimensions of all male 5/8 – 24 plug (male) trunk and distribution connectors that are typically used in the 75 ohm RF broadband communications industry.*

ANSI/SCTE 94-1-2003, HMS Common Inside Plant Management Information Base (MIB) SCTE-HMS-HE-RF-AMP-MIB

*This document provides MIB definitions for HMS RF amplifier equipment present in the headend (or indoor) and is supported by a SNMP agent*

ANSI/SCTE 94-2-2003, HMS Common Inside Plant Management Information Base (MIB) SCTE-HMS-HE-RF-SWITCH-MIB

*This document provides MIB definitions for HMS RF switch equipment present in the headend (or indoor) and is supported by a SNMP agent*

ANSI/SCTE 95-2004, HMS Inside Plant HMTS Theory of Operation

*Contains information about the background of the Hybrid Management Termination System (HMTS). This document is a companion document for the HMTS MIB, and does not replace the MIB.*

ANSI/SCTE 96-2003, Cable Telecommunications Testing Guidelines

*The test procedures that reference this document are intended to allow a competent technician or engineer to perform the tasks of determining, to a reasonable degree of certainty, the level of performance for the various parameters detailed. The procedures are general in nature and with sufficient forethought and preparation, can be adapted to individual devices, cascades or complete systems. The primary focus for these procedures is for bench or laboratory testing, but the principles discussed are equally applicable to field testing.*

ANSI/SCTE 97-2004, Metadata Requirements for Video-On-Demand in Cable Networks

*This Recommendation describes requirements in a cable operator’s headend for Video-on-Demand (VoD) metadata.*

ANSI/SCTE 98-2004, Test Method for Withstand Tightening Torque - 'F' Male

*To measure the "F" Male interface torque and/or to determine the amount of torque that will cause one or more of the following conditions to occur: stripping of the internal threads, damage to the male interface and/or failure of the nut hex-flats.*

ANSI/SCTE 99-2004, Test Method For Axial Pull Connector/Drop Cable

*The purpose of this standard is to determine the tensile pull required to cause one or more of the following conditions in a connector/drop cable test system, catastrophic cable structural failure, connector structural failure or separation due to slip at the connector/drop cable interface.*

## SDI (Steel Deck Institute)

ANSI/SDI C1.0-2006, Specification for Composite Steel Floor Deck

*ANSI/SDI-C1.0 is a specification standard for composite steel floor deck to be used by designers, specifiers, manufacturers, and installers of composite steel floor deck. The specification sets guidelines and requirements relating to materials, design, and installation of composite steel floor deck. Commentary is included for further clarification and guidance.*

ANSI/SDI NC1.0-2006, Specification for Non-Composite Floor Deck

*ANSI/SDI-NC1.0 is a specification standard for non-composite steel floor deck to be used by designers, specifiers, manufacturers, and installers of non-composite steel floor deck. The specification sets guidelines and requirements relating to materials, design, and installation of non-composite steel floor deck. Commentary is included for further clarification and guidance.*

ANSI/SDI RD1.0-2006, Specification for Steel Roof Deck

*ANSI/SDI-RD1.0 is a specification standard for steel roof deck to be used by designers, specifiers, manufacturers, and installers of steel roof deck. The specification sets guidelines and requirements relating to materials, design, and installation of steel roof deck. Commentary is included for further clarification and guidance.*

## SDI (Steel Door Institute)

ANSI A250.10-1998 (R2004), Steel Surfaces for Steel Doors and Frames, Test Procedure and Acceptance Criteria for Prime Painted

*These methods prescribe the procedures to be followed in the selection of material, chemical preparation, painting, testing, and evaluation of prime painted steel surfaces of steel doors and frames.*

ANSI A250.11-2001, Recommended Erection Instructions for Steel Frames

*Covers the basic recommended practices for installation of steel frames for swinging doors in a variety of wall conditions typical of those commonly used in commercial buildings. This standard was listed for public review in the 12/3/1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI A250.13-2003, Testing and Rating of Severe Windstorm Resistant Components for Swinging Door Assemblies

*This standard provides for testing and establishing load ratings for components of exterior swinging door assemblies for protection during severe windstorm conditions in wind speeds or gusts that range from 110 to 150 mph.*

ANSI A250.3-1999, Test Procedure and Acceptance Criteria for Factory-Applied Finish Painted Steel Surfaces for Steel Doors and Frames

*Procedures to be followed in the selection of material, chemical preparation, painting, testing, and evaluation of factory -applied finish painted steel surfaces for steel doors and frames.*

ANSI A250.4-2001, Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcings

*Establishes a standard method of testing the performance of a steel door mounted in a pressed steel or channel iron frame, installed with appropriate anchors, under conditions that might reasonably be considered an accelerated field operating condition. This standard was listed for public review in the 12/3/1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI A250.6-2003, Hardware on Standard Steel Doors (Reinforcement-Application)

*It is the intention of this publication to furnish users and prospective users of standard steel doors and frames with practical information regarding accepted design methods for reinforcing and recommended practices for proper field preparation for builders' hardware.*

ANSI A250.7-1997 (R2002), Nomenclature for Steel Doors and Steel Door Frames

*This standard serves to provide a comprehensive list of terms and definitions utilized in the manufacture and installation of standard steel doors and frames.*

ANSI A250.8-2003, Recommended Specifications for Standard Steel Doors and Frames

*This specificatoin offers a varietyfo choices suitable for commercial application. Specific performance levels of doors and frames are defined herein. This specification covers sizes, design, materials, general construction requirements and finishing of standard steel doors and frames.*

## SES (Standards Engineering Society)

ANSI/SES-1-2002, Recommended Practice for Standards Designation and Organization

*Presents recommended practice, which provides guidance on designating and organizing standards for standards developers and users. It also standardizes where information should be located within broad generic types of standards. Separate sections on referenced publications, definitions, standards elements, and format are included.*

## SIA (Scaffold Industry Association)

ANSI/SIA A92.2-2001, Vehicle-Mounted Elevating and Rotating Aerial Devices

*Applies to the establishment of criteria for design, manufacture, testing, inspection, installation, maintenance, use, training, and operation of vehicle-mounted aerial devices.*

ANSI/SIA A92.3-2006, Manually Propelled Elevating Aerial Platforms

*Applies to manually propelled, integral chassis aerial platforms having a platform that cannot be positioned completely beyond the base and are used to position personnel, along with their necessary tools and materials, at work locations. Platforms are adjustable by manual or powered means and shall not be occupied when moved horizontally.*

ANSI/SIA A92.5-2006, Boom-Supported Elevating Work Platforms

*Applies to self-propelled integral chassis aerial platforms having a platform that can be positioned completely beyond the base and are used to position personnel, along with their necessary tools and materials, at work locations. Aerial platforms are power operated with primary functions, including drive, controlled from the platform. Such aerial platforms are intended to be occupied when driven.*

ANSI/SIA A92.6-2006, Self-Propelled Elevating Work Platforms

*This standard applies to self-propelled integral chassis aerial platforms having a platform that cannot be positioned completely beyond the base and are used to position personnel, along with their necessary tools and materials, at work locations. Aerial platforms are power operated with primary functions including drive controlled from the platform.*

ANSI/SIA A92.7-1990 (R1998), Airline Ground Support Vehicle-Mounted Vertical Lift Devices

*Applies to the design, construction, testing, inspection, maintenance, and use of airline ground support vehicle mounted lift devices, the vehicles of which cannot be driven from the work platform when the work platform is in an elevated position.*

ANSI/SIA A92.8-2006, Vehicle-Mounted Bridge Inspection and Maintenance Devices

*This Standard applies to mobile units capable of positioning a platform alongside or beneath a bridge deck or equivalent structure while being supported from such structure and are used to position personnel, along with their necessary tools and materials, at work stations. Typical examples of this type of equipment are shown in figures 1 and 2.*

## SIA (Security Industry Association)

ANSI/SIA CP-01-2000, SIA Control Panel Standard - Features for False Alarm Reduction

*This standard details recommended design features for security system control panels and their associated arming and disarming devices to reduce the incidence of false alarms. These features are applicable to both residential and commercial properties protected by an electronic security system.*
*This standard is being submitted for a second publlic review. This standard was first listed in the April 23, 1999 issue of Standards Action. It is being resubmitted due to the following substantive change, listed in its entirety:*
*In paragraph 4.2.5.1 Abort Window, change the line in the programming chart from "Maximum 30-255 sec" to "Maximum 45 sec".*

ANSI/SIA MSD-01-2000, Mobile Security Devices Standard - Monitoring Practices for False Dispatch Prevention

*Details the monitoring center operations and procedures to ensure a minimum of erroneous requests for public safety responses. It applies to security devices or combinations of devices used for personal safety and/or asset protection that are mobile in nature, installed in motor vehicles or other conveyances, or carried by pedestrians. The standard is intended for implementation by all entities involved with monitoring of MSDs.*

ANSI/SIA PIR-01-2000, SIA Passive Infrared Motion Detector Standard - Features for Enhancing False Alarm Immunity

*Details recommended design features for passive infrared detectors, including detectors that incorporate passive infrared elements with other technologies, to reduce the incidence of false alarms when the detectors are used in security systems. Addresses detector features in terms of their technical feasibility and economic viability at the date of publication. These features are considered to provide a good level of false alarm protection for general use in commercial and residential applications. This standard is intended for use by manufacturers in the design of passive infrared detectors. It is also intended for reference by all affected parties, including security system installers, specifiers, and users; central station owners and operators; manufacturers of central station products, such as receivers and automation software; and local authorities.*

## SJI (Steel Joist Institute)

ANSI/SJI CJ-1.0-2006, Standard Specifications and Code of Standard Practice for Composite Steel Joists, CJ-Series

*This new standard covers the design and use of open web steel joists in composite construction utilizing field applied shear connectors between the top chord and the overlying concrete slab to allow the steel joist and slab to act together as an integral unit after concrete has adequately cured.*

ANSI/SJI CJCOSP-1.0-2006, Standard Specifications and Code of Standard Practice for Composite Steel Joists, CJ-Series

*This new standard covers the design and use of open web steel joists in composite construction utilizing field applied shear connectors between the top chord and the overlying concrete slab to allow the steel joist and slab to act together as an integral unit after concrete has adequately cured.*

ANSI/SJI JG-1.1-2005, Specification for Joist Girders

*Specification covers the design, manufacture, and use of Joist Girders. Load and Resistance Factor Design (LRFD) and Allowable Strength Design (ASD) are included in this specification.*

ANSI/SJI K-1.1-2004, Specification for Open Web Steel Joists, K-Series

*Specification covers the design, manufacture, and use of Open Web Steel Joists. K-Series, Load and Resistance Factor Design (LRFD) and Allowable Strength Design (ASD) are included in this specification.*

ANSI/SJI LH/DLH-1.1-2005, Specification for Longspan Steel Joists, LH-Series and Deep Longspan Steel Joists, DLH-Series

*Specification covers the design, manufacture, and use of Longspan Steel Joists and Deep Longspan Steel Joists. Load and Resistance Factor Design (LRFD) and Allowable Strength Design (ASD) are included in this specification.*

## SMACNA (Sheet Metal and Air-Conditioning Contractors'

ANSI/SMACNA 001-2000, Seismic Restraint Manual: Guidelines for Mechanical Systems

*Provides a flexible set of guidelines for designers and contractors to determine the correct restraints for sheet metal ducts, piping, and conduit.*

ANSI/SMACNA 005-2003, Round Industrial Duct Construction Standards

*SMACNA's Round Industrial Duct Construction Standards offers a standardized, engineered basis for design and construction of industrial ducts of Classes 1 to 5. Covers design pressures from negative 30 inches w.g. to positive 50 inches w.g. Includes duct selection tables for carbon, galvanized and stainless steel, and aluminum. Tables were expanded to include duct sizes up to 96 inches in diameter. Includes a spiral lockseam pipe chapter for Classes 1 & 2.*

ANSI/SMACNA 006-2006, HVAC Duct Construction Standards - Metal and Flexible, 3rd Edition

*SMACNA's HVAC Duct Construction Standards - Metal and Flexible is intended for designers, fabricators, and installers of commercial and institutional duct construction projects. The standards contain prescriptive application tables for the fabrication and installation of rectangular, round, oval and flexible duct for positive or negative pressures up to 10 inches water gage (2500 Pa). Also includes standards for duct liner, hangers, tie rods, joints, leakage seal classes, and accessories.*

## SMPTE (Society of Motion Picture and Television Engineers)

ANSI/SMPTE 151-1998, Motion-Picture Film (8-mm Type S) – 16-mm Film Perforated 8-mm Type S, (1–3)

*Specifies the cutting and perforating dimensions for 16-mm motion-picture film with 8-mm type S perforations in positions 1 and 3 and a perforation pitch of either 0.1664 in. or 0.1667 in. The width of the 8-mm strip after processing and slitting is also specified.*

ANSI/SMPTE 184M-1998, Motion-Picture Film – Raw Stock Identification and Labeling

*Specifies the information to be included by the manufacturer covering the physical specifications and certain packaging characteristics of motion-picture raw stock. The suggested location of this information on the manufacturer's label is also specified.*

ANSI/SMPTE 192-1997, Motion-Picture Equipment (35-mm) – Shipping Reels for Prints

*Specifies the dimensions of shipping reels for 35-mm motion-picture prints having a nominal film capacity of 2000 ft.*

ANSI/SMPTE 205-1993 (R1998), Motion-Picture Equipment (8-mm Type S) – Model 1 Camera Cartridge – Interface and Take-Up Core Drive (200-ft Capacity)

*Specifies the dimensions of the 8-mm ype S 200-ft (60m) capacity motion-picture camera cartridge and cartridge camera interface. Also specified are the dimensions of the take-up core drive opening and critical dimensions of the take-up core as well as the driving force, direction of drive, and recommended drive ratio. An optional means of retaining the film supply untill the cartridge is placed in the camera is described.*

ANSI/SMPTE 206-1998, Motion-Picture Equipment (8-mm Type S) – Model 1 Sound Camera Cartridge – Aperture, Profile, Film Position, Pressure Pad and Flatness (200-ft Capacity)

*Specifies the dimensions and location of the cartridge aperture, pressure pad, and characteristics necessary for its appropriate flatness, clearance, and location of film in the camera aperture of 200-ft (60-m) capacity 8-mm type S model 1 sound motion-picture film camera cartridges.*

ANSI/SMPTE 207M-1997, Television – Digital Control Interface – Electrical and Mechanical Characteristics

*Defines the electrical and mechanical characteristics of an interface system comprised of a general-purpose communication channel and interface device(s) used for the transfer of data and digital control signals between equipment utilized in the production, post-production, and/or transmission of visual and aural information.*

ANSI/SMPTE 208M-1992 (R1998), Motion-Picture Film – 35- and 16-mm Magnetic Audio Records – Recorded Characteristics

*This standard specifies the recorded characteristics of magnetic records on 35-mm motion-picture film intended for reproduction at 24 frames per second, and on 16-mm motion-picture film intended for reproduction at 24 frames per second.*

ANSI/SMPTE 21M-1997, 3/4-inch Type E Helical-Scan – Records

*Specifies the location of the edges of the video, audio, and tracking-control records and the mechanical separation of the simultaneously recorded information of the video and audio records, as recorded on a 3/4-in type E helical-scan video tape recording cassette system, operating at a tape speed of 95.3 mm/s.*

ANSI/SMPTE 220-1996, Motion-Picture and Television Equipment – Camera Mounting Connections – 1/4-inch, 20-Thread and 3/8-inch, 16-Thread Tripod Screws

*Specifies the location of the head mounting sockets in the mounting plates of motion-picture and television cameras intended to mate with 1/4-inch, 20-thread and 3/8-inch,16-thread locking screws.*

ANSI/SMPTE 22M-1997, 3/4-inch Type E Helical-Scan – Cassette

*Specifies the dimensions of a video cassette for use with a 3/4-in type E helical-scan video tape recording cassette system, operating at a tape speed of 95.3 mm/s.*

ANSI/SMPTE 235-1998, Motion-Picture Equipment (16mm) – Projection Reels – 200- to 2300-ft Capacity

*Specifies the dimensions for 16-mm motion-picture projection reels having capacities from 200 to 2300 feet of film inclusive.*

ANSI/SMPTE 243M-1993 (R1998), Motion-Picture Equipment – 35mm and 70mm Projection Lenses and Mounts

*Specifies the lens markings, focal length tolerances, mounting diameters, mechanical factors in mounting additional lens adaptors to lenses, and the preferred value steps in focal lengths for lenses used in 35- and 70-mm motion-picture-projectors. Also specified is the limiting or maximum available space for projector lens mounts where lenses of varying focal lengths and designs and attachments thereto are used.*

ANSI/SMPTE 249M-1996, Television Analog Recording – 1/2-in Type M-2 – Records

*Specifies the dimensions and locations of the video, audio, time code, and tracking-control records, as recorded by 1/2-in type M-2 helical-scan video tape recorders operating with video signals having a typical scanning structure of 525 lines, 59.94 fields/sec, 2:1 interlace, utilizing the video cassettes specified in BSR/SMPTE 250M. It also spcifies the records for two different audio recording modes – common audio mode and pulse code modulation audio mode.*

ANSI/SMPTE 250M-1996, Television Analog Recording – 1/2-in Type M-2 – Tapes and Cassettes

*Specifies tapes and cassettes for the 1/2-in type M-2 helical-scan video tape recording system.*

ANSI/SMPTE 257-1998, Motion-Picture Film (35-mm) – Stereoscopic Prints with Vertically Positioned Subframes – Projectable Image Areas

*Specifies the maximum dimensions of the film image area intended for projection from a 35-mm motion-picture film using vertically positioned subframes for stereoscopic projection, and the placement of this area relative to the perforatios and the reference edge of the film.*

ANSI/SMPTE 259M-1997, Television – 10-Bit 4:2:2 Component and 4fsc NTSC Composite Digital Signals – Serial Digital Interface

*Describes a serial digital interface for 525/60 and 625/50 digital television equipment operating with either 4:2:2 component signals or 4fsc composite digital signals.*

ANSI/SMPTE 298M-1997, Television - Universal Labels for Unique Identification of Digital Data

*Defines universal labels, a universal labeling mechanism to be used in identifying the type and encoding of data within a general-purpose data stream. The labeling mechanism is intended to function across all types of digital communications protocols and message structures, allowing the intermixture of data of any sort. Labels created using the mechanism specified are intended to be attached to the data they identify and to travel together with them through communications channels.*

ANSI/SMPTE 299M-1997, Television -- 24-Bit Digital Audio Format for HDTV Bit-Serial Interface

*Defines the mapping of 24-bit AES digital audio data and associated control information into ancillary data space of a serial digital video conforming to American National Standard for Television – Bit-Serial Digital Interface for High-Definition Television Systems, ANSI/SMPTE 292M-1996.*

ANSI/SMPTE 300-2002, Motion-Picture Color Print Film (35-mm) - Manufacturer-Printed Latent Image Identification Information

*Specifies the position, dimensions, content, and exposure of human-readable, latent image information applied onto 35-mm color print film. This information is normally exposed onto the film at the time of manufacture.*

ANSI/SMPTE 35M-1997, Television Analog Recording – 1/2-in Type G – Cassette and Tape

*Specifies the dimensions of a video cassette and a video magnetic tape intended for use with 1/2-in type G video systems operating at tape speeds of 40, 20, and/or 13.3 mm/s.*

ANSI/SMPTE 74-1993 (R1998), Specifications for Motion-Picture Cameras – Zero Point for Focusing Scales – 16mm and 8mm

*Specifies a mark and its location to indicate the film plane on 16- and 8-mm cameras having lenses which can be focussed for various object distances.*

ANSI/SMPTE 93-1998, Motion-Picture Film (35-mm) – Perforated BH

*This standard specifies the cutting and perforating dimentions for 35-mm motion-picture film with a BH-type perforation and a perforation pitch of either 0.1866 in or 0.1970 in (4,740 mm or 4.750 mm).*

## SPI (The Society of the Plastics Industry, Inc.)

ANSI/SPI B151.1-2007, Plastics Machinery - Horizontal Injection Molding Machines - Safety Requirements for Manufacture, Care, and Use

*The requirements of this standard shall apply to all HIMM's that process plastic materials and inject said material into a mold held closed by a horizontally acting clamp.*

ANSI/SPI B151.15-2003, Extrusion Blow Molding Machines, Construction, Care, and Use of

*Applies to all Extrusion Blowmolding Machines that process plastic materials to form a parison that is blown into the shape of a mold held together by a clamp(s)*

ANSI/SPI B151.2-1999, Film Casting Machines – Construction, Care, and Use

*Identifies and addresses known hazards to personnel working on or adjacent to the machinery.*

ANSI/SPI B151.20-1999, Plastic Sheet Production Machinery - Manufacture, Care and Use

*Identifies and addresses known hazards to personnel working on or with the machinery.*

ANSI/SPI B151.21-2003, Injection Blow Molding Machines, Safety Requirements for the Construction, Care, and Use of

*The requirements of this standard shall apply to all injection blowmolding machines (IBMMs - including stretch blow) that process plastic materials and produce and/or deliver a perform that is then blown into the shape of a mold held together by vertically or horizontally acting clamp(s).*

ANSI/SPI B151.27-2003, Plastics Machinery – Robots Used with Horizontal Injection Molding Machines – Safety Requirements for the Integration, Care, and Use

*Criteria establishing safe practicesand procedures for the use of robots with horrizontal and vertical injection molding machines.*

ANSI/SPI B151.29-2002, Safety Requirements for the Manufacture, Care and Use of Vertical Clamp Injection Molding Machines

*Identifies and addresses known hazards to personnel working on or with the specified machinery.*
*Single copy price: $10.00*
*Order from: Betty Drake, SPI*
*Send comments (with copy to BSR) to: Same*

ANSI/SPI B151.4-1999, Blown Film Take-Off and Auxiliary Equipment – Construction, Care, and Use

*Identifies and addresses known hazards to personnel working on or adjacent to the machinery.*

ANSI/SPI B151.5-2000, Plastic Film and Sheet Winding Machinery - Manufacture, Care, and Use

*To identify and address known hazards to personnel working on or adjacent to the Machinery.*

## SPRI (Single Ply Roofing Institute)

ANSI/SPRI ES-1-2003, Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems

*This design standard is intended as a reference for those individuals who design, specify and install edge materials used with low slope roofing systems. It was developed by SPRI in 1994 and published in non-mandatory language as a guide. It was revised to comply with mandatory language requirements and approved as ANSI standard in 1998. The Standard has now been reviewed and revised by the SPRI Roof Accessories Subcommittee, consisting of representatives from membrane manufacturers, insurance companies, roof edge manufacturers and roofing consultants.*

ANSI/SPRI FX-1-2001 (R2006), Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners

*The standard being reaffirmed is a procedure for testing the pullout resistance of all fasteners. The data developed from these tests shall be used by the roofing system manufacturer and design professional to calculate the proper density and placement of roofing fasteners used in membrane roofing systems and by roofing installers and inspectors as a quality control test to ensure that sufficient pullout performance is achieved.*

ANSI/SPRI IA-1-2005, Field Test Procedure for Determining the Mechanical Uplift Resistance of Insulation Adhesives over Various Substrates

*The proposed field test procedure is used to obtain data for use by roofing professionals when verifying the acceptability of the insulation adhesive being considered for insulation or coverboard attachment to a substrate.*

*Note: A revised PINS is only required if the previously identified stakeholders have changed substantively (see item 6 on this form.).*
*This standard will provide a uniform field testing procedure for determining the suitability of using an insulation adhesive for insulation or coverboard attachment to a substrate. This standard is intended primarily for situations when an existing roofing system is being replaced or recovered and the general condition of the substrate is in doubt. This procedure, however, is also applicable to new*

ANSI/SPRI RD-1-2003, Performance Standard for Retrofit Drains

*Intended as reference for those individuals who design, specify, or install retrofit roof drains.*

ANSI/SPRI RP-4-2002, Wind Design Standard for Ballasted Single-Ply Roofing Systems

*Provides a reference for those individuals who design, specify and install ballasted single-ply roofing systems.*

## SSCI (Steel Shipping Container Institute)

ANSI MH2-2004, Materials Handling (Containers) - Steel Drums and Pails

*A dimensional standard for the manufacture of free-standing steel drums and pails having capacities from 5 to 58 gallons. The dimensions for sizes and types most commonly used in domestic and export shipments are included in this standard as well as key construction elements.*

## SSFI (Scaffolding, Shoring & Forming Institute)

ANSI/SSFI SC 100-2005, Standards for Testing and Rating Scaffold Assemblies and Components

*This standard provides methods for testing and rating the performance of the following: Tube and Coupler Scaffold Components; Welded Frame Scaffold Assemblies; System Scaffold Assemblies; Guardrail Scaffold Components; Screwjack Scaffold Components; Caster (with Lever Actuated Brake and Swivel Lead) Scaffold Components, Putlog Scaffold Assemblies; Side and End Bracket Scaffold Components.*

ANSI/SSFI SPS 1.1-2003, Standard Requirements and Test Methods for Testing and Rating Portable Rigging Devices for Suspended Scaffold

*This standard establishes methods for testing and rating portable rigging devices used to support transportable suspended scaffolds for construction, alteration, demolition, and maintenance of buildings or structures. This standard does not cover permanently installed suspended scaffold systems (davits or roofcars).*

## SVIA (Specialty Vehicle Institute of America)

ANSI/SVIA 1-2001, Four-Wheel All-Terrain Vehicles - Equipment, Configuration, and Performance Requirements

*Addresses design, configuration and performance aspects of ATVs, including, among other items, requirements for mechanical suspension; throttle, clutch and gearshift controls; engine and fuel cutoff devices; lighting; tires; operator foot environment; service and parking brake/parking mechanism performance; and pitch stability. Additional requirements, which address maximum speed capability and speed limiting devices, are included for youth-sized ATVs. This present revision modifies certain definitional language and adds several provisions to enhance and clarify the standard.*

## TCATA (Textile Care Allied Trades Association)

ANSI Z8.1-2006, Safety Requirements for Commercial Laundry & Drycleaning Equipment & Operations

*This standard applies to the safety requirements for the operation and use of commercial and industrial laundry and drycleaning equipment.*

## TCIA (Tree Care Industry Association)

ANSI A300 (Part 1)-2001, Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices

*Provides standard definitions for tree care maintenance; performance standards for tree pruning operations; performance standards for utility line clearance; and performance standards for writing tree pruning specifications. This standard was listed for public review in the 12/15/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI A300 (Part 2)-2004, Tree Care Operations - Tree, Shrub, and Other Woody Plant Maintenance - Standard Practices - Part 2 - Fertilization

*This document presents performance standards for the care and maintenance of trees, shrubs, and other woody plants, specifically as they relate to fertilization. This document is a guide in the drafting of maintenance specifications specific to fertilization, for federal, state, municipal, and private authorities including property owners, property managers, and utilities.*

ANSI A300 (Part 3)-2006, Tree Care Operations - Tree, Shrub and Other Woody Plant Maintenance: Standard Practices - Part 3 - Tree Support Systems (a. Cabling, Bracing, and Guying)

*Performance standards for writing work specifications when installing or maintaining cable, brace, guy and other tree support systems. Covers definitions, tree inspection, hardware, tools and equipment, system design, installation preparation, and installation procedures.*

ANSI A300 (Part 4)-2002, Tree Care Operations - Tree, Shrub and Other Woody Plant Maintenance: Standard Practices - Part 4 - Lightning Protection Installation for Trees

*Will provide standards for the installation and maintenance of lightning protection systems for trees. The standard is intended for use by arborists, managers, and governmental agencies in the drafting of written work specifications. The standard includes materials, installation practices, and grounding.*

ANSI A300 (Part 5)-2005, Tree Care Operations -- Tree, Shrub, and Other Woody Plant Maintenance -- Standard Practices (Management of Trees and Shrubs During Site Planning, Site Development, and Construction Operations)

*Provides performance standards for the care and maintenance of trees, shrubs, and other woody plants. BSR A300 (Part 5) will provide standards specific to management of trees and shrubs during site planning, site development, and construction operations. ANSI A300 standards are intended as guides for federal, state, municipal, and private authorities including property owners, property managers, and utilities in the drafting of their maintenance specifications.*

ANSI A300 (Part 6)-2005, for Tree Care Operations -- Tree, Shrub, and Other Woody Plant Maintenance -- Standard Practices (Transplanting)

*ANSI A300 standards present performance standards for the care and maintenance of trees, shrubs, and other woody plants. The purpose of this document is to provide standards for developing specifications for transplanting and planting trees and shrubs.*

ANSI A300 (Part 7)-2006, Tree Care Operations - Tree, Shrub and Other Woody Plant Maintenance: Standard Practices - Part 7 - (Integrated Vegetation Management a Electric Utility Rights-of-way)

*ANSI A300 provides performance standards for the care and maintenance of trees, shrubs, and other woody plants. BSR A300 (Part 7) provides standards specific to IVM operations. ANSI A300 standards are intended as guides for federal, state, municipal, and private authorities including property owners, property managers, and utilities in the drafting of their maintenance specifications.*

## TCNA (Tile Council of North America)

ANSI A108.01-2005, General Requirements: Subsurfaces and Preparations by Other Trades

*This Standard outlines the requirements for substrates and subsurfaces and general guidelines for preparations by other trades. This section was previously labeled the 'AN' Section of the A108 standards document and was not formally included as a standard. This section also outlines the acceptable criteria for deflection in the subfloor which has been modified from the 1999 version. All of A108 has been renumbered to accommodate the formation of this new standard along with A108.02. All other portions of A108.01 are essentially unchanged from the AN Section (1999 version).*

ANSI A108.02-2005, General Requirements: Materials, Environmental, and Workmanship

*This Standard outlines the general requirements for materials and workmanship for the installation of ceramic tile. This section was previously formatted as three (3) sections, A-1, A-2, and A-3. Essentially all portions of these sections remain the same as the 1999 version. References to standards have been updated to 2005. The entire A108 document has been renumbered as part of the creation of this new standard along with the creation of A108.01.*

ANSI A108.10-1999 (R2005), Specifications for Installation of Grout in Tilework

*Reaffirmation only - no changes.*

ANSI A108.11-1999 (R2005), Specifications for Interior Installations of Cementitious Backer Units

*Reaffirmation only - no changes.*

ANSI A108.12-1999 (R2005), Installation of Ceramic Tile with EGP (Exterior-Glue Plywood) Latex Portland Cement Mortar

*Reaffirmation only - no changes.*

ANSI A108.13-2005, Installation of Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installations

*Create a new paragraph A-4.10.4.2 which recommends consulting BOTH the setting material and membrane manufacturer for additional curing times.*

ANSI A108.14-2005, Installation of Paper-Faced Glass Mosaic Tile

*This is a new standard which is a guideline for installing paper faced glass mosaic tile (including glass thinner than 6/15" and sheets/murals incorporating tiles of varying thickness) using the wet-set method, with Portland Cement mortar.*

ANSI A108.15-2005, Alternate Method: Installation of Paper-Faced Glass Mosaic Tile

*This specification is a guideline for installing paper-faced glass mosaic tile (including glass tile thinner than 3/16" and sheets/murals incorporating tiles of varying thickness) installed over cured Portland cement mortar beds.*

ANSI A108.16-2005, Installation of Paper-Faced, Back-Mounted, Edge-Mounted, or Clear Film Face-Mounted Glass Mosaic Tile

*This specification is a guideline for instaling paper-faced, back-mounted, edge-mounted, or clear film face-mounted glass mosaic tile, 3/16" and thicker, using direct bond method over cured Portland cement mortar beds.*

ANSI A108.17-2005, Installation of Crack Isolation Membranes for Thin-set Tile and Dimension Stone

*This specification is a guideline for installing crack isolation membranes that comply with proposed new standard ANSI A118.12-2005. Crack isolation membranes are used over existing substrate cracks, or over substrate areas susceptible to future cracking. Use of such a membrane does not change industry requirements for the installation of tile, including proper movement joint placement. Membrane manufacturer’s instructions may specify the need for, and placement of, additional movement joints to prevent crack transmission to the finished tile installation.*

ANSI A108.1A-2005, Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar

*ASC A108 voted to add the word, "cracks" to paragraph A-3.1.1.*

ANSI A108.1b-1999 (R2005), Specifications for Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex Portland Cement Mortar

*Reaffirmation only - no changes.*

ANSI A108.1C-1999 (R2005), Specifications for Contractors Option: Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar Bed with Dry-Set or Latex Portland Cement Mortar

*Reaffirmation only - no changes.*

ANSI A108.4-1999 (R2005), Specifications for Installation of Ceramic Tile with Organic Adhesives or Water Cleanable Tile Setting Epoxy Adhesive

*Reaffirmation only - no changes.*

ANSI A108.5-1999 (R2005), Specifications for Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex Portland Cement Mortar

*Reaffirmation only - no changes.*

ANSI A108.6-1999 (R2005), Specifications for Installation of Ceramic Tile with Tile with Chemical Resistant, Water Cleanable Tile Setting and Grouting Epoxy

*Reaffirmation only - no changes.*

ANSI A108.8-1999 (R2005), Specifications for Installation of Ceramic Tile with Chemical Resistant Furan Mortar and Grout

*Reaffirmation only - no changes.*

ANSI A108.9-1999 (R2005), Specifications for Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout

*Reaffirmation only - no changes.*

ANSI A118.1-1999 (R2005), Specifications for Dry-Set Portland Cement Mortar (included in ANSI A108.1-1992)

*Reaffirmation only - no changes.*

ANSI A118.10-1999 (R2005), Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installations

*Reaffirmation only - no changes.*

ANSI A118.11-1999 (R2005), Specifications for EGP (Exterior Glue Plywood) Latex-Portland Cement Mortar

*Reaffirmation only - no changes.*

ANSI A118.12-2005, American National Standard Specifications for Crack Isolation Membranes for Thin-set Ceramic Tile and Dimension Stone Installations

*This specification describes the test methods and minimum requirements for crack isolation membranes for thin-set ceramic tile and dimension stone installation. Cracking is limited to horizontal planar movement of the substrate. It should be noted that while crack isolation membranes are intended to minimize the potential for crack propagation from the substrate through the finished tile or stone installation, they may not always be 100% effective in preventing all defects in the finished tile.*

ANSI A118.2-1999, Specifications for Conductive Dry-Set Portland Cement Mortar (included in ANSI A108.1-1992)

*This Specification describes the test methods and the minimum requirements for conductive dry-set portland cement mortar.*

ANSI A118.3-1999 (R2005), Specifications for Chemical Resistant, Water Cleanable Tile-Setting and Grouting Epoxy and Water Cleanable Tile Setting Epoxy Adhesive (included in ANSI A108.1-1992)

*Reaffirmation only - no changes.*

ANSI A118.4-1999 (R2005), Specifications for Latex Portland Cement Mortar (included in ANSI A108.1-1992)

*Reaffirmation only- no changes.*

ANSI A118.5-1999 (R2005), Specifications for Chemical Resistant Furan Resin Mortars and Grouts for Tile Installation (included in ANSI A108.1-1992)

*Reaffirmation only - no changes.*

ANSI A118.6-1999 (R2005), Specifications for Ceramic Tile Grouts (included in ANSI A108.1-1992)

*Reaffirmation only - no changes.*

ANSI A118.7-1999 (R2005), Specifications for Polymer Modified Cement Grouts for Ceramic Tile Installation

*Reaffirmation only - no changes.*

ANSI A118.8-1999 (R2005), Specifications for Modified Epoxy Emulsion Mortar Grout (included in ANSI A108.1-1992)

*Reaffirmation only - no changes.*

ANSI A118.9-1999 (R2005), Specifications for Cementitious Backer Units (included in ANSI A108.1-1992)

*Reaffirmation only - no changes.*

ANSI A136.1-1999 (R2005), Organic Adhesives for Installation of Ceramic Tile (included in ANSI A108.1-1992)

*Reaffirmation only - no changes.*

## TIA (Telecommunications Industry Association)

ANSI/EIA/TIA 455-62-B-2003, Optical Fiber Macrobend Attenuation

*Establishes uniform requirements for measuring macrobending sensitivity*

ANSI/TIA 1019-2004, Structural Standards for Steel Gin Poles Used for Installation of Antenna Towers and Antenna Supporting Structures

*This document describes the requirements for design of steel gin poles that are used for the installation of antennas, towers and antenna supporting structures*

ANSI/TIA 102.AAAA-A-2001, Project 25 Encryption Protocol

*Covers all of the parts of a system for public-safety Land Mobile Radio communications.*

ANSI/TIA 102.AAAB-A-2005, Project 25 - Digital Land Mobile Radio - Security Services Overview

*This document provides an overview of the security services available in Land Mobile Radio Systems.*

ANSI/TIA 102.AAAC-2001, Conformance Test for the Project 25 DES Encryption Protocol

*Assures that equipment actually conforms to the formats specified in the DES Encryption Protocol. The object of the conformance tests is to assure that equipment may be interoperable with other equipment conforming to this standard.*

ANSI/TIA 102.AAAD-2002, Block Encryption Protocol

*(SP-3-4921-1) The Project 25 standard covers all of the parts of a system for public-safety Land Mobile Radio communications.*

ANSI/TIA 102.AABA-A-2004, Project 25 - Trunking Overview - New Technology Standards Project - Digital Radio Technical Standards

*Defines the general control channel structures to be employed on the Project 25 trunking control channel*

ANSI/TIA 102.AABB-A-2005, Project 25 - Trunking Control Channel Formats - New Technology Standards Project - Digital Radio Technical Standards

*Defines the general control channel structures to be employed on the Project 25 trunking control channel*

ANSI/TIA 102.AABC-1-2001, Project 25, Trunking Control Channel Messages, Addendum 1

*Adds enhancements to the existing standard to allow for the operation of the Project 25 Subnetwork Dependent Convergence Protocol.*

ANSI/TIA 102.AABC-2-2002, Project 25 - Trunking Control Channel Messages - Addendum 2 - Multi Band Operations

*The purpose of this addendum is to update information contained in the standard*

ANSI/TIA 102.AABC-B-2005, Project 25 - Trunking Control Channel Messages - New Technology Standards Project - Digital Radio Technical Standards

*Defines the messages to control trunking system operation on the common air inteface for Project 25.*

ANSI/TIA 102.AABF-A-2004, Project 25 - Link Control Word Formats and Messages - New Technology Standards Project - Digital Radio Technical Standards

*This document provides information necessary to define the formats and messages for the Link Control words for both conventional and trunking operation.*

ANSI/TIA 102.AACB-2002, Digital Private Land Mobile Radio Over-the-Air-Rekeying (OTAR) Operational Description

*Provides an operational description of OTAR.*

ANSI/TIA 102.AACC-A-2006, Conformance Tests for the Project 25 Over-The-Air Rekeying (OTAR) Protocol

*This document provides a series of conformance tests for the Project 25 Over-The-Air-Rekeying (OTAR) Protocol, reference 1. These tests are intended to assure that the equipment conforms to the message formats specified in the OTAR Protocol document.*

ANSI/TIA 102.BAAC-A-2003, Project 25 - Common Air Interface Reserved Values

*This document references all the reserved values for the fields of information.*

ANSI/TIA 102.BABA-1998, APCO Project 25 Vocoder Description

*This ballot was issued to resolve negative ballots and will address changes to original ballot. The changes to this document can be found on page A-5 of this new ballot.*

ANSI/TIA 102.BABA-2003, Project 25 - Vocoder Description

*This document describes the functional requirements for the transmission and reception of voice information using digital communication media described in the standard.*

ANSI/TIA 102.BABB-1999, Project 25 Vocoder Mean Opinion Score Conformance Test

*Details definitions and methods of measurement for testing conformance of speech codecs used in Project 25 Digital Land Mobile Radio Equipment to the reference speech codec defined for Project 25.*

ANSI/TIA 102.BABC-1999, Project 25 - Vocoder Reference Test

*Specifies one method that may be employed to test that implementations of TIA/EIA/102.BABA compatible speech codecs meet recommended minimum performance requirements.*

ANSI/TIA 102.BADA-1-2006, P25 - Telephone Interconnect Requirements and Definitions (Voice Service) Addendum 1 - Conventional Individual Calls

*This Addendum updates information contained in TIA/EIA-102.BADA Telephone Interconnect Requirements and Definitions (Voice Services). It provides for several improvements to telephone interconect calls on conventional Project 25 systems. These include availability checks on incoming calls, improved call progress indications and improved call tear down procedures.*

ANSI/TIA 102.BADA-2000, Telephone Interconnect Requirements and Definitions (Voice Service)

*This document was generated in response to APCO Project 25 requirements for telephone interconnect. However, it is applicable to any general land mobile communications system.*

ANSI/TIA 102.BAEA-2000, Project 25 - Data Overview

*Provides an overview of the standardized set of data communication services. Project 25 digital radio systems will optionally support a standardized set of data communications services.*

ANSI/TIA 102.BAEA-A-2004, Project 25 - Data Overview - Addendum 1 - USB/PPP - New Technology Standards Project - Digital Radio Technical Standards

*The purpose of this document is to incorporate the information contained in the addendum.*

ANSI/TIA 102.BAEB-1-2001, Project 25 - Packet Data Specification Addendum - Subnetwork Dependent Convergence Protocol (SNDCP) New Technology Standards Project - Digital Radio Technical Standards

*Updates information on digital radios.*

ANSI/TIA 102.BAEB-2-2002, Project 25 - Packet Data Specification - Addendum 1 - USB/PPP - New Technology Standards Project - Digital Radio Technical Standards

*(SP-3-4632-AD2) This addendum defines the application of the Universal Serial Bus (USB) Specification and the Point-to-Point Protocol (PPP) to the Physical and Link Layers, respectively, of the A Reference Point between the Mobile Data Peripheral (MDP) and the Mobile Radio Controller (MRC) in the Project 25 General System Model in TSB-102-A.*

ANSI/TIA 102.BAEB-A-2005, Project 25 - Packet Data Specification, New Technology Standards Project

*Project 25 digital radio systems may support, as a standard option, a set of data communications bearer services. This document provides a detailed specification of the Internet Protocol (IP) packet data communication bearer services such that, where these packet data bearer services are enabled, data connectivity will operate through any Project 25 radio, across any Project 25 digital radio system, independent of the particular equipment manufacturer, adhere to the Common Air Interface, and similarly in trunking or conventional system modes.*

ANSI/TIA 102.BAEC-2000, Project 25 - Circuit Data Specification - New Technology Standards Project - Digital Radio Technical Standards

*Serves to define the detailed interfaces, protocols, and procedures involved in interfacing with a data-capable Project 25 standard radio unit via the standard mobile data peripheral interface(A), and (optionally) a Project 25 standard FNE (Fixed Network Equipment) data end-system interface (Ed). To obtain an electronic copy contact Valerie Kamin at Global Engineering at 1-800-854-7179.*

ANSI/TIA 102.BAEE-A-2004, Project 25 - Radio Control Protocol (RCP)

*Defines the radio management protocols and associated messages for use in lade mobile digital radio systems.*

ANSI/TIA 102.CAAA-B-2004, Digital C4FM/CQPSK Transceiver Measurement Methods

*This standard provides definition, methods of measurement, and performance standards for radio equipment used in the Private (Dispatch) Land Mobile Services that employ C4FM or CQPSK modulation, for transmission and reception of voice or data using digital techniques*

ANSI/TIA 102.CAAB-B-2004, Land Mobile Radio Transceiver Performance Recommendations, Project 25 - Digital Radio Technology, C4FM/CQPSK Modulation

*This standard provides definition, methods of measurement, and performance standards for radio equipment used in the Private (Dispatch)*

*Land Mobile Services that employ C4FM or CQPSK modulation*

ANSI/TIA 1026-2004, IEC 61282-5 Fibre Optic Communication System Design Guides - Part 5: Accommodation and Compensation of Dispersion

*This document applices to the accommodation and compensation of dispersion in fibre optic communication systems*

ANSI/TIA 102AACA-1-2002, Project 25 - Digital Radio Over the Air Rekeying (OTAR) Protocol - Addendum 1 - Key Management Security Requirements for Type 3 Block Encryption Algorithms

*This document specifies a method to transport Over the Air (OTAR) Key Management Messages.*

ANSI/TIA 102AACA-2-2003, Project 25 - Digital Radio Over the Air Rekeying (OTAR) Protocol - Addendum 2 - Data Link Independent OTAR

*This document specifies a method to transport Over the Air (OTAR) Key Management Messages.*

ANSI/TIA 102AACA-2001, Project 25 Digital Radio Over the Air Rekeying (OTAR) Protocol

*Covers all of the parts of a system for public safety land mobile radio communications*

ANSI/TIA 102BAAA-A-2003, Project 25 - FDMA - Common Air Interface

*Defines the Common Air Interface for all reference configurations described in the general system model*

ANSI/TIA 1048-2005, IEC 62005-7 - Reliability of Fibre Optic Interconnecting Devices and Passive Components - Part 7: Life Stress Modeling

*This document describes the life stress modeling for the reliability of fibre optic interconnecting devices and passive components.*

ANSI/TIA 1057-2006, Telecommunications - IP Telephony Infrastructure - Link Layer Discovery Protocol for Media Endpoint Devices

*This Standard provides extensions to the IEEE 802.1AB base protocol to allow for these functions, and also provides behavioral requirements for devices implementing the extensions to enable correct multi-vendor interoperation.*

ANSI/TIA 1062-2006, 1544 kbps Interface Requirements for Packet-based Gateways

*This document fills a recognized need in the telecommunications industry, brought about by the connecting of public and private networks using Voice over Internet Protocol (VoIP) gateways with 1544 kbps interfaces. It will be useful to anyone engaged in the manufacture of 1544 kbps packet-based gateway equipment and to those purchasing, operating, or using such equipment.*

ANSI/TIA 1096-2006, Telephone Terminal Equipment TIA - Connector Requirements for Connection of Terminal Equipment to the Telephone Network

*The technical criteria in this standard are intended to protect the telephone network from the harms defined by the Federal Communications Commission (FCC) Part 68, Section 3 rules in Title 47 of the Code of Federal Regulations (47 CFR 68.3.*

ANSI/TIA 124-E-2006, Wireless Radio Telecommunication Intersystem Non-Signaling Data Communication DMH (Data Message Handler)

*This document describes the messages and procedures required to perform call detail record data trans-mission between systems.*

ANSI/TIA 125-A-2000, Recommended Minimum Performance Standard for Digital Cellular Spread Spectrum Speech Service Option 1

*Provides definitions, methods of measurement, and minimum performance characteristics of IS-96-A variable-rate speech codecs for digitial cellular wideband spread spectrum mobile stations and base stations.*

ANSI/TIA 126-D-2001, Mobile Station Loopback Service Options Standard

*Provides a loopback of primary traffic information bits through the mobile station.*

ANSI/TIA 127-A [SF1]-2005, Software Distribution for TIA-127-A -Enhanced Variable Rate Codec (EVRC) Speech Service Option 3 for Wideband Spread Spectrum Digital Systems

*This technical database forms the Software Distribution in support of the Specification for the Enhanced Variable Rate Codec (EVRC), Speech Service Option 3, a variable-rate two-way speech service option.*

ANSI/TIA 127-A-2004, Enhanced Variable Rate Codec Speech Service Option 3 for Wideband Spread Spectrum Digital Systems

*Describes data services available on wideband spread spectrum systems. It is organized into a series of related recommendations, some of which address functions common to all code division multiple access data services, and others which describe a specific data service.*

ANSI/TIA 136-005+1-2000, TDMA Third Generation Wireless, Introduction, Identification, and Semi-Permanent Memory, Addendum 1

*SP-4027-005-1 This addendum will correct error in the standard.*

ANSI/TIA 136-005-A+1-2000, TDMA Third Generation Wireless, Introduction, Identification, and Semi-Permanent Memory, Addendum 1

*4. (SP-4027-005-A+1) - (ANSI approved 3/2000) this addendum will address some network compatibility issues.*

ANSI/TIA 136-005-C-2004, Introduction, Identification, and Semi-Permanent Memory

*This document comprises of a list of brief explanations of terms, processes, and functions used in ANSI-TIA-136*

ANSI/TIA 136-010-C-2001, Optional Mobile Station Facilities

*Comprises a multi-part standard that, when taken in total, defines the requirements for a PCS/Cellular system and mobile station using TDMA technology while also maintaining compatibility with AMPS analog technology. This standard was listed for public review in the 8/25/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 136-020-E-2004, SOC, BSMC and Other Code Assignments

*This document comprises of a list of brief explanations of terms, processes, and functions used in ANSI/TIA-136*

ANSI/TIA 136-030-B-2004, TDMA Third Generation Wireless - R-UIM Overview and Operation

*This document describes the Removable-User Identity Module (R-UIM) as an entity that stores and manages the identity of the subscriber and related subscription data, as well as, personal data*

ANSI/TIA 136-033-1-2001, TDMA Third Generation Wireless - R-UIM File Structure

*Makes corrections to ANSI/TIA/EIA-136-033.*

ANSI/TIA 136-033-A-2002, TDMA Third Generation Wireless - R-UIM File Structure

*This standard defines the coding of the EFs specified in the R-UIM file structure in the TIA/EIA-136-030.*

ANSI/TIA 136-034-A-2002, TDMA Third Generation Wireless - R-UIM-ME Interface Procdures (RMIP)

*This standard establishes the interface functions & commands and application protocols required for operation of the Removable User Identity Module (R-UIM), when inserted into compatible Mobile Equipment (ME).*

ANSI/TIA 136-036-2001, TDMA Third Generation Wireless - Personalization of Mobile Equipment (ME)

*Presents personalization, which is based on the current personalization feature and mechanisms. This standard was listed for public review in the 8/25/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 136-037-A-2002, TDMA Third Generation Wireless - R-UIM Application Toolkit (RAPT)

*This standard describes the interface between the Mobile Equipment (ME) and the Removable User Identity Module (R-UIM) for the R-UIM Application Toolkit (RAPT).*

ANSI/TIA 136-110-B-2001, TDMA Cellular/PCS - RF Channel Assignments

*Comprises a multi-part standard which,when taken in total, defines the requirements for a PCS/Cellular system and mobile station using TDMA technology while also maintaining compatibility with AMPS analog technology. This standard was listed for public review in the 8/25/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 136-121-A-1999 (R2003), Digital Control Channel Layer 1

*This document provides service to access points to layer 2 both on mobile station and BMI*

ANSI/TIA 136-123-F-2006, TDMA Third Generation Wireless Digital Control Channel Layer 3

*This part provides the digital control channel (DCCH) Layer 3 description, including the mobile station state diagram, detailed procedures (e.g. intelligent roaming), the Layer 3 message set, information element descriptions, and timer descriptions.*

ANSI/TIA 136-131-C-2001, Digital Traffic Channel Layer 1

*Incorporates enhancements necessary to describe alternate slot formats in support of High Penetration Paging application.*

ANSI/TIA 136-133-A-1-2000, Digital Traffic Channel Layer 3 (Addendum 1)

*Corrects errors in TIA/EIA-136-133-A. To obtain an electronic draft: contact Valerie Kamin, Global Engineering Documents at 1-800-854-7179.*

ANSI/TIA 136-133-B-2000, Digital Traffic Channel Layer 3

*Describes the digital traffic channel layer 3 structure. This standard was originally listed for public review in the Decmeber 3, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text. To obtain an electronic draft: contact Valerie Kamin at Global Engineering Documents at 1-800-854-7179.*

ANSI/TIA 136-133-E-2004, Digital Traffic Channel Layer 3

*This document describes the function of the digital traffic channel layer three*

ANSI/TIA 136-140-B-2000, Analog Control Channel

*Describes the wideband analog data signals - mobile station. This standard was originally listed for Public Review in the March 12, 1999 and July 2, 1999 issues of Standards Action. It is being resubmitted due to substantial changes to the text. To obtain an electronic copy, contact Valerie Kamin at Global Engineering at 1-800-854-7179.*

ANSI/TIA 136-1999, TDMA Cellular/PCS

*Defines the requirements for a PCS/Cellular system and mobile stations using Time Division Multiple Access (TDMA) technology while also maintaining compatibility with AMPS analog technology. This is the third public review for this standard. It was originally listed in the May 22, 1998 and the August 28, 1998 issues of Standards Action and is being resubmitted due to substantive changes to the text.*

ANSI/TIA 136-210-A-2001, Radio Interface ACELP Minimum Performance

*Specifies the procedures to be employed to test that non-bit-exact implementations of TIA/EIA-136-410 compatible full-rate speech codecs operation in CTX or DTX . This standard was listed for public review in the 8/25/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 136-240-2001, TDMA Third Generation Wireless - Adaptive Multi-Rate Speech Codec Minimum Performance Requirements

*Specifies the procedures to ensure that non-bit-exact implementation of TIA/EIA-136-440 or GSM 06.90 compatible minimum performance requirements This standard was listed for public review in the 8/25/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 136-250-2001, TDMA Third Generation Wireless - Minimum Performance Standards for ACELP Voice Activity Detection (VAD)

*Povides VAD minimum performance specifications.*

ANSI/TIA 136-270-C-1-2002, TDMA Third Generation Wireless - Mobile Stations Minimum Performance - Addendum

*Details definitions, methods of measurement, and minimum performance requirements for 800MHz and 1900 MHz Wireless mobile stations.*

ANSI/TIA 136-270-C-2001, Mobile Stations Minimum Performance

*Incorporates enhancements.*

ANSI/TIA 136-271-2002, Third Generation Wireless - Mobile Stations Minimum Performance for Global Circulation

*This standard details definitions, methods of measurement, and minimum performance requirements for @GHz Wireless mobile stations.*

ANSI/TIA 136-280-D-2002, Minimum Performance Standards for Base Stations

*This standard details definitions, methods of measurements, and minimum performance requirements for 800 and 1900 MHz wireless base stations.*

ANSI/TIA 136-350-A-1-2001, TDMA Wireless Data Service Control , Addendum 1

*Revises this subpart of TIA/EIA-136 to incorporate enhancements.*

ANSI/TIA 136-350-C-2002, Data-Service Control

*This standard specifies Data-Service Control (DSC) for TDMA wireless systems.*

ANSI/TIA 136-351-2001, TDMA Third Generation Wireless - EGPRS-136 AT Command Set

*Describes the User-network commands required for configuring and invoking EGPRS-136 services within a Mobile Termination (MT). This standard was listed for public review in the 8/25/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 136-410-1-2001 (R2003), TDMA Cellular PCS - Enhanced Full-Rate Voice Codedc - Addendum 1

*Makes corrections to ANSI/TIA/EIA-136.410.*

ANSI/TIA 136-410-1999 (R2003), TDMA Cellular PCS - Enhanced Full-Rate Voice Codec

*This document give a description of the ACELP speech and channel codec for a TIA Enhanced Full Rate Codec*

ANSI/TIA 136-420-2003, TDMA Cellular PCS - VSELP

*This document describes the speech coding algorithm*

ANSI/TIA 136-430-1999 (R2003), US1

*This document describes the speech codec data*

ANSI/TIA 136-440-1-2001, TDMA Third Generation Wireless - Adaptive Multi-Rate (AMR) Wireless

*Makes corrections to the original document.*

ANSI/TIA 136-440-2-2002, TDMA Third Generation Wireless - Adaptive Multi-Rate (AMR) Codec - Addendum 2

*(SP-3-4027-440-AD2) This standard provides a description of the AMR speech service, including speech coding, channel coding and link adaptation.*

ANSI/TIA 136-610-B-2002, TDMA Cellular/PCS - Radio Interface R-DATA/SMDPP Transport

*The purpose of this standard is to demonstrate the transport of R-DATA messages through the TIA/EIA-41 SMDPP and vice versa.*

ANSI/TIA 136-620-A-2001, Teleservice Segmentation and Reassembly

*Incorporates enhancements.*

ANSI/TIA 136-630-1999 (R2003), Broadcast Teleservice Transport - Broadcast Air-Interface Transport Service (BATS)

*This document defines a general purpose broadcast transport mechanismthat can be used by existing teleservices*

ANSI/TIA 136-670-2001, TDMA Third Generation Wireless - Packet-Data Service Teleservice over GSM SMS

*Specifies how GSM Short Messages Service may be used to deliver teleservices between (EGPRS-136) mobile stations. This standard was listed for public review in the 8/25/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 136-700-A-1999, Introduction to Teleservices

ANSI/TIA 136-700-B-2000, Introduction to Teleservices

*Describes a teleservice, which is a mechanism for information delivery from a source to a destination through a BMI. This standard was originally listed for Public Review in the March 12, 1999 issue of Standards Action. It is being resubmitted due to substantial changes to the text. To obtain an electronic copy, contact Valerie Kamin at Global Engineering at 1-800-854-7179.*

ANSI/TIA 136-700-D-2002, TDMA Third Generation Wireless - Introduction to Teleservices

*The teleservice is a mechanism for information delivery from a source to a destination through a BMI.*

ANSI/TIA 136-710-C-2002, Short Message Service - Cellular Messaging Teleservice

*(SP-3-4027-710-RV3-1) The purpose of this revision is to revise the original standard.*

ANSI/TIA 136-711-2002, Third Generation Wireless - GSM Hosted SMS Teleservice (GHOST) Teleservice

*GSM Hosted SMS Teleservice, GHOST, is used to deliver GSM SMS Protocol Data Units (PDUs) to and from a mobile station operating in a TIA/EIA=136 network.*

ANSI/TIA 136-720-C-2002, Over-the-Air Activation Teleservice (OATS)

*This standard describes a Teleservice that is designed to support Over-the-Air Activation (OTA).*

ANSI/TIA 136-730-A-2002, Over-the-Air Programming Teleservice (OPTS)

*This standard describes the Higher Layer Protocol Data Unit.*

ANSI/TIA 136-740-2001, TDMA Third Generation Wireless - System Assisted Mobile Positioning through Satellite (SAMPS) Teleservice

*Defines the procedures and signaling for a handset-based positioning service. This standard was listed for public review in the 8/25/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 136-741-2002, TDMA Third Generation Wireless - System Assisted Mobile Positioning though Satellite (SAMPS) for Analog Systems

*This standard defines the procedures and signaling for a handset-based position service within the System Assisted Mobile Position through Satellite (SAMPS)*

ANSI/TIA 136-750-1999 (R2003), General UDP Transport Service (GUTS)

*This document is a general-purpose application data delivery service.*

ANSI/TIA 136-760-A-2002, TDMA Cellular/PCS - Change Rate Indication Teleservice (CIT)

*This standard describes the Higher Layer Protocol Data Unit.*

ANSI/TIA 136-905-A-2004, TDMA Cellular/PCS - Radio Interface Normative Information

*This document provides information that is normative to the TIA-136 standard*

ANSI/TIA 136-910-C-2002, Informative Information

*This standard is provided for information only. It provides a brief example of a MS Terminated SMS, without mobile station user acknowledgement.*

ANSI/TIA 136-933-2000, TDMA Cellular/PCS - Radio Packet Data Service - Description of MAC Layer

*To obtain an electronic copy, contact Valerie Kamin at Global Engineering at 1-800-854-7179.*

ANSI/TIA 136-940-2000, TDMA Cellular/PCS - Radio Interface Capacity and Performance Characteristics of UWC-136

*To obtain an electronic copy, contact Valerie Kamin at Global Engineering at 1-800-854-7179.*

ANSI/TIA 136-972-2001, TDMA Third Generation Wireless - Enhanced General Packet-Data Service (EGPRS-136) Stage-2 Description

*Creates a sub-part to describe enhancements necessary for enhanced general packet data service (EGPRS-136).*

ANSI/TIA 136.000-F-2006, TDMA Third Generation Wireless List of Parts

*TIA/EIA-136 is a multi-part standard that when taken in total, defines the requirements for a PCS/Cellular system and mobile stations using Time Division Multiple Access (TDMA) technology while also maintaining compatibility with AMPS analog technology.*

ANSI/TIA 136.370-B-2006, TDMA Third Generation Wireless - Enhanced General Packet-Data Service (EGPRS-136)

*TIA/EIA-136-370 is an overview of the TDMA Packet-Data Service called Enhanced General Packet Radio Service for TIA/EIA-136. Enhanced General Packet Radio Service for TIA/EIA-136 is also referred to as EGPRS-136.*

ANSI/TIA 222-G-2005, Structural Standard for Antenna Support Structures and Antennas

*The objective of this Standard is to provide recognized literature for antenna supporting structures and antennas pertaining to: (a) minimum load requirements as derived from ASCE 7-02, “Minimum Design Loads for Buildings and Other Structures”, and (b) design criteria as derived from AISC-LRFD-99, “Load and Resistance Factor Design Specification for Structural Steel Buildings” and ACI 318-02, “Building Code Requirements for Structural Concrete&#8221.*

ANSI/TIA 232-F-1997 (R2002), Interface Between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Binary Data Interchange

*This standard is applicable to the interconnection of data terminal equipment*

*(DTE) and data circuit terminating equipment (DCE) interface is intended for connection directly to equipment on the other side without additional technical considerations.*

ANSI/TIA 250-C-2001, Electrical Performance for Television Transmission Systems

*Covers systems that transmit television signals by radio and metallic or optical cable using analog or digital techniques.*

ANSI/TIA 334-C-2000 (R2005), Signal Quality at Interface between Data Terminal Equipment and Synchronous Data Circuit-Terminating Equipment for Serial Data Transmission

*This Standard is a revision to EIA-334-B. This revision adds requirements. It also incorporates new timing diagrams.*

ANSI/TIA 3700-1999, Telephone Network Transmission Model for Evaluating Analog Modem Performance

*Defines a model of the characteristics of the Public Switched Telephone Network (PSTN) in the continental United States of America to be used to measure modem transmission performance. This standard was first listed for public review in the July 17, 1998 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 382-A-1989 (R2000), Minimum Standards – Citizens Band Radio Service Amplitude Modulated (AM) Transceivers Operating in the 27 MHz Band

*This standard details definitions, methods of measurement, and minimum standards for characteristics of mobile and base AM transceivers, transmitters, and receivers, utilizing 6K00A3E type emissions.*

ANSI/TIA 404B-1995 (R2001), Start-Stop Signal Quality between Data for Nonsynchronous Data Terminal Equipment

*Specifies the quality of serial binary data signals employing start-stop format at a data terminal equipment interface.*

ANSI/TIA 41.000-E-1(E)-2005, Wireless Radiotelecommunication Intersystem - Introduction to TIA-41

*This section provides an introduction to TIA-41 for wireless radiotelecommunication intersystems.*

ANSI/TIA 41.000-E-1[E]-2006, Mobile Application Part (MAP) -Introduction

*The purpose of this standard is to identify those wireless services which require intersystem cooperation, to present the general background against which those services are to be provided, and to summarize the principal considerations which have governed and directed the particular approaches taken in the procedural recommendations.*

ANSI/TIA 41.000-E-2004, Wireless Radiotelecommunications Intersystem Operations - Introduction to TIA-41

*Identifies those cellular services which require intersystem cooperation, to present the general background*

ANSI/TIA 41.290-E-2007, Mobile Application Part (MAP) - Intersystem Handoff - Annex A

*Change segment numbering to include the tandem segments as well as the air time segments. DMH requires the number of segments in a call be saved in the audit record. This information must be passed from the serving system to the anchor system upon call disconnect.*

ANSI/TIA 41.400-E-2005, Wireless Radiotelecommunications Intersystem Operations: Operations, Administration and Maintenance

*Defines the intersystem operations, administration, and maintenance information flows and procedures required for intersystem trunk maintenance.*

ANSI/TIA 41.500-E-2004, Wireless Radiotelecommunications Intersystem Operations - Introduction to Signaling Protocols

*Defines the single set of Application Services*

ANSI/TIA 41.510-E-2004, Wireless Radiotelecommunications Intersystem Operations - X.25 Transport Signaling Protocols

*Identifies the X.25 based data transfer services*

ANSI/TIA 41.511-E-2004, Wireless Radiotelecommunications Intersystem Operations - ANS/SS7 Transport Signaling Protocols

*Defines the message transfer part*

ANSI/TIA 41.512-E-2004, Wireless Radiotelecommunications Intersystem Operations - ITU SS7 Transport Signaling Protocols

*Describes the ITU-SS7 based data transfer services*

ANSI/TIA 41.520-E--2004, Wireless Radiotelecommunications Intersystem Operations - TCAP Application Signaling Protocols

*Describes the application services*

ANSI/TIA 41.540-E-2004, Wireless Radiotelecommunications Intersystem Operations - MAP Operations Signaling Protocol

*Employs the TCAP operation formats defined in T1.114*

^NSI/TIA 41.550-E-2004, Wireless Radiotelecommunications Intersystem Operations - MAP Parameters Signaling Protocols

*Describes the use of TCAP parameter format*

ANSI/TIA 41.551-E-2004, Wireless Radiotelecommunications Intersystem Operations - Parameter Types Signaling Protocols

*Provides the definitions of the parameter types used in this standard*

ANSI/TIA 41.590-E-2004, Wireless Radiotelecommunications Intersystem Operations - MAP Compatibility Signaling Protocols

*Outlines guidelines and rules for implementation of this standard*

ANSI/TIA 41.600-E-2005, Wireless Radiotelecommunication Intersystem - Introduction to Procedures

*This section describes the introduction to procedures for wireless radiotelecommunication intersystems.*

ANSI/TIA 41.630-E-2005, Wireless Radiotelecommunication Intersystem - Basic Call Procedures

*This section describes the basic call procedures for wireless radiotelecommunication intersystems.*

ANSI/TIA 41.640-E-2005, Wireless Radiotelecommunication Intersystem - Intersystem Procedures

*This section describes the intersystem procedures for wireless radiotelecommunication intersystems.*

ANSI/TIA 41.641-E-2005, Wireless Radiotelecommunication Intersystem - SMS

*This section describes SMS for wireless radiotelecommunication intersystems.*

ANSI/TIA 41.642-E-2005, Wireless Radiotelecommunication Intersystem - Segementation

*This section describes the segmentation for wireless radiotelecommunication intersystems.*

ANSI/TIA 41.650-E-2005, Wireless Radiotelecommunication Intersystem - Common Voice Feature Procedures

*This section describes the common voice feature procedures for wireless radiotelecommunication intersystems.*

ANSI/TIA 41.651-E-2005, Wireless Radiotelecommunication Intersystem - Voice Features

*This section describes the voice features in wireless radiotelecommunication intersystems.*

ANSI/TIA 41.660-E-2005, Wireless Radiotelecommunications Intersystem - WIN

*This section describes the WIN feature for wireless radiotelecommunication intersystems.*

ANSI/TIA 41.690-E-2005, Wireless Radiotelecommunication Intersystem - Timers

*This section describes timers for wireless radiotelecommunication intersystems.*

ANSI/TIA 41.700-E-2004, Wireless Radiotelecommunications Intersystem Operations - Introduction to WIN Functional Plane

*This part defines the distributed functional plane (DFP) for the WIN*

ANSI/TIA 41.730-E-2004, Wireless Radiotelecommunications Intersystem Operations - WIN Distributed Plane and Model

*This part provides call and service processing and control*

ANSI/TIA 41.750-E-2004, Wireless Radiotelecommunications Intersystem Operations - SSF/CCF Call and Service Logic Model

*This part describes the WIN calla nd service logic processing in terms of call modeling and modeling of service logic processing*

ANSI/TIA 41.790-E-2004, Wireless Radiotelecommunications Intersystem Operations - Annexes

*This annex provides an example of how the WIN funtional entities can be mapped*

ANSI/TIA 422-B-1994 (R2005), Electrical Characteristics of Balanced Voltage Digital Interface Circuits

*This Standard specifies the electrical characteristics of the balanced voltage digital interface circuit, normally implemented in integrated circuit technology, that may be employed when specified for the interchange of serial binary signals between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) or in any point-to-point interconnection of serial binary signals between digital equipment.*

ANSI/TIA 423-B-1995 (R2001), Electrical Characteristics of Unbalanced Voltage Digital Interface Circuits

*Specifies the electrical characteristics of the unbalanced voltage digital interface circuit, normally implemented in integrated circuit technology.*

ANSI/TIA 440-B-2004, Fiber Optic Terms and Definitions

*This document provieds fiber optic terms and definitions*

ANSI/TIA 455-100A-1989 (R2005), Gas Leakage Test for Fiber Optic Cable

*The intent of this test procedures is to describe a method for the determination of how well a cable opposes the migration of gas down the cable's length. The migration is forced by applying a gas pressure, of specified value, to one end of the sample.*

ANSI/TIA 455-104A-1993 (R2005), Fiber Optic Cable Cyclic Flexing Test

*The intent of this test procedure is to determine the effects of repeated flexions on a fiber optic cable. Measures permanent and/or transient optical transmittance hangs and requires the assessment of any damage occurring to other cable components. The intent of this test procedure is to determine the effects of repeated flexions on a fiber optic cable. Measures permanent and/or transient optical transmittance hangs and requires the assessment of any damage occurring to other cable components.*

ANSI/TIA 455-107A-1999, Return Loss for Fiber Optic Components

*This procedure is used to determine the ratio in decibels of the power reflected by the port of a component or assembly to the incident power on the same port of that component or assembly when that component or assembly is introduced into a link or system. The ratio is termed " Return Loss" when applied to a fiber optic system or link. Return loss, by convention, is a positive number. The ratio of relfected to incident power is termed " Reflectance" when applied to an individual component. Reflectance, by convention, is a negative number.*

ANSI/TIA 455-111-A-2003, Procedure for the Measurement of Optical Fiber Curl

*Describes the measurement methods and test procedures for fibre curl*

ANSI/TIA 455-113-1996 (R2001), Polarization-Mode Dispersion Measurement for Single-Mode Optical Fibers by the Fixed Analyzer Method

*Describes a procedure for measuring the polarization-mode dispersion (PMD) of single-mode optical fibers.*

ANSI/TIA 455-11C-2002, Vibration Test Procedure for Fiber Optic Components and Cables

*(SP-3-4638-RV3) This revisions intent is to determine the effects of vibration within the sinusoidal and random vibration environments that may be encountered during the life of the fiber optic component.*

ANSI/TIA 455-122-A-2002, Polarization-Mode Dispersion Measurement for Single Mode Optical Fibers by Jones Matrix Eigenanalysis

*Describes a procedure for measuring the polarization-mode dispersions (PMD) of single-mode optical fibers.*

ANSI/TIA 455-123-2000 (R2005), Measurement of Optical Fiber Ribbon Dimensions

*The intent of this test procedure is to provide methods to measure or verify key optical fiber ribbon dimensional parameters. These parameters may affect the ability to join or connectorize optical fiber ribbon due to either misalignment of optical fibers or dimensional compatibility of the ribbon structure with associated ribbon hardware and termination equipment such as ribbon holders, or chucks, used with mass fusion splicers, or mass mechanical splices and connectors.*

ANSI/TIA 455-126-2000, Spectral Characterization of LEDs

*Measures the central wavelength, peak wavelength, and the spectral width (RMS and FWHM) of a semiconductor light emitting diode (LED) using a dispersive spectrophotometric method (that is, using a revolving diffraction grating) or other suitable method. This is the second public review for this standard. It first appeared in the September 26, 1997 issue of Standards Action and is being resubmitted now due to substantive changes to the text.*

ANSI/TIA 455-130-2001, Elevated Temperature Life Test for Laser Diodes

*the procedure is intended to characterize the gradual degradation modes present in telecommunication laser diodes. The data generated will be analyzed following standard procedures of TIA/EIA 610.*

ANSI/TIA 455-131-1997 (R2005), Measurement of Optical Fiber Ribbon Residual Twist

*The intent of this test procedure is to provide a method of measuring residual twist in optical fiber ribbons, and highlights critical aspects of this measurement. Optical fiber ribbon residual twist is a measure of how much a ribbon rotates, or twists, along a given length. Residual twist can result from the ribbon manufacturing process, or from changes in the dimensions of a ribbon due to heat and humidity aging.*

ANSI/TIA 455-132-A-2001, Measurement of Effective Area of Single-Mode Optical Fiber

*Documents the methods for measuring the effective area (Aeff) of single-mode fiber.*

ANSI/TIA 455-133-A-2003, Length Measurement of an Optical Fiber or Cable by the Phase-Shift Method

*Establishes uniform requirements for measuring the length and elongation of optical fibre*

ANSI/TIA 455-134-1996 (R2002), Measurement of Connector Ferrule Hole Inside Diameter

*The intent of this procedure is to determine the inside diameter of the ferrule hole in an optical fiber connector ferrule*

ANSI/TIA 455-135-1996 (R2002), Measurement of Connector Ferrule Inside and Outside Diameter Circular Runout

*The intent of this procedure is to determine the circular runout of the ferrule hole in he end of an optical fiber connector ferrule relative to the ferrule outer surface.*

ANSI/TIA 455-141-1999 (R2005), Twist Test for Optical Fiber Ribbons

*The intent of this test procedure is to determine an optical fiber ribbon's mechanical ability to withstand dynamic twisting.*

ANSI/TIA 455-157-1994 (R2000), Measurement of Polarization Dependent Loss (PDL) of Single-Mode Fiber Optic Components

*the intent of this test is to determine the sensitivity of single-mode fiber optic components to changes in polarization. To obtain an electronic draft: contact Valerie Kamin, Global Engineering Documents at 800-854-7179*

ANSI/TIA 455-158-1997 (R2001), Measurement of Breakaway Frictional Force in Fiber Optic Connector Alignment Sleeves

*Measures the breakaway frictional force between the ferrule and the sleeve in fiber optic connectors.*

ANSI/TIA 455-15A-1992 (R2002), Altitude/Immersion of Fiber Optic Components

*(SP-3-2364-RF1) The intent of this reaffirmation is to demonstrate the ability of a fiber optic component device-to-cable attachment(s).*

ANSI/TIA 455-160-A-2003, Procedure for Measuring Temperature and Humidity Aging Effects on Optical Characteristics of Optical Fibers (SP-2821-A)

*This standard determines the suitability of optical fibres to withstand the environmental condition of high humidity and high temperature*

ANSI/TIA 455-161-1996 (R2000), Procedure for Measuring Temperature and Humidity Aging Effects on Mechanical Characteristics of Optical Fibers

*This test procedure describe a method for the determination , in an accelerated manner, of the effects of temperature on the mechanical characteristics of optical fibers. It is intended to assess the ability of an optical fiber to withstand prolonged exposure to elevated temperature and humidity in the surrounding atmosphere. The performance of the fiber during and after aging may be evaluated by performing specific optical tests.*

ANSI/TIA 455-162A-1999 (R2005), Fiber Optic Cable Temperature-Humidity Cycling

*The intent of this test procedure is to describe a method for evaluating materials and properties of fiber optic cables when they are subjected to the cyclic effects of temperature and humidity. This is an accelerated environmental test designed to expose the cable to controlled high humidity at elevated temperatures and to frozen moisture. The intent of this test method is to: A) detect changes in the transmission performance of the fibers and, B) detect damage to the cable materials and components such as cracks or blisters.*

ANSI/TIA 455-168A-1992 (R1999), Chromatic Dispersion Measurement of Multimode Graded-Index and Single-Mode Optical Fibers by Spectral Group Delay Measurement – Variable Aperture Method in the Farfield

*Describes a procedure for determining the chromatic dispersion of EIA-4920000-A Class 1A and Class 1B multi-mode and class IVA and IVB single-mode.*

ANSI/TIA 455-169A-1992 (R1999), Chromatic Dispersion Measurement of Optical Fibers by the Phase-Shift Method

*Provides procedures for determining the chromatic dispersion of Class IVA and IVB single-mode fibers over a specified wave-length range using the relative phase shifts among sinusoidally modulated optical sources of different wave-lengths.*

ANSI/TIA 455-16A-2000, Salt Spray (Corrosion) Test for Fiber Optic Components

*Determines the effects of a controlled salt-laden atmosphere on fiber optic device components, finishes, and mechanisms.*

ANSI/TIA 455-171-A-2001, Attenuation by Substitution Measurement for Short-Length Multimode Graded-Index and Single Mode Optical Fiber Cable Assemblies

*Specifies the components together with the models and measurement procedures needed for verification of balanced twisted pair cabling This standard was listed for public review in the 2/11/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 455-172-1986 (R1999), Flame Resistance of Firewall Connector

*Provides for a test to determine the ability of a cabled and mated connector (plug and receptacle) to resist firewall environments, such as flame or ignition of gasses. Optical operation is required for 5 minutes and physical for 20 minutes.*

ANSI/TIA 455-173-1990 (R2001), Coating Geometry Measurement for Optical Fiber Side View Method

*Describes a procedure for measuring the polarization-mode dispersion (PMD) of single-mode optical fibers. This standard was listed for public review in the 5/5/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 455-175-B-2003, Chromatic Dispersion Measurement of Single-Mode Optical Differential Phase Shift Method

*Establishes uniform requirements for measuring the chromatic dispersion of optical fibre*

ANSI/TIA 455-176-A-2003, Method of Measuring Optical Fiber Cross-Sectional Geometry by Automated Grey-Scale Analysis

*Establishes uniform requirements for measuring the geometrical characteristics of uncoated optical fibres*

ANSI/TIA 455-177-B-2003, IEC 60793-1-43 Optical fibres - Part 1-43: Measurement methods and test procedures - Numerical aperture

*This document establishes uniform requirements for measuring the numerical aperture of optical fibre.*

ANSI/TIA 455-178-B-2003, FOTP-178 IEC 60793-1-32 Optical Fibers - Part 1-32: Measurement Methods and Test Procedures - Coating Stripability

*Pertains primarily to testing either fibers as produced by a fiber manufacturer or subsequently overcoated (tight buffered) using various polymers.*

ANSI/TIA 455-180-A-1999, FOTP-180, Measurement of the Optical Transfer Coefficients of a Passive Branching Device (Coupler)

*Measures the pertinent coefficients of the logarithmic transfer matrix of a branching device in order to determine the ability of the device to carry out its design.*

ANSI/TIA 455-181-1992 (R2001), Lightning Damage Susceptibility Test for Optic Cables with Metallic Components

*Provides a test method for electrical-impulse testing of fiber optic cable using specified current waveforms and peak-current levels.*

ANSI/TIA 455-183-2000 (R2005), Hydrogen Effect on Optical Fiber Cable

*The intent of this test procedure is to provide a type test which characterizes the effect on fiber attenuation due to hydrogen generated by the cable components only. The data must be used cautiously since such data does not account for potential generation of hydrogen from other sources in the installed environment.*

ANSI/TIA 455-184-1991 (R1999), Coupling Proof Overload Test, Fiber Optic Interconnecting Devices

*The intent of this procedure is to apply an overload torque to twist-type coupling mechanisms. This procedure is applicable to threaded and bayonet twist-type coupling mechanisms.*

ANSI/TIA 455-185-1991 (R1999), Strength of Coupling Mechanism Fiber Optic Interconnecting Devices

*The intent of this procedure is to assure that the coupling mechanism of a connector set or connector-device combination will withstand the axial loads likely to be applied during normal servie.*

ANSI/TIA 455-186-1991 (R1999), Proposed New FOTP, Gauge Retention Force

Measurement for the Fiber Optic Components

*Measures the retention characteristics of the resilient member of a fiber optic component (mostly commonly a connector). Specifically intended for use when it is impracticable to define acceptance/rejection criteria for resillient members by the use of size dimensions. This method is applicable to either male or female members. For the case of a male member, a ring gauge is forced over the member and the minimum frictional force to pull it off is assessed by its ability to pick up a weight. This procedure is identical for a female resilient member except that a guage pin is substituted for the ring gauge.*

ANSI/TIA 455-187-1991 (R1999), FOTP-187, Engagement and Separation Force Measurement of Fiber Optic Connector Sets

*Measures the forces or torques that are required to fully couple or uncouple a connector set. The connector set components are held in a fixture so that a controlled coupling force or torque can be applied. The force or torque is mesured during the entire coupling and/or uncoupling cycle. The procedure is applicable to either twist type or push-pull type coupling mechanisms.*

ANSI/TIA 455-188-1991 (R2001), Proposed New FOTP, Low-Temperature Testing of Fiber Optics Components

*Intended for exposing a specimen to the environmental condition of extended low temperature (cold).*

ANSI/TIA 455-191-B-2003, Measurement of Mode Field Diameter of Single-Mode Optical Fiber

*This standard describes the measurement methods and test procedures for determining mode field diameters.*

ANSI/TIA 455-192-1999 (R2005), H-Parameter Test Method for Polarization-Maintaining Optical Fiber

*The intent of this test procedure is to specify a method of measuring the h-parameter of single-mode, highly linearly birefringent optical fiber (commonly called polarization-maintaining fibers).*

ANSI/TIA 455-193-1999 (R2005), Polarization Crosstalk Test Method for Polarization-Maintaining Optical Fiber and Components

*The intent of this test procedure is to specify a method of measuring the polariation crosstalk of single-mode, highly linearly berefringent (commonly called polarization-maintaining or PM) optical fiber and components. This standard is applicable to fibers and components having connectors attached to one or both ends, and to two or more.*

ANSI/TIA 455-194-1999, Measurement of Fiber Pushback in Optical Connectors

*Determines the ability of an adhesive to adequately lock the optical fiber into a stable, fixed position in an optical connector when the connector is mated under load.*

ANSI/TIA 455-195-A-2003, Coating Geometry Measurement for Optical Fiber - FOTP195

*This standard describes the measurement methods and test procedures for determining coating geometry.*

ANSI/TIA 455-196-1999, Guideline for Polarization Mode Dispersion Measurement in Single-Mode Fiber Optic Components

*Describes the measurement of Polarization Mode Dispersion (PMD) in fiber optic devices or components.*

ANSI/TIA 455-197-2000, Differential Group Delay Measurement of Single-Mode Components and Devices by the Differential Phase Shift Method

*Describes a procedure in which a modulated light source at a given wavelength is coupled into the component under test, and the phase of the modulated signal existing the fiber at a first polarization state is compared with the phase at a second, orthogonal polarization state.*

ANSI/TIA 455-1B-1998, Cable Flexing for Fiber Optic Interconnecting Devices

*SP-2761-D-1 was prepared by the FO-6.3 Subcommittee on Fiber Optic Interconnecting Devices. Balloting on SP-2761-D closed on May 16, 1995. There were eleven affirmative ballots, and one disapproved with comments received. The comments were addressed by the FO-6.3 Subcommittee. Since technical changes were made to the document, it was deemed necessary to issue a 30-day Public Review notice, thus SP-2761-D-1.*

ANSI/TIA 455-20-B-2004, Fiber Optics – Measurement of Change in Optical Transmittance

*This standard describes the methods and test procedures for monitoring of changes in optical transmittance.*

ANSI/TIA 455-200-2001, Insertion Loss of Connectorized Polarization - Maintaining Fiber or Polarizing Fiber Pigtailed Devices and Cable Assemblies

*Specifies a procedure for the measurement of the insertion loss of a fiber optic interconnection on single mode, highly linearly birefringent optical fiber, i.e., either polarization-maintaining (PM) fiber or polarizing (PZ) fiber.*

ANSI/TIA 455-201-2001, Return Loss of Connectorized Polarization-Maintaining Fiber or Polarizing Fiber Pigtailed Devices and Cable Assemblies

*Specifies a procedure for the measurement of the return loss of a fiber optic interconnection on single mode, highly linearly birefringent optical fiber, i.e., either polarization-maintaining*

*(PM) fiber or polarization (PZ) fiber.*

ANSI/TIA 455-203-2001, Launched Power Distribution Measurement Procedure for Graded-Index Multi-mode Fiber Transmitters

*Sets forth a standard procedure for the collection of two-dimensional fiber-optical nearfield grayscale data and subsequent reduction to one-dimensional data expressed as a set of three sampled parametric functions of radius fr*

*This standard was originally listed for public review in the December 17, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 455-204-00, Measurement of Bandwidth on Multimode Fiber

*Describes two methods for determining and measuring the information transmission capacity of TIA/EIA-4920000-B Class 1 (glass core) multi-mode optical fibers.*

ANSI/TIA 455-206-2000, FOTP206 - IEC 61290-1-1 - Optical Fiber Amplifiers - Basic Specification Part 1-1: Test Methods for Gain Parameters - Optical Spectrum Analyzer

*Establishes uniform requirements for accurate and reliable measurements, by means of the electrical spectrum analyzer test method.*

ANSI/TIA 455-207-2000, FOTP207 - IEC 61290-1-2- Optical Fiber Amplifiers - Basic Specification Part 1-2: Test Methods for Gain Parameters - Electrical Spectrum Analyzer

*Establishes uniform requirements for accurate and reliable measurements, by means of the optical power meter test method.*

ANSI/TIA 455-208-2000, FOTP208- IEC 61290-1-3 - Optical Fibre Amplifiers - Basic Specification - Part 1-3: Test Methods for Gain Parameters - Optical Power Meter

*Establishes uniform requirements for accurate and reliable measurements, by means of the optical spectrum analyzer test method*

ANSI/TIA 455-209-2000, FOTP209 - IEC 61290-2-1 - Optical Fibre Amplifiers - Basic Specification Part 2-1: Test Methods for Optical Power Parameters - Optical Spectrum Analyzer

*Establishes uniform requirements for accurate and reliable measurements, by means of the electrical spectrum analyzer test method.*

ANSI/TIA 455-210-2000, FOTP210-IEC 61290-2-2 - Optical Fibre Amplifiers - Basic Specification - Part 2-2: Test Methods for Optical Power Parameters - Electrical Spectrum Analyzer

*This standard establishes uniform requirements for accurate and reliable measurements, by means of the optical power meter test method.*

ANSI/TIA 455-211-2000, FOTP211 - IEC 61290-2-3- Optical Fibre Amplifiers - Basic Specification - Part 2-3: Test Methods for Optical Power Parameters - Optical Power Meter demultiplexer

*This standard establishes uniform requirements for accurate and reliable measurements, by means of optical demultiplexer test methods*

ANSI/TIA 455-212-2000, FOTP212 - IEC 61290-6-1 - Optical Fibre Amplifiers - Basic Specification Part 6-1: Test Methods for Pump Leakage Parameters- Optical Demultiplexer

*This standard establishes uniform requirements for accurate and reliable measurements, by means of optical spectrum analyzer test method.*

ANSI/TIA 455-213-2000, FOTP213 - IEC 61290-7-1 - Optical Fibre Amplifiers -Basic Specification - Part 7-1: Test Methods for Out-of-Band Insertion Losses - Filtered Optical Power Meter

*This standard establishes uniform requirements for accurate and reliable measurements, by means of filtered optical power meter test method*

ANSI/TIA 455-214-2000, FOTP214 - IEC 61290-1 - Optical Fibre Amplifiers - Part 1: Generic Specification

*Establishes uniform requirements for transmission, operation, reliability and environmental properties of OFAs.*

ANSI/TIA 455-219-2002, FITP219 Multifiber Ferrule Endface Geometry Measurement

*Defines a test procedure to assess endface geometry in guide-pin based multifiber ferrules*

ANSI/TIA 455-224-2002, FOTP224 - Calibration of Fibre Optic Chromatic Dispersion Test Sets

*Provides standard procedures for the calibration of optical fibre chromatic dispersion (CD) test sets*

ANSI/TIA 455-225-2002, FOTP225 - End Face Image Analysis Procedure for the Calibration of Optical Fibre Geometry Test Sets

*Addresses the calibration of measurement made on single-mode fibres only.*

ANSI/TIA 455-226-2002, FOTP226 - Calibration of Optical Time-Domain Reflectometers (OTDR's)

*Provides procedures for calibrating single-mode optical time domain reflectometers (OTDRs)*

ANSI/TIA 455-227-2002, FOTP-227-IEC 61300- Fiber Optic Devices and Passive Components - Basic Test and Measurement Procedures - Part 3-24: Examinations and Measurements - Keying Accuracy of Optical Connectors for Polarization Maintaining Fibre

*Measures the keying accuracy of a polarization maintaining fiber connector.*

ANSI/TIA 455-231-2003, IEC 61315 - Calibration of Fibre-Optic Power Meters

*Standardizes all of the steps involved in the calibration process*

ANSI/TIA 455-234-2003, FOTP234 - IEC 60793-1-52 Optical Fibres - Part 1-52: Measurement Methods and Test Procedures - Change of Temperature

*This standard defines a test that determines the suitability of optical fibres to withstand the environment condition of changes in temperatures.*

ANSI/TIA 455-235-2004, FOTP235 - IEC 61280-2-8 Fibre Optic Communication Subsystem Test Procedures - Digital Systems - Part 2-8: Determination of Low BER Using Q-Factor Measurements

*This document specifies two main methods for the determination of the low BER values by making accelerated measurements*

ANSI/TIA 455-236-2004, FOTP236 - IEC 61280-2-9 - Fibre Optic Communication Subsystem Test Procedures - Part 2-6: Digital Systems - Optical Signal-to-Noise Ratio Measurement for Dense Wavelength-Division Multiplexed Systems

*This document provides a parameter definition and a test method for obtaining optical signal-to-noise ratio (OSNR) using apparatus that measures the optical spectrum at a multichannel interface.*

ANSI/TIA 455-25C-2002, Repeated Impact Testing of Fiber Optic Cable Assemblies

*This procedure provides a method to determine the ability of optical fiber cables to withstand impact loads.*

ANSI/TIA 455-28-C-1999 (R2005), Measuring Dynamic Strength and Fatigue Parameters of Optical Fibers by Tension

*The intent of this test procedure is to measure the tensile strength of optical fiber at a specified constant rate of loading and environment is designed for determining fiber strength. Since this method is 100% destructive, it shall not be a substitute for any proof testing which may be done additionally. This method is to be applied only to optical fibers. It shall not be used for cables or bundles of fiber. This test may be applied to fibers as manufactured or to fibers that are exposed to alternative environments.*

ANSI/TIA 455-2C-1998, Impact Test Measurements for Fiber Optic Devices

*Determines the ability of a fiber optic component or assembly (device) to withstand impacts of the type that might be encountered in normal service. This test is normally intended to be performed only on devices designed to meet impact requirements. Typical indications of damage to a fiber optic device resulting from this test include, but are not limited to: inability to mate or unmate, broken parts or accessories, power transmission change, damage to seals. This standard was originally listed for Public Review in the December 6, 1996 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 455-31C-1994 (R2005), Proof Testing Optical Fibers by Tension

*The intent of this test procedure is to describe procedures for briefly applying a specified tensile load to continuous lengths of all Class I and Class IV, glass/glass optical fibers. This FOTP should not be applied to Class II (glass/plastic) and Class III (all-plastic) fibers. This method is intended to ensure a minimum strength for fiber that survives proof testing. The minimum strength is a key parameter for determining the minimum survival time at loads less than the minimum strength.*

ANSI/TIA 455-32A-1990 (R1999), Fiber Optic Circuit Discontinuities

*The intent of this procedure is to provide a method of testing a broad variety of passive or active fiber optic components or subsystems for susceptibility to discontinuities (transient output or transmittance fluctuations) during the application of an external stimulus, such as vibration or physical shock.*

ANSI/TIA 455-33B-2005, FOTP-33 - Optical Fiber Cable Tensile Loading and Bending

*This document describes the procedure for measuring optical fiber cable tensile and loading.*

ANSI/TIA 455-34A-1995 (R2002), Fiber Optics – Interconnection Device Insertion Loss Test

*This procedure defines a method by which the optical insertion loss of a complete fiber optic interconnection can be measured. There are two procedures that may be used. In the first power is measured through a continuous length of fiber or cable. The fiber/cable is then cut, the interconnection device is installed, and power is remeasured. In the second procedure, power is measured through a pigtailed device. The input/cable is then cut back and the power is remeasured. These procedures do not apply to cable assemblies.*

ANSI/TIA 455-35A-1990 (R1999), Fiber Optic Component Dust (Fine Sand) Test

*Ascertains the ability of fiber optic components to resist the effects of a dry dust (fine sand) laden atmosphere.*

ANSI/TIA 455-37A-1993 (R2005), Fiber Optic Cable Bend Test, Low and High Temperature

*The intent of this test procedure is to describe a procedure for determining the ability of a fiber optic cable to withstand bending at low or high temperatures. Evaluation of this ability is made by visual examination and by either measuring the change in optical transmittance or monitoring fiber continuity.*

ANSI/TIA 455-39B-1999 (R2005), Fiber Optic Cable Water Wicking Test

*The intent of this test procedure is to describe the method of measuring the water wicking characteristics of all types of fiber optic cables.*

ANSI/TIA 455-41A-1993 (R2001), Compressive Loading Resistance of Fiber Optic Cable

*Determines the ability of a fiber optic cable to mechanically and optically withstand, or recover from (or both), the effects of a slowly-applied compressive force.*

ANSI/TIA 455-42A-1989 (R2001), Optical Crosstalk in Fiber Optic Components

*SCOPE IS MISSING.*

ANSI/TIA 455-48B-1990 (R2005), Measurement of Optical Fiber Cladding Diameter Using Laser-Based Instruments

*The intent of this test procedure is to measure the cladding (outside) diameter of an optical fiber drawing process prior to the application of the protective buffer coating(s). It is also used off-line as a quality inspection method. In this application, it is normally used instead of FOTP-45. Control of the cladding diameter is required to assure the performance of the fiber in cabling, connectorization and splicing. Uniformity of the cladding diameter along the length is also required.*

ANSI/TIA 455-4C-2002, Fiber Optics – Component Temperature Life Test

*(SP-3-4467-RV3) This revisions intent is to determine the effects on the optical and mechanical characteristics of fiber optic components resulting from exposure to an elevated temperature for a specific length of time.*

ANSI/TIA 455-54B-1998 (R2001), FOTP-54, Mode Scrambler Requirements for Overfilled Launching Conditions to Multimode Fibers

*Describes light launch conditions to the test fiber for the purpose of achieving a uniform overfilled launch with a laser diode or other light source*

ANSI/TIA 455-56B-1995 (R2005), Test Method for Evaluating Fungus Resistance of Optical Fiber and Cable

*The intent of this test procedure is to evaluate the adequacy of optical fibers and cables to retain their structural integrity and performance level under environmental conditions favorable for the development of fungal growth. These conditions are: high humidity, a warm atmosphere, and the presence of inorganic salts.*

ANSI/TIA 455-57-B-1994 (R2005), Preparation and Examination of Optical Fiber Endface Testing Purposes

*The intent of this test procedure is to provide guidelines for acceptable optical fiber endface appearance and defines the techniques which are commonly employed to obtain such appearance. This procedure is intended to promote uniformity in fiber end preparation quality for testing and for optical signal transmission. This FOTP is not intended to require examination of every fiber end, nor is it intended to establish firm requirements (which are normally established by Detail Specifications), and is made available only to provide guidelines for various levels of end quality that may be called out in Detail Specifications or in other FOTPs.*

ANSI/TIA 455-58B-2001, Core Diameter Measurement of Graded-Index Optical Fibers

*Presents three methods for determining the core diameter of graded-index optical fibers having near-parabolic index profiles.*

ANSI/TIA 455-5C-2002, Humidity Test Procedure for Fiber Optic Components

*(SP-3-4637-RV3) This revisions intent is to evaluate the optical and material properties of fiber optic components as they are influenced or deteriorated by the effects of high humidity and heat conditions.*

ANSI/TIA 455-60-A-2000, Measurement of Fiber or Cable Length Using an OTDR

*Describes the use of an optical time-domain reflectometer (OTDR) to measure the length of an optical fiber or fiber cable. This standard was first listed for public review in the October 28, 1994, March 29, 1996, and November 7, 1997 issues of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 455-67-A-2003, Procedures for Measuring High Temperature Aging Effects on Optical Characteristics of Optical Fibers

*This standard determines the suitability of optical Fibre to withstand the environmental condition of high temperature (dry heat)*

ANSI/TIA 455-69-A-1991 (R2000), Test Procedure for Minimum and Maximum Exposure Temperature Evaluation of Optical Fibers

*Determines the ability of an optical fiber to maintain optical performance (attenuation and temperature dependence of attenuation) over an extended period of time. To obtain an electronic draft: global@ihs.com*

ANSI/TIA 455-70-1996 (R2000), Procedure for Assessing High Temperature Exposure Effects on Mechanical Characteristics of Optical Fibers

*Describes a method for the determination, in an accelerated manner, of the effects of temperature on the mechanical characteristics of optical fibers. Electronic copies can be obtained from global@ihs.com*

ANSI/TIA 455-71-A-1999, Procedure to Measure Temperature-Shock Effects on Fiber Optic Components

*Describes a method for conducting temperature-shock testing on fiber optic components such as connectors and branching devices.*

ANSI/TIA 455-72-1997 (R2001), Procedure for Assessing Temperature and Humidity Cycling Exposure Effect on Optical Characteristics of Optical Fiber

*Describes a method for the determination, in an accelerated manner, of the effects of temperature and humidity cycling on the optical characteristics of optical fibers.*

ANSI/TIA 455-73-1997 (R2001), Procedure for Assessing Temperature and Humidity Cycling Exposure Effect on Mechanical Characteristics of Optical Fiber

*Describes a method for the determination, in an accelerated manner, of the effects of temperature and humidity cycling on the mechanical characteristics of optical fibers*

ANSI/TIA 455-74-A-2003, Fluid Immersion Aging Procedure for Optical Fiber Optical Properties

*This standard defines the test that determines the suitability of optical fibre to withstand the environmental condition of imersion in distilled or demineralized water*

ANSI/TIA 455-78A-1990 (R1996), Spectral Attenuation Cutback Measurement for Single Mode Optical Fibers (SP-3644)

*EIA/TIA-455-78A was approved for reaffirmation by reaffirmation by the FO-6.6 Subcommittee on Optical Fibers and Materials. SP-3644 is herewith submitted to TIA membership and others concerned as a step toward reaffirmation.*

ANSI/TIA 455-78A-1990 (R1998), Spectral-Attenuation Cutback Measurement for Single-Mode Optical Fibers

*Describes a procedure for measuring spectral attenuation of single-mode optical fibers. This procedure is restricted to nonpolarization-sensitive fibers at wavelengths greater than or equal to that at which the fiber is effectively single-mode. The effective cutoff wavelength is determined by the high-order mode filter.*

ANSI/TIA 455-78B-2002, FOTP78 - IEC 60793-1-40 - Optical Fibres - Part 1-40: Measurement Methods and Test Procedures Attenuation

*Establishes uniform requirements for measuring the attenuation of optical fibre, thereby assisting in the inspection of fibres and cables for commercial purposes.*

ANSI/TIA 455-8-2000, Measurement of Splice or Connector Loss and Reflectance Using an OTDR

*Describes the use of an optical time-domain reflectometer (OTDR) to measure the loss and reflectance of a splice or connector indirectly. This standard was first listed for public review in the March 15, 1996 and November 7, 1997 issues of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 455-80-C-2003, Measuring Cutoff Wavelength of Uncabled Single-Mode Fiber by Transmitted Power

*Establishes uniform requirements for measuring cut-off wavelengthof single-mode optical fibre*

ANSI/TIA 455-81-B-2000, Compound Flow (Drip) Test for Filled Fiber Optic Cable

*This test is intended to verify that fillling and flooding compounds will not flow from a filled fiber optic cable at stated temperatures.*

ANSI/TIA 455-84B-1992 (R1998), Jacket Self-Adhesion (Blocking) for Fiber Optic Cable

*Investigates the ability of the jacket, insulation, or other outer covering of fiber optic cable on a reel, drum, or spool to withstand elevated temperatures for prolonged periods of time without sticking to itself on adjacent turns or layers.*

ANSI/TIA 455-85A-1992 (R2005), Fiber Optic Cable Twist Test

*The intent of this test procedure is to establish the ability of a fiber optic cable (or fiber optic cable component, when appropriate) to mechanically withstand twisting.*

ANSI/TIA 455-86-1983 (R2005), Fiber Optic Cable Jacket Shrinkage

*The intent of this test procedure is to describe a procedure for determining the linear dimensional changes in extruded plastic cable jackets at elevated temperatures.*

ANSI/TIA 455-87B-1993 (R2005), Knot Test for Fiber Optic Cable

*The intent of this test procedure is to evaluate the effect of a sever bend in a fiber optic cable due to a knot using appropriate test procedures and parameters. Used to test any type of fiber optic cable.*

ANSI/TIA 455-88-2001, Fiber Optic Cable Bend Test

*Determines the degree of cable degradation that will occur if the cable is statically bent around a corner of a given radius.*
*Single copy price: $39.00*
*Order from: Global Engineering Documents*
*Send comments (with copy to BSR) to: Billie Zidek-Conner, TIA*

ANSI/TIA 455-89B-1998, Jacket Elongation and Tensile Strength for Fiber Optic Cable

*This procedure describes the method for determining the elongation and tensile strength of optical fiber cable jackets.*

ANSI/TIA 455-95A-2000 (R2005), Absolute Optical Power Test for Optical Fibers and Cables

*The intent of this test procedure describes a method for determining the total optical power emanating from an optical fiber. This procedure may be used for, but is not limited to, measuring the attenuation of the fiber or cable, the loss of terminating devices or methods, the amount of optical power coupled into the fiber by a source, or the optical power at the system receiver.*

ANSI/TIA 455-98-A-1983 (R2000), External Fiber Optic Cable External Freezing Test

*Simulates the effect of ice (Method A) or the crush force caused by ice (Method B) on Fiber Optic Cables. Electronic copies can be obtained from global@ihs.com*

ANSI/TIA 455-B-1998, Standard Test Procedure for Fiber Optic Fibers, Cables, Transducers, Sensors, Connecting and Terminating Devices, and Other Fiber Optic Components

*This document provides uniform test procedures for testing fiber optic components „‚tended for, or forming a part of, optical communications and data transmission systems.*

ANSI/TIA 464-C-1-2004, Telecommunications - Multiline Terminal Systems - Requirements for PBX Switching Equipment, Addendum 1

*Updates ANSI/TIA-464-C to make it in-line with the new changes mandated by FCC for Part 68 product registration*

ANSI/TIA 464-C-2002, Private Branch Exchange (PBX) Switching Equipment for Voiceband Application

*(SP-3-3673) Defines requirement for Private Branch Exchange (PBX) systems.*

ANSI/TIA 470-110-C-2004, Telephone Instruments with Loop Signaling

*This standard provides handset acoustic performance requirements for Customer Premises Equipment (CPE) intended for wireline connection to the PUblic Switched Telephone Network (PSTN*

ANSI/TIA 470-210-C-1-2006, Telecommunications - Telephone Terminal Equipment - Resistance and Impedance Performance Requirements for Analog Telephones - Addendum 1

*This Addendum corrects an error made in transferring the longitudinal balance performance requirements from TIA-470-B to this document in the process of creating this revision.*

ANSI/TIA 470-210-C-2004, Telecommunications - Telephone Terminal Equipment - Resistance and Impedance Performance Requirements

*This document establishes criteria and procedures for evaluating the resistance and impedance performance of analog terminals*

ANSI/TIA 470-230-C-2005, Telecommunications - Telephone Terminal Equipment - Network Signaling Performance Requirements for Analog Telephones

*This standard defines the DTMF, Pulse Dial, and Flash network signaling performance requirements for Customer Premises Equipment (CPE) intended for connection to the Public Switched Telephone Network (PSTN.*

ANSI/TIA 470-310-C-2004, Telecommunications - Telephone Terminal Equipment - Cordless Telephone Range Measurement Procedures

*This standard establishes procedures and criteria for evaluating Cordless Telephone Range Performance in a traditional outdoor environment as well as controlled laboratory environment.*

ANSI/TIA 470.220-C-2004, Telecommunications - Telephone Terminal Equipment - Alerter Acoustic Output Performance Requirements for Analog Telephones

*This document defines the acoustic and electrical performance requirements of analog telephone alerters*

ANSI/TIA 470.320-C-2006, Telecommunications Telephone Terminal Equipment Cordless Telephone Operation and Feature Performance Requirements

*This standard was developed in accordance with TIA procedural guidelines, and represents the consensus position of the Working Group and its parent Subcommittee TR-41.3, which served as the formulating group.*

ANSI/TIA 472C000-B-2005, Standard for Optical Fiber Premises Distribution Cable

*This document covers fiber optic communications cables intended for use in the buildings of communications users.*

ANSI/TIA 472E000-2005, Standard for Indoor-Outdoor Optical Fiber Cable

*This document covers optical fiber communications cables intended for use in Indoor-Outdoor optical fiber applications.*

ANSI/TIA 472F000-2005, Optical FIber Drop Cable

*This document covers optical fiber communications cables for use in outdoor and indoor/outdoor optical fiber drop applications.*

ANSI/TIA 485-A-1998 (R2003), Electrical Characteristics of Generators and Receivers for Use in Balanced Digital Multipoint Systems

*This standard specifies the electrical characteristics of generators and receivers that may be employed when specified for the interchange ofbinary signals in multipoint interconnection of digital equipment.*

ANSI/TIA 492AAAB-1998, Detail Specification for 50-um Core Diameter/125-um Cladding Diameter Class Ia Graded-Index Multimode Optical Fibers

*PUBLISH CHANGES for 30-day PR (separate file)*
*Enables end users and manufacturers of fiber-optic cable to specify one of the choices of multimode optical fiber contained in the cable. This Specification, in conjunction with Generic Specification TIA/EIA-4920000-B and Sectional Specification TIA/EIA-492A000-A, follows the specification structure of the National Electronic Components Quality Assessment System (NECQ).*

ANSI/TIA 492CAAA-1998, Detail Specification for Class IVa Dispersion-Unshifted Single-Mode Optical Fibers

*This specification enables end users and manufacturers of fiber optic cable to specify one of the choices of single-mode optical fiber contained in the cable. This specification, in conjunction with Generic Specification TIA/EIA 4920000-B and Sectional Specification TIA/EIA 490C000, to follow the specification structure of the National Electronic Components Quality Assessment System (NECQ). This Detail Specification applies to a Class IVa dispersion-unshifted (or non-shifted) fiber whose dispersion characterisitc is approximated by a differentiated Sellmeier equation.*

ANSI/TIA 492CAAB-2000 (R2005), Detail Specification for Class IVa Dispersion Unshifted Single-Mode Optical Fibers with Low Water Peak

*Detail Specification for Class IVa Dispersion-Unshifted Single-Mode Optical Fibers with Low Water Peak*

ANSI/TIA 526-15-1993 (R1998), Jitter Tolerance Measurement

*Describes the procedure to measure output jitter at hierarchical interfaces and intrinsic jitter generated by individual digital equipment.*

ANSI/TIA 526-16-1993 (R1998), Jitter Transfer Function Measurement

*Describes the procedure to measure the jitter transfer characteristic of an individual digital equipment as the ratio of the output jitter to the applied input jitter as a function of frequency.*

ANSI/TIA 526-17-1993 (R1998), Output Jitter Measurement

*Describes the procedure to measure the output jitter generated by individual digital equipment.*

ANSI/TIA 526-18-1993 (R1998), Systematic Jitter Generation Measurement

*Describes the procedure to measure the systematic jitter on a digital signal at the output port of an individual digital equipment, including pattern-dependent sources such as intersymbol interference, finite pulse width, pattern effects, and clock threshold offsets.*

ANSI/TIA 526-19-2000, Optical Signal-to-Noise Ratio Measurement Procedures for Dense Wavelength-Division Multiplexed Systems

*Provides a parameter definition and a test method for obtaining optical signal-to-noise (OSNR) using apparatus that measures the optical spectrum at a multi-channel interface.*

ANSI/TIA 526-27-1998, Procedure for System-Level Temperature Cycle Endurance Test

*Contains a temperature endurance test that is meant to demonstrate the capability of fibre-optic telecommunications equipment to operate reliably in uncontrolled environments.*

ANSI/TIA 530-A-1992 (R2003), High-Speed 25-Position Interface for Data Terminal Equipment and Data Circuit-Terminating Equipment, Including Alternative 26-Position Connector

*This document is applicable to the interconnection of data terminal equipment (DTE) and data circuit-terminating equipment (DCE) employing serial binary data interchange with control information exchanged on Sept,t,tarate control circuits. It defines signal characteristics; interface mechanical characteristics; and, functional description of interchange circuits.*

ANSI/TIA 553-A-1999, Mobile Station – Land Station Compatibility Specification

*Creates a compatibility standard for a cellular radio telecommunications system. This is the fourth public review for this standard. It was originally listed in the May 24, 1996, January 31, 1997, and November 21, 1997 issues of Standards Action. It is being resubmitted due to substantive changes in the text.*

ANSI/TIA 561-1990 (R2003), Simple 8-Position Non-Synchronous Interface between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Data Interchange

*This document was developed in recognition of a need for physically smaller interfaces consistent with modern technology. When used in conjunction with TIA-562, this Standard provides a complete interface specification suitable for non-synchronous applications where full functionality is not required. TIA-561 is applicable to the interconnection of Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) employing serial binary data interchange where a minimal number of control and information circuits are required. Scope, interface mechanical characteristics, and functional description of the interchange circuits are defin*

ANSI/TIA 562-1989 (R2003), Electrical Characteristics of Unbalanced Digital Interface

*This document was developed in response to the demand from the data communications community for physically smaller, lower power interfaces more consistent with today's technology. This Standard specifies the electrical characteristics of the unbalanced voltage digital interface circuit normally implemented in integrated circuit technology that may be employed when specified for the interchange of serial binary signals between Data Terminal Equipment (DTE) and Data Circuit Terminating Equipment (DCE) or in any interconnection of binary signals between voice or data equipment. The electrical characteristics specified in EIA/TIA-562 also allo*

ANSI/TIA 568-A-1-1997, Propagation Delay and Delay Skew Specifications for 100-Ohm 4-Pair Cable

*This document specifies propagation delay for 100 4-pair cables for all recogized cabling categories. The document also specifies the delay skew for 4-pair cables for all recognized cabling categories. Related to these two specifications, this addendum will specify the variability permitted within the operating range of temperature. Laboratory measurement methods and computation algorithms used within the specified frequency range are included in these specifications. Field testing requirements are not covered in this document.*

ANSI/TIA 568-A-5-2000, Transmission Performance Specifications for 4-pair 100 Ohm Category 5 Cabling

*Describes transmission performance of a cabling system, which depends upon the characteristics of horizontal cable, connecting hardware, patch cords and cross-connect wiring, the total number of connections, and the care with which they are installed and maintained. This standard was originally listd in the April 24, 1998 and August 14, 1998 issues of Standards Action. It is being resubmitted due to substantive changes.*

ANSI/TIA 568-B.1-1-2001, Commercial Building Telecommunications Cabling Standard - Part 1: General Requirements - Addendum 1 - Minimum 4-Pair UTP and 4-Pair ScTP Patch Cable Bend Radius

*Applies to minimum 4-pair unshielded twisted-pair (UTP) and 4-pair screened twisted-pair (ScTP) patch cable bend radius*

ANSI/TIA 568-B.1-2-2003, Commercial Building Telecommunications Cabling Standard - Part 1: General Requirements - Addendum 2 - Grounding and Bonding Specifications for Screened Horizontal Cabling

*This addendum specifies additional components and requirements for screened balanced twisted-pair horizontal cabling*

ANSI/TIA 568-B.1-2001, Commercial Building Telecommunications Cabling Standard

*Specifies a generic telecommunications cabling system for commercial buildings that will*

*support a multiproduct, multivendor environment. This standard was listed for public review in the 2/11/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 568-B.1-3-2003, Commercial Building Telecommunications Cabling Standard - Part 1: General Requirements - Addendum 3 - Supportable Distances and Channel Attenuation for Optical Fiber Applications by Fiber Type

*This addendum applies to the supportable distances and channel attenuation for optical fiber applications by fiber type.*

ANSI/TIA 568-B.1-4-2003, Commercial Building Telecommunications Cabling Standard - Part 1: General Requirements - Addendum 4 - Recognition of Category 6 and 850 nm laser-Optimized 50/125 Micron Multi-mode Fiber

*The purpose of this addendum is to recognize balanced twisted pair category 6 cabling and 850 nm laser-optimized 50/125 um multimode optical fiber cable revising sub-clause 4.4, 4.5, 5.3, and 11.2.2 of TIA/EIA-568-B.1*

ANSI/TIA 568-B.1-5-2004, Commercial Building Telecommunications Cabling Standard - Part 1: General Requirements - Addendum 5 - Telecommunications Cabling for Telecommunications Enclosures

*The purpose of this addendum is to recognize the use of telecommunications enclosures*

ANSI/TIA 568-B.1-7-2006, Guidelines for Maintaining Optical Fiber Polarity With Systems Using Array Connectors

*To support bi-directional communication systems that use separate optical fibers in each direction, the cabling system must provide correct signal polarity so that the transmitter on one end of the channel will connect to the receiver on the other end.*

ANSI/TIA 568-B.2-1-2002, Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted Pair Components - Addendum 1 - Transmission Performance Specifications for 4-Pair 100 Ohm Category 6 Cabling

*Specifies requirements for insertion loss, near-end crosstalk (NEXT) loss, equal level far-end crosstalk (ELFEXT), return loss, propagation delay, and delay skew requirements for 100 ohm 4-pair category 6 cabling, cables, and connecting hardweare. (SP-3-3727-AD1-B)*

ANSI/TIA 568-B.2-11-2005, Commercial Building Telecommunications Cabling Standard - Part2: Balanced Twisted-Pair Cabling Components - Addendum 11: Specification for Increased Diameter of 4-Pair UTP and ScTP Cables

*This standard specifies the requirements for the cable diameter of 4-pair balanced UTP and SCTP cables specified in TIA-568-B.2.*

ANSI/TIA 568-B.2-2-2001, Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted-Pair Cabling

*Revises subclauses 4.3.48, 4.4, 4.4.1, 4.4.4.9, and 5.4.3 of the standard.*

ANSI/TIA 568-B.2-2001, Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted-Pair Cabling

*Specifies minimum requirements for balanced twisted-pair telecommunications cabling components. This standard was listed for public review in the 11/3/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 568-B.2-3-2002, Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted-Pair Cabling - Addendum 3 - Additional Considerations for Insertion Loss and Return Loss Pass/Fail Determination

*The purpose of this addendum is to add clause 1.2.5 to TIA/EIA-568-B.2. which covers insertion loss and return loss pass/fail determination.*

ANSI/TIA 568-B.2-4-2002, Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted Pair Cabling Components - Addendum 4 - Solderless Connection Reliability Requirements for Copper Connecting Hardware

*(SP-3-4426-AD4) This standard specifies solderless connection reliability requirements for copper connecting hardware used in commercial building telecommunications.*

ANSI/TIA 568-B.2-5-2003, Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted Pair Cabling Components - Addendum 5

*This addendum makes corrections to TIA/EIA-568-B.2*

ANSI/TIA 568-B.2-6-2003, Commercial Building Telecommunicatins Cabling Standard - Part 2: Balanced Twisted-Pair Cabling Components - Addendum 6 - Category 6 Related Component Test Procedures

*This addendum contains refinements and enhancements to the measurement methods specified for category 6 components in the TIA/EIA-568-B.2-1 Standard*

ANSI/TIA 568-B.2-9-2007, Commercial Building Telecommunications Cabling Standard - Part 2: - Balanced Twisted-Pair Cabling Components - Addendum 9 - Additional Category 6 Balance Requirements and Mesurement Procedures

*This addendum provides updated specifications and laboratory test procedures for category 6 balance requirements and measurements.*

ANSI/TIA 568-B-3-1-2002, Optical Fiber Cabling Components Standard - Addendum 1 - Additional Transmission Performance Specifications for 50/125 um Optical Fiber Cables

*Provides additional applications for multimode optical fiber cabling optimized for laser operation at 850 nm in support of serial transmission at 10 Gb/s data rates for distances up to 300 m (984 ft).*

ANSI/TIA 568-B-3-2000, Optical Fiber Cabling Components Standard

*This standard specifies minimum requirements for optical fiber telecommunications cabling components that are used within a commercial building, up to and including the telecommunications outlet/connector, and between buildings in a campus environment. This standard was originally listed for public review in the October 22, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text. To obtain an electronic draft: contact Valerie Kamin at Global Engineering Documents at (800) 854-7179.*

ANSI/TIA 568-B-3-2000, Transmission Performance Specifications for 4-pair 100 Ohm Category 5 Cabling

*This standard specifies minimum requirements for optical fiber telecommunications cabling components that are used within a commercial building, up to and including the telecommunications outlet/connector, and between buildings in a campus environment. This standard was originally listed for public review in the October 22, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text. To obtain an electronic draft: contact Valerie Kamin at Global Engineering Documents at (800) 854-7179.*

ANSI/TIA 569-A-1-2000, Commercial Building Telecommunications Pathways and Spaces

*Provides an addendum to fully replace Section 4.7 of ANSI/TIA/EIA 569-A. This standard was listed for public review in the November 17, 1997, May 8, 1998, and December 18,1998 issues of Standards Action. It is being resubmitted due to substantive changes.*

ANSI/TIA 569-A-2-2000, Furniture Pathway and Spaces

*Comprises an addendum to fully replace Section 4.7 of ANSI/TIA/EIA 569-A. This document was listed for public review in the November 17, 1997, May 8, 1998 and December 18, 1998 issues of Standards Action. It is being resubmitted due to substantive changes.*

ANSI/TIA 569-A-3-2000, Commercial Building Standard for Telecommunications Pathways and Spaces - Access Floor

*Revision to Clause 4.3, Access Floor. Access flooring systems are comprised of modular floor panels supported by pedestals, and assembly of pedestals, or an integral pedestal and floor panel. Access flooring is typically used in computer and equipment rooms, telecommunications closets and in general office areas.*

ANSI/TIA 569-A-4-2000, Commercial Building Standard for Telecommunications Pathways and Spaces

*This addendum is for a poke-thru device that allows through penetration of above grade concrete floors and steel decks with telecommunication cables, or power, or both, while maintaining the fire-rating integrity of the floor.*

ANSI/TIA 569-A-5-2001, Commercial Building Telecommunications Cabling Standard - Addendum 5 - In-Floor Systems

*Replace sub-clause 4.2, underfloor pathways, of ANSI/TIA/EIA-569-A. The underfloor sub-clause of ANSI/TIA/EIA-569-A, through this addendum, is being modified to align with current terminology and specifications. This standard was listed for public review in the 6/2/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 569-A-6-2001, Commercial Building Standard for Telecommunications Pathways and Spaces - Addendum 6 - Multi-Tenant Pathways and Spaces

*Focuses on the pathways and spaces that are common to the telecommunications infrastructure in multi-tenant buildings and campuses.*

ANSI/TIA 569-A-7-2001, Multi-Tenant Pathways and Spaces, Addendum 7

*Applies to cable trays and cable runways. The following provides criteria for cable fill design criteria and installation guidelines of cable trays and cable runways.*

ANSI/TIA 570-A-1-2002, Security Cabling for Residences

*This addendum focuses on security cabling for residences and recognizes the evolving nature of residences, and the homeowner inherent limitations in adapting to changing cabling needs once the residence has been constructed.*

ANSI/TIA 570-A-2-2002, Residential Telecommunications Cabling Standard - Addendum 2 - Control Cabling for Residences

*(SP-3-3490-AD2) This addendum focuses on control cabling for residences.*

ANSI/TIA 570-A-3-2002, Residential Telecommunications Cabling Standard - Addendum 3 - Whole-Home Audio Cabling for Residences

*This addendum describes the components for a basic whole-home audio system.*

ANSI/TIA 570-B-2004, Residential and Light Commercial Telecommunications Wiring Standard

*This document standardizes requirements for residential telecommunications infrastrcture*

ANSI/TIA 571-A-1999, Environmental Consideration for Telephone Terminals

*Establishes environmental conditions that should be addressed in the design of telecommunications user premises equipment for interfacing and connecting with the various elements of the public telephone network. This document was listed in the September 12, 1997, March 27, 1998, and May 22, 1998 issues of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 574-1990 (R2003), Synchronous Interface between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Binary Data Interchange

*Provides the flexibility of a new interface*

ANSI/TIA 578-B-2000 (R2005), Asynchronous Facsimile DCE Control Standard

*This standard contains protocols for use between a DTE and a Facsimile DCE. It includes automatic calling and answering.*

ANSI/TIA 592-A-1998 (R2005), Asynchronous Facsimile DCE Control

*This standard contains protocols for use between a DTE and a facsimile DCE. It supports automatic calling and answering.*

ANSI/TIA 594-B-2004, Information Technology - Telecommunications and Information Exchange Between Systems - Synchronization Methods and Technical Requirements for Private Integrated Services Networks

*Establishes technical criteria necessary in the design of a synchronization plan for a PISN*

ANSI/TIA 596-1992 (R2002), Network Channel Terminating Equipment for Public Switched Digital Service

*These requirements apply to a device between an end-user DTE and the network interface (NI) of an intraLATA or interLATA carrier*

ANSI/TIA 598-C-2005, Color Coding of Fiber Optic Cables

*This document defines the recommended identification scheme or system for individual fibers, fiber units, and groups of fiber units within a cable structure.*

ANSI/TIA 602-A-2000 (R2005), Serial Asynchronous Automatic Dialing and Control

*Applicable to the interconnection of data terminal equipment (DTE) and data circuit-terminating equipment (DCE) employing serial binary data operation via the ITU-T Recommendation V.24, 100-series interchange circuits.*

ANSI/TIA 603-C-2004, Land Mobile FM or PM Communications Equipment Measurement and Performance Standards

*This standard provides definition, methods of measurement and performance standards for radio equipment used in the Private (Dispatch) Land Mobile Services that employ FM or PM modulation*

ANSI/TIA 604-10A-2002, Fiber Optic Connector Intermateability Standard

*Presents the intermateability standard for simplex and duplex connectors with the commercial designation LC.Presents the intermateability standard for simplex and duplex connectors with the commercial designation LC. This standard was listed for public review in the 12/29/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 604-12-2000, Fiber Optic Connector Intermateability Standard for Type MT-RJ

*FOCIS 12 presents the intermateability standard for connectors with the commercial designation of MT-RJ, and is used as an addendum to TIA/EIA-604.*

ANSI/TIA 604-13-A-2004, FOCIS 13 - Fiber Optic Connector Intermateability Standard, Type SFOC 1.25

*This document presents the intermateability standard for simplex and duplex connectors with the commercial designation SFOC 1.25*

ANSI/TIA 604-15-2003, FOCIS 15 - Fiber Optic Connector Intermateability Standard - Type MF

*(SP-3-4931) Presents the intermateability standard for connectors with the commercial designation MF, and is used as an addendum to TIA/EIA-604.*

ANSI/TIA 604-16-A-2004, FOCIS 16 - Fiber Optic Connector Intermateability Standard - Type LSH

*This document provides the intermateability standard for connectors with the commercial designation of LSH*

ANSI/TIA 604-16-B-2005, Fiber Optic Connector Intermateability Standard, Type LSH

*TIA-604-16-B presents the intermateability standard for simplex and duplex connectors with the commercial designation LSH. This standard is issued as an addendum to TIA/EIA 604, Fiber Optic Connector Intermateability Standards. The provisions of TIA/EIA 604 apply to this document.*

ANSI/TIA 604-17-2004, FOCIS17 - Fiber Optic Connector Intermateability Standard, Type MU

*(SP-3-0076) presents the intermateability standard for connectors with the commercial designation MU*

ANSI/TIA 604-1993 (R2000), Fiber Optic Connector Intermateability Standards (FOCIS)

*This document, together with its addenda, provides standards for the intermateability of fiber optic connectors. Each addendum to this document is a Fiber Optic Connector Intermateability Standard (FOCIS) for a particular type or design of fiber optic.*

ANSI/TIA 604-2-B-2004, Fiber Optic Connector Intermateability Standard

*This standard presents the intermateability standard for connectors with the commercial designation ST*

ANSI/TIA 604-3-B-2004, Fiber Optic Connector Intermateability Standard

*this document presents the intermateability standard for connectors with the commercial designation of SC and SC-APC*

ANSI/TIA 604-4-1997, Fiber Optic Connector Intermateability Standard

*Intermateability standard for type FC connectors*

ANSI/TIA 604-4-B-2004, FOCIS4 - Fiber Optic Connector Intermateability Standard, Type FC and Type FC-APC

*This document presents the intermateability standard for connectors with the commercial designation of FC and FC-APC*

ANSI/TIA 604-5-C-2004, Fiber Optic Connector Intermateability Standard (FOCIS-5)

*FOCIS 5 presents the intermateability standard for connectors with the commercial designation of MPO*

ANSI/TIA 604-6-1999, Fiber Optic Connector Intermateability Standard (Fiber Jack Connector)

*Defines the minimum physical attributes of mating connector components. This is the second public review for this standard. It first appeared in the April 10, 1998 issue of Standards Action and is being resubmitted due to substantive changes to the text.*

ANSI/TIA 604-7A-2002, FOCIS-7, Fiber Optic Connector Intermateability Standard

*This standard defines the minimum physical attributes of mating connector components.*

ANSI/TIA 605-1992 (R2002), Facsimile DCE-DTE Packet Protocol Standard

*This document describes Facsimile DCE to DTE Packet Protocol.*

ANSI/TIA 606-A-2002, Administration Standard for the Telecommunications Infrastructure of Commercial Buildings

*This standard covers over-the-air provisioning of mobile station operational parameters, provisioning of System Selection for Preferred Roaming parameters, provisioning of Service Programming Lock, and the newly added provisioning of Preferred User Zone List.*

ANSI/TIA 612-1993 (R2005), Electrical Characteristics for an Interface at Data Signaling Rates up to 52 Mbit/s

*This Standard specifies the electrical characteristics of the balanced digital interface circuit.*

ANSI/TIA 613-1993 (R2005), High-Speed Serial Interface for Data Terminal Equipment and Data Circuit-Terminating Equipment

*This standard provides for a general purpose DTE-DCE interface for data rates up to a maximum of 52 Mbit/s.*

ANSI/TIA 631-A-2002, Telecommunications Telephone Terminal Equipment – Radio Frequency Immunity Requirements for Equipment Having an Acoustic Output

*(SP-3-3210-RV1) This standard specifies Radio Frequency (RF) immunity performance criteria for two-wire Telephone Terminal Equipment (TTE) having an acoustic output and two-wire TTE adjunct devices with connection port for Telephone Terminal Equipment (TTE) having an acoustic output.*

ANSI/TIA 637-B-1[E]-2006, Short Message Services (SMS) for Wideband Spread Spectrum Systems - Release B Addendum 1

*The Short Message Service (SMS) allows the exchange of short messages between a mobile station and the wireless system, and between the wireless system and an external device capable of transmitting and optionally receiving short messages.*

ANSI/TIA 637-B-2002, Short Message Services for Spread Spectrum Systems

*This standard allows the exchange of short messages between a mobile station and the wireless system, and between the wireless system and an external device capable of transmitting and optionally receiving short messages. It also provides for the broadcast of messages.*

ANSI/TIA 637-C-2004, Short Message Services for Spread Spectrum Systems

*This document describes technical requirements for Short Message Service (SMS)*

ANSI/TIA 644-A-2001, Electrical Characteristics of Low Voltage Differential Signaling (LVDS) Interface Circuits

*Specifies the electrical characteristics of low voltage differential signaling interface circuits, normally implemented in integrated circuit technology, that may be employed when specified for the interchange of binary signals. To obtain an electronic draft: global@ihs.com*

ANSI/TIA 662-013-1998, Personal Wireless Telecommunications Interoperability Standard (PWT) - Part 13 - Data Services Access Profiles A and B, Class 1

*Specifies a generic frame relay service for use within closed user groups (CUG). This part is used by other Data Service Profile (DSP) standards when providing inter-working to levels above the Medium Access Control (MAC) layer of the attached network.*

ANSI/TIA 663-1997, Personal Communications Interface Interoperability Standard (PCI)

*This specifications is to be used for two way interworking between fixed and portable radio devices operating in the unlicensed frequency band allocated for personal communications services (Unlicensed PCS or U-PCS). The equipment is intended to convey digitally-encoded speech and data with associated digital signaling, via a radio channel, to and from a nearby fixed atation, or network of fixed stations.*

ANSI/TIA 664-000-A-2000, Cellular Features Description

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-000-A-2000, Wireless Features Description

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-000-B-1-2005, Wireless Features Description - Introduction

*Describes a subset of wireless features, which have been defined to enable a wireless subscriber to use these features in any system into which the subscriber roams. To accomplish this, the selected subset consists of features that are more likely to be used when roaming, and also features that are necessary to implement full intersystem operation.*

ANSI/TIA 664-000-B-2003, Wireless Features Description - Introduction

*Presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-100-A-2000, Wireless Features Description: General Background and Assumptions

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-501-A-2000, Wireless Features: Call Delivery

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-502-A-2000, Wireless Features: Call Forwarding - Busy

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-503-A-2000, Wireless Features: Call Forwarding - Default

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-504-A-2000, Wireless Features: Call Forwarding - No Answer

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-505-A-2000, Wireless Features: Call Forwarding - Unconditional

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-506-A-2000, Wireless Features: Call Transfer

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-507-A-2000, Wireless Features: Call Waiting

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-508-A-2000, Wireless Features: Calling Number Identification Presentation

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-509-A-2000, Wireless Features: Calling Number Identification Restriction

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-510-A-2000, Wireless Features: Conference Calling

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-511-A-2000, Wireless Features: Do Not Disturb

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-512-A-2000, Wireless Features: Flexible Alerting

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-513-A-2000, Wireless Features: Message Waiting Notification

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-514-A-2000, Wireless Features: Mobile Access Hunting

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-515-A-2000, Wireless Features: Password Call Acceptance

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-516-A-2000, Wireless Features: Preferred Language

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-517-A-2000, Wireless Features: Priority Access and Channel Assignment

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-518-A-2000, Wireless Features: Remote Feature Control

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-519-A-2000, Wireless Features: Selective Call Acceptance

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-520-A-2000, Wireless Features: Subscriber PIN Access

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-521-A-2000, Wireless Features: Subscriber PIN Intercept

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-522-A-2000, Wireless Features: Three-Way Calling

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-523-A-2000, Wireless Features: Voice Message Retrieval

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-524-A-2000, Wireless Features: Voice Privacy

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-525-A-2000, Wireless Features: Asynchronous Data Service

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-526-A-2000, Wireless Features: Calling Name Presentation

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-527-A-2000, Wireless Features: Calling Name Restriction

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-528-A-2000, Wireless Features: Data Privacy

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-529-A-2000, Wireless Features: Emergency Services

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-530-A-2000, Wireless Features: Group 3 Facsimile Service

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-531-A-2000, Wireless Features: Network Directed System Selection

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-532-A-2000, Wireless Features: Non-Public Service Mode

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-533-A-2000, Wireless Features: Over the Air Service Provisioning

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-534-2000, Wireless Features: Service Negotiation

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-535-A-2000, Wireless Features: User Group

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-536-A-2000, Wireless Features Description: Group 3 Analog Fax

*The G3 AFax service shall allow digital woreless subscribers to send and receive faxes using standard aaagroup 3 fax machines and fax modems.*

ANSI/TIA 664-601-A-2000, Wireless Features: Short Message Delivery Point-to-Point Bearer Service

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-602-A-2000, Wireless Features: Wireless Messaging Teleservice

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-603-A-2000, Wireless Features: Wireless Paging Teleservice

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-701-A-2000, Wireless Features: Mobile Station Functionality

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-801-A-2000, Wireless Features: System Functionality

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-802-A-2000, Wireless Features: Subscriber Confidentiality

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-803-A-1-2005, Wireless Features Description: Network Services

*The dual-band Personal Communication Services (PCS) and cellular support feature is a network capability providing the infrastructure for wireless systems to support both PCS(1800 MHz) and cellular (800 MHz). This section describes services used by the switching system and network operators.*

ANSI/TIA 664-803-A-2000, Wireless Features: Network Services

*This standard presents a recommended plan for the implementation of Uniform Features for use in the Wireless Radiotelephone Service*

ANSI/TIA 664-804-2003, Wireless Features Description - Enhanced Security Services

*Provides enhanced capabilities for wireless networks and mobile stations.*

ANSI/TIA 664-805-2005, Wireless Features Description: CDMA Packet Data Service

*C-PDS shall allow communication services to access private or public Packet Data Networks (PDNs) (e.g., Internet or Intranets) using an air interface provided by the wireless service provider. C-PDS shall also allow movement of a wireless user engaged in a Packet Data session.*

ANSI/TIA 667-A-1999, Personal Access Communications Systems Wireless User Premises Equipment (PACS-WUPE) Air Interface Standard

*Details how equipment built under this specification must conform to the Spectrum Etiquette required by the FCC rules and the independent PCS systems to share the Unlicensed band.*

ANSI/TIA 668-A-1998 (R2003), High Frequency Radio Facsimile

*Defines the image format, line format, synchronization method, and modulation method suitable for the transmission of images over noisy, low-bandwidth audio channels, especially HF radio links*

ANSI/TIA 678-1-2000, Data Transmission Systems and Equipment – Serial Asynchronous Automatic Dialing and Control for Character Mode DCE on Wireless Data Services, Addendum 1

*Adds 10 additional code points to the +WS46 command, WDS-Side Stack Selection.*

ANSI/TIA 678-A-2004, Data Transmission Systems and Equipment – Serial Asynchronous Automatic Dialing and Control for Character Mode DCE on Wireless Data Services

*Specifies extensions to the protocol elements, procedures, and behaviors*

ANSI/TIA 683-D-2005, Over the Air Service Provisioning of Mobile Stations in Spread Spectrum Systems

*This document describes Over-the-Air Service Provisioning in CDMA and analog systems. The procedures defined are intended to be extendable and flexible enough to be used with future air interface specifications. The procedures in this document do not require support for continuation of the service provisioning process following a CDMA-to-analog handoff.*

ANSI/TIA 687-1997 (R2001), Medium Speed Interface for Data Terminal Equipment and Data Circuit Terminating Equipment

*Applies where equipment on one side of the DTE/DCE interface is intended for connection directly to equipment on the other side without additional technical consideration*

ANSI/TIA 688-1997 (R2003), DTE/DCE Interface for Digital Cellular Equipment

*This standard is applicable to the interconnection of data terminal equipment (DTE) employing serial binary data interchange.*

ANSI/TIA 689-A-2003, Telecommunications - Multiline Terminal Systems - 1 PBX and KTS Support of Enhanced 9-1-1 Emergency Service Calling

*Contains technical requirements associated with PBX and Key Telephone System support of Enhanced 9-1-1 Emergency Calling Service.*

ANSI/TIA 690-2000, Recommended Minimum Standards for 800 MHz Cellular Subscriber Units

*Details definitions, methods of measurement, and minimum performance characteristics of 800-MHz Cellular Subscriber Units. This standard was first listed for public review in the May 24, 1996, December 20, 1996 and Novemeber 7, 1997 issues of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 691-1999, Mobile Station-Base Station Compatibility Standard for Enchanced 800 MHz Analog Cellular

*Creates a compatibility standard for a cellular radio telecommunications system. This is the third public review for this standard. It was originally listed in the May 24, 1996 and the October 24, 1997 issues of Standards Action. It is being resubmitted due to substantive changes in the text.*

ANSI/TIA 694-1997 (R2001), Electrical Characteristics for an Unbalance Digital Interface for Data Signal Rate up to 512 kbit/s

*Specifies the electrical characteristics of the unbalanced voltage digital interface circuit, normally implemented in integrated circuit technology, that ay be employed when specified for the interchange of serial binary signals between DTE and DCE or in any point-to-point interconnection of serial binary between digital equipment.*

ANSI/TIA 712-1997 (R2003), Recommended Minimum Standards for 800 MHz Cellular Base Stations

*This document details definitions, methods of measurement, and minimum performance characteristics of 800 MHz Cellular Base Stations*

ANSI/TIA 723-1998 (R2003), High-Speed 232-Type DTE/DCE Interface

*This document is applicableto the interconnection of DTE and DCE employing serial binary data interchange with control information exchanged on separate control circuits*

ANSI/TIA 732.100-2001, Cellular Digital Packet Data (CDPD) - System Specification Overview

ANSI/TIA 732.1023-2001, Cellular Digital Packet Data (CDPD) - Accounting Interoperability

ANSI/TIA 732.1024-2001, Cellular Digital Packet Data (CDPD) - Circuit Switched Cellular Digital Packet Data

ANSI/TIA 732.1025-2001, Cellular Digital Packet Data (CDPD) - CS CDPD Modem Bank Management Protocol (MBMP)

ANSI/TIA 732.1026-2001, Cellular Digital Packet Data (CDPD) - CS CDPD Accounting Service and Protocol

ANSI/TIA 732.300-2001, Cellular Digital Packet Data (CDPD) - Communications Architecture

ANSI/TIA 732.301-2001, Cellular Digital Packet Data (CDPD) - Subprofiles Concepts

ANSI/TIA 732.310-2001, Cellular Digital Packet Data (CDPD) - Application Subprofiles

ANSI/TIA 732.311-2001, Cellular Digital Packet Data (CDPD) - Lower Layer Subprofiles

ANSI/TIA 732.312-2001, Cellular Digital Packet Data (CDPD) - Subnetwork Subprofiles

ANSI/TIA 732.400-2001, Cellular Digital Packet Data (CDPD) - Overview of the Airlink

ANSI/TIA 732.401-2001, Cellular Digital Packet Data (CDPD) - Airlink Physical Layer

ANSI/TIA 732.402-2001, Cellular Digital Packet Data (CDPD) - Medium Access Control

ANSI/TIA 732.403-2001, Cellular Digital Packet Data (CDPD) - Mobile Data Link Protocol

ANSI/TIA 732.404-2001, Cellular Digital Packet Data (CDPD) - Subnetwork Dependent Convergence Protocol

ANSI/TIA 732.405-2001, Cellular Digital Packet Data (CDPD) - Radio Resource Management

ANSI/TIA 732.406-2001, Cellular Digital Packet Data (CDPD) - Airlink Security

ANSI/TIA 732.408-2001, Cellular Digital Packet Data (CDPD) - Minimum Performance Standards for CDPD Mobile Data Base Stations

ANSI/TIA 732.409-2001, Cellular Digital Packet Data (CDPD) - Minimum Performance Standards for CDPD Mobile End Systems

ANSI/TIA 732.500-2001, Cellular Digital Packet Data (CDPD) - Mobility Management

ANSI/TIA 732.501-2001, Cellular Digital Packet Data (CDPD) - Mobile Network Location Protocol

ANSI/TIA 732.507-2001, Cellular Digital Packet Data (CDPD) - Mobile Network Registration Protocol

ANSI/TIA 732.600-2001, Cellular Digital Packet Data (CDPD) - Network Support Service

ANSI/TIA 732.620-2001, Cellular Digital Packet Data (CDPD) - Message Handling Service

ANSI/TIA 732.630-2001, Cellular Digital Packet Data (CDPD) - Accounting Service and Protocol

*Provides a sub-part with specific focus on subject matter relevant to Accounting Service and Protocol*

ANSI/TIA 732.700-2001, Cellular Digital Packet Data (CDPD) - Network Management

ANSI/TIA 732.731-2001, Cellular Digital Packet Data (CDPD) - MD-IS and MDBS Management Ensemble

ANSI/TIA 732.732-2001, Cellular Digital Packet Data - Inter-Domain Management Ensemble

ANSI/TIA 732.733-2001, Cellular Digital Packet Data (CDPD) - Accounting Management Ensemble

*Provides a sub-part with specific focus on subject matter relevant to Accounting Management Ensemble.*

ANSI/TIA 732.734-2001, Cellular Digital Packet Data (CDPD) - Generic Equipment Management Ensemble

ANSI/TIA 732.750-2001, Cellular Digital Packet Data (CDPD) - Management Information Library

ANSI/TIA 732.751-2001, Cellular Digital Packet Data - Managed Object Conformance Statements (MOCS)

ANSI/TIA 732.800-2001, Cellular Digital Packet Data (CDPD) - Overview of Supplementary Protocol Information

ANSI/TIA 732.820-2001, Cellular Digital Packet Data (CDPD) - State Transition Tables for the CDPD MAC Procedures

ANSI/TIA 732.821-2001, Cellular Digital Packet Data (CDPD) - MAC PICS Proforma

ANSI/TIA 732.830-2001, Cellular Digital Packet Data (CDPD) - State Transition Tables for Mobile Data Link Protocol (MDLP)

ANSI/TIA 732.831-2001, Cellular Digital Packet Data (CDPD) - MDLP PICS Proforma

ANSI/TIA 732.841-2001, Cellular Digital Packet Data (CDPD) - SNDCP PICS Proforma

ANSI/TIA 732.870-2001, Cellular Digital Packet Data (CDPD) - State Transition Tables for Mobile Network Registration Protocol (MNRP)

ANSI/TIA 732.880-2001, Cellular Digital Packet Data (CDPD) - State Transition Tables for Mobile Network Location Protocol (MNLP)

ANSI/TIA 732.881-2001, Cellular Digital Packet Data (CDPD) - MNLP PICS Proforma

ANSI/TIA 732.900-2001, Cellular Digital Packet Data (CDPD) - Protocol Testing Overview

ANSI/TIA 732.920-2001, Cellular Digital Packet Data (CDPD) - MAC Abstract Test Suite

ANSI/TIA 732.930-2001, Cellular Digital Packet Data (CDPD) - MDLP Abstract Test Suite

ANSI/TIA 733-A [SF1]-2005, Software Distribution for TIA-733-A - High Rate Speech Service Option17 for Wideband Spread Spectrum Communications Systems

*This technical database forms the Software Distribution in support of the Specification for the High Rate Speech Service Option 17, a two-way speech service option.*

ANSI/TIA 733-A-2004, High Rate Speech Service Option 17 for Widebande Spread Spectrum Communications Systems

*This document describes the requirements for Service Option 17.*

ANSI/TIA 736-A-2000, Recommended Minimum Performance Standard for the High-Rate Speech Service Option 17 for Spread Spectrum Communication Systems

*Provides definitions, methods of measurement, and minimum performance characteristics of IS-733 variable rate speech codecs for the purpose of TIA/EIA IS-98 and TIA/EIA IS-97.*

ANSI/TIA 758-1-1999, Customer-Owned Outside Plant Telecommunications Cabling

*Provides the requirements used in the design of the telecommunications pathways and spaces, and the cabling installed between buildings or points in a customer-owned campus environment.*

ANSI/TIA 758-A-2004, Customer-Owned Outside Plant Telecommunications Cabling

*This recirculation ballot is a result of the comment resolution held on SP-3-3339-RV1.*

ANSI/TIA 777-A-2003, Telecommunications - Telephone Terminal Equipment - Type 2 Caller Identity Equipment Performance Requirements

*This document addressesthe technical issues associated with Type 1, Type 2, and Type 2.5 Customer Premises Equipment*

ANSI/TIA 785-1-2002, 100 Mb/s Layer Medium Dependent Sublayer and 10 Mbs and 100 Mbs Auto-Negotiation on 850 mm Fiber Optics - Addendum 1

*Makes corrections to the original document.*

ANSI/TIA 785-2001, 100 Mb/s Physical Layer Medium Dependent Sublayer and 10 Mb/s and 100 Mb/s Auto-Negotiation on 850 n, Fiber Optics

*Specifies the 100BASE-X PMD (including MDI) and fiber optic medium for a short wavelength, multimode fiber, 100BASE-SX. This standard was listed for public review in the 11/17/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 793-2001, North American Telephone Network Transmission Model for Evaluating Analog Client and Digitally Connected Server Modems

*Defines a model of the characteristics of the Public Switched Telephone Network (PSTN) in the continental US which determines PCM modem transmission performance. Electronic copies of the document can be purchased from global@ihs.com*

ANSI/TIA 810-B-2006, Telecommunications - Telephone Terminal Equipment - Transmission Requirements for Narrowband Voice Over IP (VOIP) and Voice Over PCM Digital Wireline Telephones

*Summary of Changes: Clause 4.6: Reference Volume Control Setting. Added “unless the manufacturer specifies a different reference volume control setting that also complies with the mandatory low leak RLR requirement in 6.2.3” to help clarify that a manufacturer may specify a setting other than the quietest setting. 2. Clause 4.8: Standard Test Position. Replaced ERP and 6N with “a force of 10N”, based on the most recent information available. 3. Clause 5: General Technical Requirements. Added a new item, “All Type 3.3 ear simulator measurements shall be transformed from the drum reference point (DRP) to the ear reference point (ERP).” I.*

ANSI/TIA 825-A-2003, A Frequency Shift Keyed Modem for Use on the Public Switched Telephone Network

*Specifies a FSK modem which operates at a nominal data signaling rates of 50 or 45.45 symbols per second over the switched telephone network.*

ANSI/TIA 828-2001, BTS-BSC Interoperability (Abis Interface)

*Defines the interface between BST and BSC within the BS. This standard was listed for public review in the 7/14/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 829-2001, Tandem Free Operation (TFO)

*Details the Inband Signalling Protocol between the Transcoder/Rate Adapter Units (TRAU) for speech traffic channels for the Tandem Free Operations (TFO) of Speech Codecs, sometimes also termed "Vocoder Bypass."*

ANSI/TIA 854-2001, A Full Duplex Ethernet Physical Layer Specification for 1000Mb/s (1000BASE-TX) Operating Over Category 6 Balanced Twisted Pair Cabling

*Specifies a full duplex Ethernet physical layer interface, referred to as 100BASE-TX for 1000Mbit/s operation over a maximum 100 meter long category 6 twisted-pair cabling channel This standard was listed for public review in the 10/20/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TIA 855-2001, Telecommunications - Telephone Terminal Equipment Stutter Dial Tone Detection Device - Performance Requirements

*Provides specifications for CPE devices designed to automatically detect stutter dial tone on an analog telephone line*

ANSI/TIA 862-2002, Building Automation Systems Cabling Standard for Commercial Buildings

*This standard enables the planning and installation of a structured cabling system for building automation system applications used in new or renovated construction of commercial building.*

ANSI/TIA 876-2002, North American Network Access Transmission Model for Evaluating xDSL Modem Performance

*(SP-3-4254) Defines the North American network access transmission model to be used in evaluating performance of DSL modems.*

ANSI/TIA 895-A-2002, CDMA Tandem Free Operation

*(SP-3-0030-RV1) This service description document details the Inband Signaling (IS) protocol between Transcoder/Rate Adapter Units (TRAUs) for speech traffic channels for the Tandem Free Operation (TFO) of speech codecs, sometimes also termed "Vocoder Bypass". It is applied to the cdma2000 standards.*

ANSI/TIA 899-2002, Electrical Characteristics of Multipoint Low Voltage Differential Signaling (MVDS) Interface Circuits for Multipoint Data Interchange

*Specifies the electrical characteristics of low-voltage differential signaling interface circuits that may be employed when specified for the interchange of binary signals between equipment sharing a common data interchange circuit.*

ANSI/TIA 902.BAAB-A-2003, Wideband Air Interface - Scalable Adaptive Modulation (SAM) Physical Layer Specification - Public Safety Wideband Data Standards Project - Digital Radio Technical Standards

*Defines the physical layer of the Scalable Adaptive Modulation (SAM) Wideband Air Interface (WAI).*

ANSI/TIA 902.BAAC-A-2007, Wideband Air Interface Media Access Control / Radio Link Adaptation (MAC/RLA) Layer Specification

*The scope of this document is to define the Media Access Control / Radio Link Adaptation layer, or MAC/RLA layer, of the Wideband Air Interface (WAI). The WAI called UW is the interface between the Fixed Network Equipment (FNE) and the Mobile Radio (MR), or directly between MRs in a wideband system. The general wideband system model is shown in Figure 1 and illustrates the Radio to FNE Configuration as defined in [1.*

ANSI/TIA 902.BAAD-A-2003, Wideband Air Interface - Scalable Adaptive Modulation (SAM) - Radio Channel Coding Specification - Public Safety Wideband Data Standards Project - Digital Radio Technical Standards

*Describes the coding that is present in a system with a wide band air interface.*

ANSI/TIA 902.BAAE-A-2007, Wideband Air Interface Logical Link Control (Llc) Layer Specification

*The scope of this document is to define the logical link control layer, or LLC layer, of the wideband air interface (WAI). The wideband air interface called Uw is the interface between the fixed network equipment (FNE) and the subscriber units, or directly between subscriber units in a wideband system. The general wideband system model is shown in Figure 1 and illustrates the Radio to FNE Mode of operation.*

ANSI/TIA 912-A-2004, Telecommunications - IP Telephony Equipment - Voice Gateway Transmission Requirements

*This standard establishes performance and technical criteria for interfacing and connecting with the various elements of public and private telecommunicaitons networks.*

ANSI/TIA 921-2006, Network Model for Evaluating Multimedia Transmission Performance Over Internet Protocol

*This standard specifies an IP network model and scenarios for evaluating and comparing communications equipment connected over a converged wide-area network. The IP network model consists of many impairment combinations that are scenario based and time varying. IP streams from any type of network device can be evaluated using this model.*

ANSI/TIA 93-B-1-2006, Wireless Telecommunications Ai - Di Interfaces Standard - Addendum 1

*This standard provides interface compatibility specifications and technical requirements for the interfacing of a Wireless Carrier to an Exchange Carrier (EC), Interexchange Carrier (IC), International Carrier(INC), Consolidated Carrier or any other carrier element.*

ANSI/TIA 93-B-2001, Wireless Telecommunications: Ai-Di Interfaces

*Provides technical requirements for an interface that interconnects a switching system in a wireless network with a switching system in the Public Switched Telephone Network (PSTN) or a switching system in an Integrated Services Digital Network (ISDN).*

ANSI/TIA 939-2003, Procedures for Automatic Interworking between T.30, V.18, V.8bis, V.8, and V.32/Annex A Automode Modems and V.32b is, V32, V.22bis, V.22, V.21, V.23, 212-Type and 103-Type Modems

*Specifies a procedure for a modem to automatically detect the modulation technique and data signaling rate of the modem*

ANSI/TIA 942-2005, Telecommunications Infrastructure Standard for Data Centers

*This Standard specifies the minimum requirements for telecommunications infrastructure of data centers and computer rooms including single tenant enterprise data centers and multi-tenant Internet hosting data centers. The topology proposed in this document is intended to be applicable to any size data center.*

ANSI/TIA 95-B-1999 (R2004), Mobile Station-Base Station Compatibility Standard for Wideband Spread Spectrum Cellular Systems

*This document defines the requirements for a PCS/Cellular system and mobile and base stations using Code Division Multiple Access (CDMA) technology while also maintaining compatibility with AMPS analog technology*

ANSI/TIA 96-C-1998, Service Option/Standard for Wideband Spread Spectrum Systems

*Provides two-way voice communications between base station and the mobile station usiing the dynamically variable codec algorythim*

ANSI/TIA 968-A-1-2003, Telecommunications - Telephone Terminal Equipment - Technical Requirements for Connection of Terminal Equipment to the Telephone Network, Addendum 1

*This addendum makes corrections to TIA-968-A*

ANSI/TIA 968-A-2-2004, Telecommunications - Telephone Terminal Equipment - Technical Requirements for Connection of Terminal Equipment to the Telephone Network - Addendum 2

*Make changes to TIA-968-A*

ANSI/TIA 968-A-2002, Telecommunications - Telephone Terminal Equipment- Technical Requirmeents for Connection of Terminal Equipment to the Telephone Network

*This standard specifies technical criteria for terminal equipment approved in accordance with 47 CFR 68 for direct connection to the public switched telephone network*

ANSI/TIA 968-A-3-2004, Telecommunications, Telephone Terminal Equipment, Technical Requirements for Connection of Terminal Equipment to the Telephone Network - Addendum 3

*This addendum provides changes to TIA-968-A, Telecommunications -Telephone Terminal Equipment - Technical Requirements for Connection of Terminal Equipment to the Telephone Network. This addendum also provides changes to TIA-968-A-1, Telecommunications - Telephone Terminal Equipment - Technical Requirements for Connection of Terminal Equipment to theTelephone Network.*

ANSI/TIA 968-A-4-2006, Telecommunications - Telephone Terminal Equipment - Technical Requirements for Connection of Terminal Equipment to the Telephone Network

*This addendum provides changes to TIA-968-A, 'Telecommunications - Telephone TerminalEquipment - Technical Requirements for Connection of Terminal Equipment to the Telephone Network.*

ANSI/TIA 97-F-1-2006, Recommended Minimum Performance Standards for cdma2000 Spread Spectrum Base Stations - Addendum 1

*This Standard details definitions, methods of measurement, and minimum performance requirements for Code Division Multiple Access (CDMA) base stations. This Standard shares the purpose of [3] (and subsequent revisions thereof) by ensuring that a mobile station can obtain service in any system that meets the compatibility requirements of [3.*

ANSI/TIA 97-F-2005, Recommended Minimum Performance Standards for cdma2000 Spread Spectrum Base Stations

*This Standard details definitions, methods of measurement, and minimum performance characteristics for Code Division Multiple Access (CDMA) mobile stations.*

ANSI/TIA 98-F-1-2006, Recommended Minimum Performance Standards for cdma2000® Spread Spectrum Mobile Stations - Addendum 1

*This Standard details definitions, methods of measurement, and minimum performance characteristics for Code Division Multiple Access (CDMA) mobile stations. This Standard shares the purpose of [4] (and subsequent revision thereof) by ensuring that a mobile station can obtain service in any cellular system that meets the compatibility requirements of [4.*

ANSI/TIA 98-F-2005, Recommended Minimum Performance Standards for cdma2000 Spread Spectrum Mobile Stations

*This Standard details definitions, methods of measurement, and minimum performance characteristics for Code Division Multiple Access (CDMA) mobile stations.*

ANSI/TIA J-STD 607-A-2002, Commercial Building Grounding and Bonding Requirements for Telecommunications

*(SP-3-4351) Specifies the requirements for a uniform telecommunications grounding and bonding infrastructure that shall be followed within commercial buildings where telecommunications equipment will be installed.*

ANSI/TIA J-STD-025-2000, Lawfully Authorized Electronic Surveillance

*Defines the interfaces between a telecommunication service provider (TSP) and a Law Enforcement Agency (LEA) to assist the LEA in conducting lawfully authorized electronic surveillance.*

ANSI/TIA J-STD-025-B-1-2006, Addendum: Support for the Mobile Equipment IDentifier (MEID

*This addendum only consists of additions to ANS/TIA J-STD-025-B adding MEID, as follows: a. Page 12 Line 46: Section 3 -- Definitions and Acronyms - Add Mobile Equipment IDentifier (MEID). b. Page 93 Line 11: Section 6.4.9 -- PartyIdentity - Add meid. c. Page 221 Line 14: Annex I -- PartyIdentity - Add meid.*

ANSI/TIA J-STD-025-B-2006, Lawfully Authorized Electronic Surveillance (CALEA)

*This Standard defines the interfaces between a telecommunications service provider (TSP) and a Law Enforcement Agency to assist the LEA in conducting lawfully authorized electronic surveillance. A TSP, manufacturer, or support service provider that is in compliance with this Standard will have a “safe harbor” under Section 107 of the Communications Assistance for Law Enforcement Act (CALEA), Public Law 103-414.*

ANSI/TIA TR-1028-2004, IEC 61282-7 Optic Communication System Design Guides - Part 7: Statistical Calculation of Chromatic Dispersion

*This document is a guideline providing*

*methods of representing the process statistics of the chromatic dispersion of optical fibres and related components that may be combined in a link*

ANSI/TIA TR-1029-2004, IEC 61282-3 Fibre Optic Communication System Design Guides - Part 3: Calculation of Polarizatioon Mode Dispersion

*This document provies guidelines for the calculation of polarization mode dispersion (PMD) in fibre optic systems to accommodate the statistical variation of PMD and differential group delay (DGD) in optical fibre cables and components*

ANSI/TIA/EIA 136-030-B-1-2005, TDMA Third Generation Wireless - Release B - Addendum 1 - R-UIM Overview and Operation

*The Removable-User Identity Module (R-UIM) is an entity that stores and manages the identity of the subscriber and related subscription data, as well as, personal data. In GSM the R-UIM is referred to as the Subscriber Identity Module (SIM). The R-UIM is an extension of GSM SIM capabilities to enable operation in a TIA/EIA-136 and TIA/EIA-41 environment and may also facilitate roaming between GSM and TIA/EIA-136 networks.*

ANSI/TIA/EIA 136-100-B-2000 (R2004), Introduction to Channels

*This section describes the RF channel*

ANSI/TIA/EIA 136-122-B-2000 (R2004), TDMA Third Generation Wireless - Digital Control Channel Layer 2

*this section describes the digital control channel layer 2.*

ANSI/TIA/EIA 136-132-2003 (R2004), TDMA Third Generation Wireless - Digital Traffic Channel Layer 2

*this section describes the digital traffic channel layer 2.*

ANSI/TIA/EIA 136-150-B-2000 (R2004), Analog Voice Channel

*this section describes the analog voice channel.*

ANSI/TIA/EIA 136-220-2000 (R2004), Radio Interface VSELP Minimum Performance

*this section describes the VSELP minimum performance*

ANSI/TIA/EIA 136-230-2000 (R2004), TDMA Third Generation Wireless - Minimum Performance Specifications for US-1 Voice Coder

*this section describes the minimum performance specifications for US-1 voice coder.*

ANSI/TIA/EIA 136-290-A-2001 (R2004), Radio Interface RF Minimum Performance for 136HS Outdoor 136HS Indoor Bearers

*this section describes RF minimum performance for 136HS outdoor and 136HS indoor bearers*

ANSI/TIA/EIA 136-310-A-1-2001 (R2004), TDMA Third Generation Wireless-Radio Link Protocol, Addendum 1

*this addendum makes corrections to TIA/EIA-136-310-A*

ANSI/TIA/EIA 136-310-A-2000 (R2004), Radio Link Protocol-1

*this section describes the radio link protocol 1*

ANSI/TIA/EIA 136-320-2000 (R2004), TDMA Cellular/PCS - Radio Link Protocol-2

*this section describes the radio link protocol 2*

ANSI/TIA/EIA 136-330-2000 (R2004), TDMA Cellular/PCS - Packet Data

*this section describes the packet data service overview*

ANSI/TIA/EIA 136-331-2000 (R2004), Packet-Data Service - Physical Layer

*this section describes the packet data service for 136+ physical layer*

ANSI/TIA/EIA 136-332-2000 (R2004), Packet Data Service - Medium Access Control

*this section describes the packet data service 136+ medium access control*

ANSI/TIA/EIA 136-333-2000 (R2004), Packet Data Service - Logical-Link Control

*this section describes the packet data service logical-link control*

ANSI/TIA/EIA 136-334-2000 (R2004), Packet Data Service - Sub-network Dependent Convergence Protocol

*this section describes the packet data service sebnetwork dependent convergence protocol*

ANSI/TIA/EIA 136-335-2000 (R2004), Packet Data Service - Radio Resource Management

*this section describes the packet data service radio resource management*

ANSI/TIA/EIA 136-336-2000 (R2004), Packet Data Service - Mobility Management

*this section describes the packet data service mobility management*

ANSI/TIA/EIA 136-337-2000 (R2004), Packet data Service - Tunneling of Signaling Messages

*this section describes the packet data service tunneling of signaling messages*

ANSI/TIA/EIA 136-340-2000 (R2004), Overview of High-Speed Packet Data Service - Outdoor

*this section describes the packet data service for 136HS outdoor overview*

ANSI/TIA/EIA 136-341-2000 (R2004), TDMA Cellular/PCS - Radio Interface High-Speed Packet Service - Outdoor - Physical Layer

*this section describes the packet data service for 136HS outdoor physical layer*

ANSI/TIA/EIA 136-342-2000 (R2004), TDMA Cellular/PCS - Radio Interface High-Speed Packet Service - Outdoor - Medium Access Layer

*this section describes the packet data service for 136HS outdoor RLC/MAC*

ANSI/TIA/EIA 136-360-2000 (R2004), TDMA Third Generation Wireless - Packet Data Service - 136HS Indoor Overview

*this section describes the packet data service for 136HS indoor overview.*

ANSI/TIA/EIA 136-361-2000 (R2004), TDMA Third Generation Wireless - Packet Data Service - 136HS Indoor Physical Layer

*this section describes the packet data service 136HS physical layer.*

ANSI/TIA/EIA 136-362-2000 (R200x), TDMA Third Generation Wireless - Packet Data Service - 136HS Indoor RLC/MAC

*this section describes the packet data service 136HS indoor RLC/MAC.*

ANSI/TIA/EIA 136-376-B-2006, TDMA Third Generation Wireless Enhanced General Packet-Data Service (EGPRS-136) Mobility Management (MM

*TIA/EIA-136-376 specifies the mobility-management functions for high-speed packet-data service (EGPRS-136). These functions include location tracking and user-identity confidentiality.*

ANSI/TIA/EIA 136-377-B-2006, TDMA Third Generation Wireless - Enhanced General Packet-Data Service (EGPRS-136) - Gs Interface

*TIA/EIA-136-377 specifies the Gs interface in the EGPRS-136 packet-data architecture.*

ANSI/TIA/EIA 136-510-B-2000 (R2004), TDMA Cellular/PCS - Authentication, Encryption of Signaling Information/User Data, and Privacy

*this section describes the authentication, encryption of signaling information user data and privacy.*

ANSI/TIA/EIA 136-511-A-2000 (R2004), TDMA Third Generation Wireless - Messages Subject to Encryption

*this section describes the messages subject to encryption.*

ANSI/TIA/EIA 136-900-2000 (R2004), TDMA Third Generation Wireless - Introduction to Annexes/Appendices

*this section introduces the annexes and*

ANSI/TIA/EIA 136-932-2000 (R2004), TDMA Cellular/PCS - Radio Packet Data Services - Stage-2 Description

*this section describes the packet data services for stage 2 description*

ANSI/TIA/EIA 136.440-B-2006, TDMA Third Generation Wireless Adaptive Multi Rate (AMR) Codec

*This document provides a description of the AMR speech service, including speech coding, channel coding and link adaptation.*

BSR/TIA 569-B-200x, Commercial Building Standard for Telecommunications Pathways and Spaces

*This document is limited to the telecommunications aspect of commercial building design and construction, encompassing telecommunications pathways and spaces.*

## TMS (The Masonry Society)

## TOY-TIA (Toy Industry Association)

ANSI Z315.1-2006, Tricycles – Safety Requirements

*The purpose of the standard is to establish a nationally recognized safety requirement for tricycles and to provide a basis for common understanding among producers, distributors, and users of these products.*

## TPI (Truss Plate Institute)

ANSI/TPI 1-2002, National Design Standard for Metal Plate Connected Wood Truss Construction

*Specifies minimum material properties for lumber and steel, and establishes fabrication and installation tolerances used in a metal plate connected wood truss. It provides for test & evaluation of the metal connector plates, delineates design responsibilities for the building designer and truss designer, and establishes structural design procedures for truss members (chords & webs) and joints (metal connector plates). This standard was listed for public review in the 3/23/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/TPI/WTCA 4-2002, Recommended Guidelines on Responsibilities for Construction Using Metal Plate Connected Wood Trusses

*Defines standards of practice and establishes minimum requirements for the design responsibilities for those persons and organizations involved in the preparation, submittal, review, and approval of truss submittals associated with the use of metal plate connected wood trusses. This standard was listed for public review in the 3/23/2001 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

## UAMA (Unified Abrasive Manufacturers' Association)

ANSI B7.1-2000, The Use, Care, and Protection of Abrasive Wheels

*Safety requirements for the use, care and protection of abrasive wheels including, definitions, handling and storage, general machine conditions, safety gaurds, flanges, mounting standard speeds, special speeds, general operating rules and mounted wheels.*

ANSI B7.7-2003, Safety Requirements for Abrading Materials with Coated Abrasives Systems

*Establishes the minimum safety requirements related to the usage of coated abrasive forms. The requirements apply to all hand-held and fixed mounted machine operations that use some form of coated abrasive product and to safety-related maintenance precautions for the machines and machine parts. This standard also contains safety requirements pertinent to operator and bystander protection, dust collection and potentially hazardous environmental conditions. This standard was listed for public review in the 3/27/1998 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI B74.10-2001, Abrasive Microgrits, Grading of

*Sets fourth designations and size limits and test procedures used by the industry other than for coated abrasives.*

ANSI B74.11-1993 (R2003), Specifications for Tumbling Chip Abrasives

*This standard applies to random shaped tumbling chips commonly used in tumbling or vibratory barrels for the finishing of a variety of parts.*

ANSI B74.12-2001, Size of Abrasive Grain-Grinding Wheels, Polishing and General Industrial Uses

*Establishes a nationally recognized basis for checking size of abrasive grain for use in manufacture of grinding wheels general polishing and other general industrial uses such as pressure blasting.*

ANSI B74.13-1990 (R2002), Markings for Identifying Grinding Wheels and Other Bonded Abrasives

*Establishes a symbol for each of the most essential characteristics of a grinding wheel and arranges these symbols in a uniform sequence. This is a standard system of markings only.*

ANSI B74.14-1992 (R2000), Methods of Chemical Analysis of Aluminum Oxide Abrasive Grain and Abrasive Crude

*Sets forth procedures for the chemical analysis aluminum oxide abrasive grain and abrasive crude. The methods apply to products as sold commercially but not necessarily after alteration in service.*

ANSI B74.15-1992 (R2000), Methods of Chemical Analysis of Silicon Carbide Abrasive Grain and Abrasive Crude

*Sets forth procedures for the chemical analysis of silicon carbide abrasive grain and abrasive crude. The methods apply to products as sold commercially but not necessarily after alteration in service.*

ANSI B74.16-2002, Checking the Size of Diamond Abrasive Grain

*Establishes a common basis for checking the size of diamond and cubic boron nitride abrasive grain for use in the manufacture of diamond grinding wheels, saws and other industrial diamond products: The purpose of this standard is to establish a common basis for checking the size of diamond and cubic boron nitride abrasive grain for use in the manufacture of diamond grinding wheels, saws and other industrial diamond products. This standard was listed for public review in the 4/23/1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI B74.18-2006, Grading of Certain Abrasive Grain on Coated Abrasive Material

*This stand specifies grading requirements for the screen grit*
*sizes called macrogrits and the microgrit sizes of aluminum oxide, zirconia alumina, silicon carbide and garnet abrasive grains for use on coated abrasive products.*

ANSI B74.19-2002, Test for Determining Magnetic Content of Abrasive Grains

*Establishes the nationally recognized basis for determining the magnetic content of abrasive grain used in the manufacture of grinding wheels, coated abrasive products, general polishing and other industrial uses such as pressure blasting, wire sawing and lithoplate graining, etc.*

ANSI B74.2-2003, Specifications for Shapes and Sizes of Grinding Wheels, and for Shapes, Sizes and Identification of Mounted Wheels

*To provide standards for basic shapes and sizes of grinding wheels classified in accordance with their intended use. More specialized abrasive wheels (diamond, discs and segments) are not included in this standard and it does not address safety as does ANSI B7.1.*

ANSI B74.20-2004, Grading of Diamond Powder in Sub-Sieve Sizes

*Defines the characterization of sub-sieve size diamond and CBN powders for general industrial use. However, there are special applications such as the electronics and polycrystalline diamond/CBN (PCD/PCBN) industries that require custom specifications to be agreed upon between the micronizer and the end user. This standard does not attempt to address these special situations.*

ANSI B74.21-2002, Vitrified Grinding Wheels, Fatigue Proof Test Procedure

*Outlines a proof test method that will increase the degree of surety at which a vitrified grinding wheel will not fail from normal operating stresses due to fatigue during its useful lifetime.*

ANSI B74.22-1991 (R2002), Design Test for Type 27 Portable Grinding Wheels

*Outlines a test method to be applied to 9 x 1/4" Type 27 wheel designs for the purpose of identifying Type 27 wheel designs that, when cracked in the wheel matrix without the knowledge of the operator, will not experience immediate breakage in use under correct operating conditions before the operator can recognize and correct the problem by removing the wheel from service.*

ANSI B74.23-2002, Measuring the Relative Crystal Strengths of a Diamond Cubic Boron Nitride Grits

*To establish an agreed method for checking the relative strengths of diamond and cubic boron nitride (CBN) grains for use in the manufacture of saw blades and other industrial diamond products. Sets out a measurement method for use by the industry (diamond grit*

*producers and manufacturers, distributors and users of these abrasive products.*

ANSI B74.3-2003, Specifications for Shapes and Sizes of Diamond or CBN Abrasive Products

*Details a system to describe the shape of complete diamond or CBN (cubic boron nitride) wheels either unitary or built of composite parts and includes mounted wheels, hand hones and plated products. It lists, in accordance with the identification system, size of diamond grinding wheels. Individual segments are not included. For the purposes of this standard, the term diamond is used to mean both diamond and CBN.*

ANSI B74.4-1992 (R2002), Procedure for Bulk Density of Abrasive Grains

*Comprises method of test primarily intended to determine bulk density of abrasive grains, which is defined as the weight in air of a given volume of the permeable material expressed in grams per cubic centimeter.*

ANSI B74.5-1964 (R2001), Capillarity of Abrasive Grains, Test for

*Establishes a capillarity test for surface wettability of abrasive grains by an aqueous medium and is applicable to all typpes of abrasive materials in which surface cleanliness is a desirable attribute.*

ANSI B74.6-2001, Sampling of Abrasive Grains, Procedure for

*Establishes a uniform method of sampling abrasive grain. Applies to containers (100 pounds or more) of uniformly produced abrasive. Its use is mainly for "referee" testing where a common method is needed.*
*Single copy price: $2.00*
*Order from: Sharyn Berki, UAMA (ASC B74) Wherry Associates*
*Send comments (with copy to BSR) to: J. Jeffrey Wherry, jjw@wherryassoc.com*

ANSI B74.8-1987 (R2001), Friability of Abrasive Grain, Ball Mill Test for

*Determines relative breakdown abrasive grains in range of 8-20 grit and 60 grit. Designed to yield approximately 50% breakdown on untempered, medium density, medium titania (semifriable) Alox grain,*
*and on extra tough modified alumina grains. Other grits can be measured if appropriate sieve and milling conditions are observed.*
*Single copy price: $2.00*
*Order from: Sharyn Berki, UAMA (ASC B74) Wherry Associates*
*Send comments (with copy to BSR) to: J. Jeffrey Wherry, jjw@wherryassoc.com*

## UL (Underwriters Laboratories, Inc.)

UL 1-2005, Flexible Metal Conduit

*Eleventh edition -- requirements cover flexible aluminum and steel conduit designed for use as metal raceway for wires and cables in accordance with the National Electrical Code.*

UL 1005-2004, Electric Flatirons

*Revision of paragraph 27.1.3 to further clarify acceptance criteria during the drop test*

UL 1008-2004, Automatic Transfer Switches

*Comments and Substantive Changes received on the ANSI proposals to the Fifth Edition of the Standard for Transfer Switch Equipment, UL 1008.*

UL 101-2002 (R2007), Standard for Safety for Leakage Current for Appliances

*Reaffirm the Standard for Leakage Current for Appliances, UL 101, which contains leakage current limits and the equipment and test methods specifications intended to minimize the risks to the user from exposure to leakage currents from appliances.*

UL 1012-2005 (Bulletin dated 2-4-05), Standard for Safety for Power Units Other Than Class 2 (bulletin dated 2-4-05)

*This comment resolution bulletin includes all comments received on the UL 1012 bulletin dated 7-15-04, and the responses to the comments. Revisions to the 7-15-04 proposals are also included.*

UL 1012-2005, Power Supplies

*Proposal bulletin topics include: 1)Proposed new edition of UL 1012, 2) revisions to address backfeed protection, and 3) Editorial and minor revisions.*

UL 1017-2006, Standard for Vacuum Cleaners, Blower Cleaners, and Household Floor Finishing Machines (proposals dated 11-18-05)

*The folowing items are subject comment:*
*1. Additional clarifications of requirements for polymeric parts handling fluids.*
*2. Editorial clarifications to Table 3, Polarity identification of flexible cords.*

UL 1023-2004, Household Burglar Alarm System Units

*These requirements cover burglar-alarm system units intended for use in residences to protect a complete multiroom residence, one room of a residence, or one opening or area in a residence.*

UL 1026-2006, Standard for Safety for Electric Household Cooking and Food Serving Appliances

*Proposal topics include: 1) Editorial corrections and clarifications, 2) Removal of reference to asbestos, 3) Removal of dates from references to other standards, 4) Removal of suffix "-A" designation of outdoor cords.*

UL 1028-2003, Hair Clipping and Shaving Appliances

*Addition of Configuration C(2) cordless only, described in Figure 13.2 of UL 1028, as a wet shaver.*

UL 1029-2001, High-Intensity-Discharge Lamp Ballasts

*The requirements in this standard cover indoor and outdoor ballasts, including starting circuits for the operation of high-intensity-discharge lamps, and associated equipment, in accordance with the National Electrical Code, from an alternating-current power supply with nominal ratings of 600 V rms or less. High-intensity-discharge lamps include mercury, metal halide, high-pressure sodium, and similar types. For convenience, although technically not HID lamps, low-pressure sodium lamps are included with the group. The requirements for ballasts consisting of resistance only are excluded from this standard.*

UL 103-2006, Standard for Safety for Factory-Built Chimneys for Residential Type and Building Heating Appliances

*The following changes in requirements are being proposed: 1. Casing seals for positive pressure chimneys. 2. Expansion of positive pressure test to all chimney assembly components. 3. References to outside documents. 4. Clarification of Scope regarding the 1700 and 2100 degree temperature tests. 5. Clarification of Scope regarding enclosed and unenclosed installations. 6. Wire size designation.*

UL 1030-2004, Sheathed Heating Elements

*These requirements cover metal-sheathed heating elements rated 600 volts or less intended for use in appliances and equipment that comply with the requirements for such appliances and equipment. These requirements cover sheathed heating elements. These requirements do not cover heating elements for use in equipment for use in hazardous locations as defined in the National Electrical Code, NFPA 70. Wherever the terms heating element and element are used in these requirements, they are intended to mean a sheathed heating element as defined in 2.4 .*

UL 1034-2004, Burglary Resistant Electric Locking Machines

*The requirements apply to the construction, performance, and operation of burglary-resistant electric locking mechanisms and their related devices, such as control units, control switches, and power supplies, and the like used to secure and release doors.*

UL 1037-2004, Antitheft Alarms and Devices

*The requirements cover antitheft alarms and devices intended to provide protection if there is a theft attempt to the protected property.*

UL 1040-2001, Standard for Safety for Fire Test for Insulated Wall Construction

*Covers the tentative test program necessary to judge the acceptability of field or prefabricated insulated wall constructions that consists in any part of materials subject to damage under fire exposure, from a spread-of-flame and damageability viewpoint, which are intended for listing under the Laboratories' classification -- Insulated Wall Construction CCN-NYVQ. This standard was listed for public review in the March 12, 1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

UL 1042-1995 (R2004), Electric Baseboard Heating Equipment

*To maintain a nationally recognized standard for these products, UL is seeking to administratively update the ANSI approval of UL 1042. UL is seeking reaffirmation of the current requirements and support of the ANSI approval of the standard as it stands. The last revisions to UL 1042 requirements were dated February 8, 2002. No changes are being proposed to the requirements in the standard at this time*

UL 1047-2003, Standard for Isolated Power Systems Equipment

*Clarification of the reference to the "grounding terminal" in proposed new paragraph 25.3A.*

UL 1053-1999, Ground-Fault Sensing and Relaying Equipment

*Covers ground-fault current sensing devices, relaying equipment, or combinations of ground-fault current sensing devices and relaying equipment or equivalent protection equipment for use in ordinary locations that will operate to cause a disconnecting device to open all ungrounded conductors at predetermined values of ground-fault current, in accordance with American National Standard National Electrical Code, ANSI/NFPA 70-1999. The proposal that is being circulated at this time is a clarification and reorganization of requirements in UL 1053.*

UL 1054-2003, Special-Use Switches

*Clarification of marking requirements with respect to voltage ratings.*

UL 1059-2006, Standard for Safety for Terminal Blocks

*Request for comments on the proposed revisions to the Fourth Edition of the Standard for Terminal Blocks, UL 1059.*

UL 1063-2006, Standard for Safety for Machine-Tool Wires and Cables

*Deletion of "New and Different" Paragraph, Addition of an Additional Significant Digit to Metric Equivalents to Table 6.6, Revision of SI Units in Table 8.1 for PVC Insulation and Jacket Properties, Replacement of the Term "Natural Grey" with "Gray”, Deletion of Table 35.1 for Markings of Additional Uses of Machine Tool Wire, Miscellaneous Editorial Corrections and Clarifications, Editorial Reorganization of Units for Conductor Sizes and Clarification of Conductor Size Ranges.*

UL 1069-2006, Hospital Signaling and Nurse Call Equipment (Proposals dated 12/16/2005)

*The following changes are proposed: 1. Revise Clause 2.1 and Appendix A to Address Commercially Available Components Often Used as Central Equipment in Nurse Call Systems 2. Revise 2.4.1 for clarification 3. Harmonize the Requirement for Diameter of the Rod Used to Evaluate Ventilating Openings in 5.5.2 With UL 60950-1 4. Revise 11.7.1 to Refer to the Requirements for Nurse Call Pendants for Use in an Oxygen-Enriched Atmosphere in NFPA 99 5. Revise the Impact Test to Change the Equivalents for the Foot-Pound Measurements from Newtons to Joules, and to Correct the Equivalent Shown for the Weight of the Steel Sphere.*

UL 1072-2006, Standard for Safety for Medium-Voltage Power Cables (Proposal dated February 24, 2006)

*Substantive changes to UL's Subject 1072 proposal dated September 23, 2005.*

UL 1076-2004, Proprietary Burglar Alarm Units and Systems

*The requirements cover construction, performance and operation of equipments for use in proprietary burglar alarm units and systems.*

UL 1077-2006, Standard for Safety for Supplementary Protectors for Use in Electrical Equipment

*These requirements apply to supplementary protectors intended for use as overcurrent, or over- or under-voltage protection within an appliance or other electrical equipment where branch circuit overcurrent protection is already provided, or is not required. Compliance with the following is acceptable for use as a component of an end product.*

UL 1082-2005a, Standard for Safety for Household Electric Coffee Makers and Brewing-Type Appliances (proposal dated 4-15-05)

*Proposal topics: 1) Addition of test method for grounding continuity, and 2) Editorial revisions.*

UL 1086-2005, Standard for Safety for Household Trash Compactors

*These requirements cover trash compactors that are rated 250 V or less and intended for household use to reduce the volume of waste prior to disposal; and that are intended to be employed in accordance with the National Electrical Code, NFPA 70.*

UL 1088-2005, Standard for Safety for Temporary Lighting Strings

*Substantive revisions to the proposed Sixth edition of UL 1088 are being recirculated for review and comment, which include (a) the deletion of use of cadmium coating for corrosion protection, (b) correction to the designations of outdoor cords from "W-A" to "W", and (c) the addition of an Exception to the Security of Screw Shell Test if a lampholder complies with UL 496.*

UL 109-2004, Standard for Safety for Tube Fittings for Flammable and Combustible Fluids, Refrigeration Service, and Marine Use

*The requirements cover fittings to be used in tubing carrying designated flammable or combustible fluids and refrigerants. The requirements for ²Marine Use² cover fittings to be used with tubing carrying designated flammable or combustible fluids in the fuel systems of boats. ²Flammable and combustible fluids² means gases and liquids which are usually considered to be flammable or combustible, such as acetylene, fuel oil, gasoline, kerosene, liquefied petroleum gas (LP-gas), and manufactured and natural fuel gases.*

UL 1093-2000, Standard for Safety for Fire Extinguishers, Halogenated Agent

*Covers the construction and performance, exclusive of performance during fire tests, of portable halon type fire extinguishers. Halon type fire extinguishers are intended to be utilized in accordance with American National Standard for Portable Fire Extinguishers, ANSI/NFPA 10-1998.*

UL 10B-2001, Standard for Safety for Fire Tests of Door Assemblies

*Pertains to methods of fire tests that are applicable to door assemblies of various materials and types of construction for use in wall openings to retard the passage of fire. Tests made in conformity with these test methods will register performance during the test exposure; but such tests shall not be construed as determining suitability for use after exposure to fire. It is the intent that tests made in conformity with these test methods will develop data to enable regulatory bodies to determine the suitability of door assemblies for use in locations where fire resistance of a specified duration is required. These methods are intended to evaluate the ability of a door assembly to remain in an opening during a predetermined test exposure. The tests expose a specimen to a standard fire exposure controlled to achieve specified temperatures throughout a specified time period, followed by*

UL 10C-2001, Standard for Safety for Positive Pressure Fire Tests of Door Assemblies

*Applies to swinging door assemblies, including door frames with lights and panels, of various materials and types of construction for use in wall openings to retard the passage of fire. The method does not provide an evaluation of a swinging door assembly when that assembly is part of a larger assembly (e.g. sliding fire door assembly), or when it is intended to be used as an elevator entrance. Tests made in conformity with these test methods are intended to register performance during the test exposure; but such tests shall not be construed as determining suitability for use after exposure to fire. It is the intent that tests made in conformity with these test methods allow for the development of data to enable regulatory bodies to determine the suitability of door assemblies for use in locations where fire resistance of a specified duration is required. These methods are intended to evaluate the ability of a door*

UL 1123-2005a, Standard for Safety for Marine Buoyant Devices

*(bulletin dated 3/4/2005) Covers marine buoyant devices, including vests, jackets, horseshoe buoys and ring buoys, with or ww ithout lifelines, intended for recreational use in accordance with the applicable regulations of the United States Coast Guard (USCG). The buoyant devices covered by these requirements are intended for USCG approval under 46 CFR 160.064.*

UL 1180-2005a, Standard for Safety for Fully Inflatable Recreational Personal Flotation Devices

*The 7/8/05 recirculation bulletin includes changes to 3/4/05 proposals for: 1) Revisions to the Test Participant Selection Requirements in Table 6.1 (PR 541); 2) Type V User Assisted Inflatable PFDs (PR 578); and 3) Indicator Window Material (PR 606).Also included are all comments received on the UL 1180 3/4/05 bulletin and responses to the comments.*

UL 1191-2002, Standard for Safety for Components for Personal Flotation Devices (Bulletin dated 2-22-02)

*Covers components intended for use in the manufacturer of personal flotation devices. The components addressed in this Standard are intended for use in personal flotation devices which comply with the requirements of Underwriters Laboratories Inc., and the United States Coast Guard Subparts of Chapter I, Title 46, Code of Federal Regulations. Proposed changes: 1 - Compartment Materials Proposal 2 - Battery - Operated Manual-Automatic Inflation Systems.*

UL 1191-2005a, Standard for Safety for Components for Personal Flotation Devices

*The 7/8/05 recirculation bulletin includes changes to the 3/4/05 Indicator Window Material Proposal (PR 604). Also included are all comments received on the UL 1191 3/4/05 bulletin and responses to the comments.*

UL 1203-2006, Standard for Safety for Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations

*These requirements cover: Explosion-proof & dust-ignition-proof elect. equip. for install. & use in hazardous (classified) locations, Cl. I, Div. 1, Gps. A, B, C & D, & Cl. II, Div. 1 Gps. E, F & G in accordance with NEC, NFPA 70. Explosion-proof elect. equip. for install. & use in Cl. I, Zn. 1, Gps. IIA, IIB & IIC hazardous (classified) locations & for use in one or more specific gas or vapor atmospheres with or w/o add'l Cl. I Gps. Equip. under the following atmospheric conditions: a) minimum ambient temperature of -50ºC (-58ºF) b) oxygen concentration not greater than 21% by vol., & c) Nominal barometric pressure of 1.*

UL 1206-2003, Standard for Safety for Electric Commercial Clothes-Washing Equipment

*These requirements cover electric commercial, industrial, and institutional clothes-washing equipment intended for use in accordance with the National Electrical Code. Equipment covered by this Standard is not intended for use by the general public, but only by trained or supervised personnel. Appliances and field-attached accessories are investigated under these requirements and under such additional requirements as are applicable to the appliance under consideration.*

UL 122-2007, Photographic Equipment (Proposal dated 11/17/06)

*Proposed changes to the maximum normal load conditions for household use photoflash equipment.*

UL 123-1997, Standard for Safety for Oxy-Fuel Gas Torches

*These requirements cover oxy-fuel gas torches employed in operations such as welding, cutting, heating, scarfing, powder cutting, or other allied processes. These requirements do not apply to torches in which the fuel gas aspirates atmospheric air or to metalspraying torches.*

UL 1236-2006, Standard for Safety for Battery Chargers for Charging Engine-Starter Batteries

*This re-circulation proposal provides revisions to the UL 1236 proposed new edition dated 10-7-05. The revisions are based on comments received during the ballot and review of the proposal document.*

UL 1238-2006, Standard for Control Equipment for Use with Flammable Liquid Dispensing Devices (Proposals dated 12/2/05)(new standard

*These requirements cover electrical equipment used for the control of flammable liquid dispensing devices rated 600 volts or less. Such control equipment is intended to be installed in ordinary locations in accordance with the National Electrical Code, NFPA 70.*

UL 1240-2005, Standard for Safety for Electric Commercial Clothes-Drying Equipment

*These requirements cover electric commercial, industrial, and institutional clothes-drying equipment intended for use in accordance with the National Electrical Code, NFPA 70. Equipment covered by this Standard is not intended for use by the general public, but only by trained or supervised personnel. Appliances and field-attached accessories including those that utilize some other source of energy - such as gas or steam - in addition to electric energy are investigated under these requirements and under such additional requirements as are applicable to the appliance under consideration.*

UL 1242-2006a, Electrical Intermediate Metal Conduit - Steel

*Proposal to revise the Threaded Pullout Conduit Test method. UL is proposing to reduce the sample length to 12 inches and to use a bench chain vise during the assembly process.*

UL 1247-2004, Diesel Engines for Driving Centrifugal Fire Pumps

*These requirements cover diesel engines for driving centrifugal fire pumps. The engines covered by these requirements are intended for installation and use in accordance with the Standard for the Installation of Centrifugal Fire Pumps, NFPA 20.*

UL 125-2001, Standard for Safety for Valves for Anhydrous Ammonia and LP-Gas (Other than Safety Relief)

*These requirements cover the following types of anhydrous ammonia and liquefied petroleum gas*
*(LP-Gas) valves for use at temperatures within the range of minus 40°F (minus 40°C) to 130°F (55°C): Shut-off Valves, Excess Flow Valves, Back Pressure Check Valves, Filler Valves, and Vapor Return Valves.*

*Valves covered by these requirements are for use in systems and facilities covered in the following*
*Standards: Safety Requirements for the Storage and Handling of Anhydrous Ammonia, ANSI/CGA G-2.1 (ANSI K61.1); Liquefied Petroleum Gas Code (National Fire Codes, Vol. 2), NFPA 58; and Storage and Handling of Liquefied Petroleum Gases at Utility Gas Plants, NFPA 59.*

UL 1254-2005, Standard for Safety for Pre-Engineered Dry Chemical Extinguishing System Units

*These requirements cover the construction and operation of fixed pre-engineered dry chemical fire extinguishing system units, and fixed automatic extinguisher units intended to be used in accordance with the Standard for Dry Chemical Extinguishing Systems, NFPA 17. Automatic extinguisher units do not have a manual means of operation, and are intended to be used in accordance with the manufacturer’s installation instructions.*

UL 1256-2002 (R2007), Fire Test of Roof Deck Construction

*These requirements cover fire test methods to evaluate the performance of metallic and nonmetallic roof deck constructions subjected to internal (under deck) fire exposures for the purpose of determining the contribution of the roof covering material, insulation, and other components of the roofing system to the spread of fire within a building. As the extent of flame propagation, thermal degradation, and combustive damage are determined after roof deck constructions are exposed to controlled fire conditions, these requirements are not intended for use in describing or defining the fire hazard or risk of fire under actual fire conditions.*

UL 1261-2004, Electric Water Heaters for Pools and Tubs (bulletin dated 3/31/04)

*Comments and Substantive Changes received on the January 27, 2004 ANSI Ballot of the Fifth Edition of the Standard for Electric Water Heaters for Pools and Tubs, UL 1261*

UL 127-1998 (R2006), Standard for Safety for Factory-Built Fireplaces

*These requirements cover factory-built fireplaces, including the fire chamber, chimney, roof assembly, and other related parts that are entirely factory-made and that are intended for unit assembly in the field. These requirements cover factory-built fireplaces having a fire chamber intended to be operated either open to a room or, when equipped with doors, operated with the doors either open or closed and intended for use with either solid wood or coal fuels.*

UL 1275-2006, Standard for Safety for Flammable Liquid Storage Cabinets

*1. Revision to the Scope.*

UL 1277-2005, Standard for Safety for Electrical Power and Control Tray Cables with Optional Optical-Fiber Members (4th edition)

*Bulletin dated December 17, 2004 This bulletin proposes revisions of UL 1277 to recognize the use of sector conductors in 3-conductor compact-stranded 1/0 AWG - 750 kcmil Type MC cables.*

UL 1283-2005, Electromagnetic Interference Filters

*This bulletin proposes the following changes in requirements to the proposed Fifth Edition of the Standard for Safety for Electromagnetic Interference Filters, UL 1283. 1) Clarification of the Scope, 3) Section 22 - Spacings - relaxation of the requirements, 4) Section 24 - Capacitors - minimum requirements for use of capacitors within EMI filters, 7) Section 31 -Endurance, 8) Section 37.1 - Capacitor Discharge - revision to reduce time to discharge to safe levels, 9) Section 37.2 - Capacitance Measurement - new requirements to determine if capacitance values change subsequent to the endurance test.*

UL 13-2005, Standard for Safety for Power-Limited Circuit Cables

*These requirements cover 60 - 250°C (140 - 482°F) single- and multiple-conductor power-limited circuit cables for use as fixed wiring within buildings principally for Class 3 and Class 2 circuits. Cables covered by these requirements are: Types CL3P and CL2P, Types CL3R and CL2R, Types CL3 and CL2, Types CL3X and CL2X, and Type PLTC.*

UL 1310-2005 (Bulletin dated 7-16-04), Standard for Safety for Class 2 Power Units

*This comment resolution bulletin includes all comments received on the UL 1310 bulletin dated 7-16-04, and the responses to the comments. Revisions to the 7-16-04 proposals are also included.*

UL 1310-2005, Direct Plug-in Transformer Units

*Proposal bulletin topics include: 1) Proposed new edition of UL 1310, 2) backfeed protection, 3) coil insulation, 4) traveler use of direct plug-in units, 5) misc clarifications and editorial revisions.*

UL 1313-2003, Nonmetallic Safety Cans for Petroleum Products

*This bulletin proposes a revision to the drop test requirement.*

UL 1314-2005, Special-Purpose Containers

*These requirements cover portable metal containers that have a nominal capacity of 6 gallons (23 L) or less and that are intended for the temporary outdoor storage and handling of petroleum based flammable and combustible liquids, such as gasoline, naphtha, and kerosene. Such containers are intended for handling and transporting these liquids between a source supply and the point of use.*

UL 1315-2003, Standard for Safety for Metal Waste Paper Containers

*These requirements cover metal receptacles intended primarily for temporary, indoor storage of waste paper and other similar materials. These containers are intended to be emptied regularly and their contents disposed of. These requirements cover waste paper containers intended for use as complete assemblies, consisting of a container body and a head or cover. They may be provided with metal or nonmetallic internal liners. They are designed to: a) Limit the external surface temperatures of the container bottom should their contents become ignited; b) Extinguish the fire; andc) Contain the contents without contributing fuel to the fire.*

UL 132-2002, Standard for Safety for Safety Relief Valves for Anhydrous Ammonia and LP-Gas

*Covers safety valves and hydrostatic relief valves for anhydrous ammonia and liquefied petroleum gas (LP-Gas) for use in nonrefrigerated systems in facilities covered by the following standards:*
*a) Safety Requirements for the Storage and Handling of Anhydrous Ammonia, (ANSI K61.1-1989 ), ANSI/CGA G-2.1.*
*b) Standard for the Storage and Handling of Liquefied Petroleum Gases, NFPA 58-1995.*
*c) Standard for the Storage and Handling of Liquefied Petroleum Gases at Utility Gas Plants, NFPA 59-1995.*
*These requirements do not apply to safety and relief valves for use on cylinders constructed in accordance with Department of Transportation (DOT) specifications. A product that contains features, characteristics, components, materials, or systems new or different from those covered by the requirements in this*

UL 1322-2004a, Fabricated Scaffold Planks and Stages

*The requirements cover wood, metal, or a combination of wood and metal fabricated planks and stage platforms for use with suspended, fixed, or rolling scaffolds. These requirements also cover modular suspended platforms.*

UL 1323-2004, Scaffold Hoists

*These requirements cover manual and power-operated type portable hoists intended for use with scaffolds suspended by wire ropes.This standard covers electrically powered hoists rated 250 volts or less to be employed in nonhazardous environmental locations in accordance with the National Electrical Code, NFPA 70.*

UL 1332-2005, Standard for Safety for Organic Coatings for Steel Enclosures for Outdoor Use Electrical Equipment

*Editorial revision to paragraph 7.1 in UL 1332.*

UL 136-2006, Pressure Cookers

*Revisions to Performance Testing, Maximum Operating Pressure and Hydrostatic Strength Testing.*

UL 141-2002, Standard for Safety for Garment Finishing Appliances

*Covers electric garment finishing appliances rated 250 volts or less for household and commercial use, in accordance with the National Electrical Code, NFPA 70. These requirements do not apply to flatirons, dry-cleaning machines, laundry equipment, revolving clothes racks, or other appliances covered by individual requirements that are separate from this standard.*

UL 1419-2005, Standard for Safety for Professional Video and Audio Equipment (Proposal dated 7/1/05)

*Substantive Changes to UL's proposal dated 5/6/05, Item 1 - Revision of Requirements to Address Double-Insulation Equipment.*

UL 142-2006, Standard for Safety for Steel Aboveground Tanks for Flammable and Combustible Liquids

*This proposal contains revisions to the previously balloted proposed ninth edition of UL 142, Standard for Safety for Steel Aboveground Tanks for Flammable and Combustible Liquids.*

UL 1424-2005, Standard for Safety for Cables for Power-Limited Fire-Alarm Circuits

*This is an addendum to the UL 1424 proposal dated April 22, 2005.*

UL 1425-2006, Standard for Safety for Non-Power-Limited Fire-Alarm Circuits

*1) Addition of requirements for an optional "Wet Location" marking to Section 7. 2) Revision to paragraph 7.3.1 to delete the prohibition of braided coverings on insulated conductors. 3) Update of Table 7.3 to include wire types PAF, PAFF, PGF, and PGFF, and an update to the referenced UL standards. 4) Editorial revision to delete paragraph 27.2, referencing the Insulation Resistance Test as part of follow-up testing.*

UL 1426-2001, Cables for Boats

*Covers electrical cables for boats, which are intended for use in marine pleasure craft. These cables consist of a single insulated conductor without a jacket or of two or more insulated conductors with or without an overall nonmetallic jacket. Each boat cable is rated as follows: 50 or 600 V; 60°C (140°F) or 75°C (167°F) wet; and 60°C (140°F), 75°C (167°F), 90°C (194°F), or 105°C (221°F) dry. Boat cable dry-rated 125°C (257°F) or 200°C (392°F) may be investigated. A boat cable so marked has insulation (and jacket if a jacket is used) that are for use where exposed to oil at 60°C (140°F) and lower temperatures. Boat cables employ stranded copper conductors that are Nos. 18 - 4/0 AWG for multiple conductors and Nos. 16 - 4/0 AWG for single conductors.*

UL 1429-2005, Standard for Pullout Switches

*Request for comments on the proposed revisions to the Fourth Edition of the Standard for Pullout Switches, UL 1429.*

UL 144-2001, Standard for Safety for Pressure-Regulating Valves for LP Gas

*Covers pressure regulators for use with LP-Gas equipment.*

*Regulators covered by these requirements are intended for use in non-refrigerated systems in accordance with the following standards:*

*a) Liquefied Petroleum Gas Code, (National Fire Codes, Vol. 2) NFPA 58;*
*b) National Fuel Gas Code ( IAS/A.G.A. Z223.1), NFPA 54;*
*c) Outdoor Cooking Gas Appliances, IAS/A.G.A. Z21.58; and*
*d) Standard on Recreational Vehicles (RVIAA119.2) (National Fire Codes, Vol. 7), NFPA 501C.*

*These requirements do not cover:*

*a) Compressed gas regulators;*

UL 1441-2005, Standard for Coated Electrical Sleeving

*Request for comments on the proposed Bi-national Fourth Edition of the Standard for Coated Electrical Sleeving.*

UL 1446-2006, Standard for Safety for Systems of Insulating Materials - General

*Obtain ANSI approval for complete standard UL 1446, UL's Standard for Safety for Systems of Insulating Materials - General.*

UL 1447-2006, The Standard for Safety for Electric Lawn Mowers

*The March 10, 2006 UL 1447 recirculation bulletin includes a revision to paragraph 1.4 changing a reference to the latest edition of a standard.*

UL 1448-2001 (R2006), Standard for Safety for Electric Hedge Trimmers

*The May 12, 2005 bulletin is a reaffirmation of the Fourth Edition of the Standard for Electric Hedge Trimmers, UL 1448 as an American National Standard, with no changes to the current requirements.*

UL 1449-2006, Standard for Safety for Surge Protective Devices

*Surge Protective Devices(SPDs)for repeat limiting of transient voltage surges on 50 or 60 Hz power circuits not exceeding 1000V:Type 1 - Perm-connected between the secondary of service transformer and line side of service disconnect overcurrent device, and the load side, including watt-hour meter socket enclosures.Type 2 - Perm-connected on load side of service disconnect overcurrent device; including SPDs located at branch panel.Type 3 - Point of utilization SPDs, installed at a min. of 10m from electrical service panel,i.e, cord connected, direct plugin, receptacle type, and SPDs installed at utilization equip. Type 4 - Component SPDs, discrete and.*

UL 1450-2006, Standard for Safety for Motor-Operated Air Compressors, Vacuum Pumps, and Painting Equipment

*1. Revision to paragraph 13.1.12 to ensure that an attachment plug is suitably rated based on the actual measured input current, rather than the rated value. A related revision to the Input Test, 45.1, is also being proposed. 2. Replacement of a reference to UL 1604 with a reference to ANSI/ISA-12.12.01-2000. 3. Revisions to clarify paragraph SA10.13.1.5 regarding test specimen preparation.*

UL 1453-2004, Water Heaters, Electric Booster and Commercial Storage Tank

*These requirements cover electric booster water heaters, electric commercial storage tank water heaters, and remote control assemblies for such heaters, rated 600 volts or less, to be employed in ordinary locations in accordance with the National Electrical Code, NFPA 70, and that meet at least one of the following conditions: a) Over 120 gallons (454 L) in capacity; b) Rated over 12 kilowatts; or c) Equipped with one or more temperature-regulating controls that permit a water temperature of more than 85EC (185EF). These heaters are intended for installation in accordance with model mechanical and plumbing codes.*

UL 1468-2004, Direct-Acting Pressure-Reducing and Pressure-Control Valves for Fire Protection Service

*These requirements cover direct-acting pressure-reducing and pressure restricting valves intended to reduce the water pressure in standpipe systems or in the supply piping for sprinkler systems. These requirements also cover pressure reducing valves that can be used as an indicating control valve in a sprinkler system. The valves covered by these requirements are intended for use in: a) Standpipe systems installed in accordance with the Standard for Installation of Standpipe and Hose Systems, NFPA 14; or b) Sprinkler systems installed in accordance with the Standard for Installation of Sprinkler Systems, NFPA 13.*

UL 147-2006, Standard for Hand-Held Torches for Fuel Gases (Proposals dated 3/24/06)

*The following changes in requirements are being proposed: (1) Addition of Requirements for LP-Gas Roofing Torches and (2) Addition of Instructions.*

UL 1472-2006, Standard for Safety for Solid-State Dimming Controls

*Revisions to the previously balloted proposed revisions to the first edition of UL 1472, Standard for Safety for Solid-State Dimming Controls.*

UL 1478-2004, Fire Pump Relief Valves

*These requirements cover direct acting (spring loaded) and pilot operated fire pump relief valves of nominal 3/4 inch size and larger, intended for use in water supply systems for fire protection service. Requirements for the installation and use of these valves are included in the Standard for the Installation of Centrifugal Fire Pumps, NFPA 20.*

UL 1479-2006b, Standard for Safety for Fire Tests of Through-Penetration Firestops

*Proposed revisions to the fire exposure test.*

UL 147A-2006, Standard for Nonrefillable (Disposable) Type Fuel Gas Cylinder Assemblies (Proposals dated 3/24/06)

*Revise 20.1 to clarify the marking requirement.*

UL 147B-2006, Standard for Nonrefillable (Disposable) Type Metal Container Assemblies for Butane (Proposals dated 3/24/06)

*Revise 20.1 to clarify the marking requirement.*

UL 1480-2006, Speakers for Fire Alarm, Emergency, and Commercial and Professional Use.

*Update reference to outside standard in 26.2.*

UL 1482-1998 (R2006), Standard for Safety for Solid-Fuel Type Room Heaters

*These requirements cover room heaters which are freestanding fire chamber assemblies of the circulating or direct radiation type. These products are for attachment to a residential type chimney intended for use with low-heat appliances and shall be used to burn solid fuels specified by the manufacturer. These products shall be manually or thermostatically controlled.*

UL 1484-2004, Residential Gas Detectors

*These requirements cover electrically operated gas detectors intended for installation in residential occupancies and recreational vehicles (RVs). These requirements cover gas detectors intended to detect flammable gases such as propane and natural gas. They also cover all remote accessories that may be connected to a gas detector.*

UL 1486-2003, Standard for Safety for Quick Opening Devices for Dry Pipe Valves for Fire Protection Service

*Proposed New Edition for UL 1486.*

UL 153-2005, Standard for Safety for Portable Electric Luminaires

*This proposal includes substantive changes to requirements originally balloted to the STP on July 1, 2005.*

UL 154 CAN/ULC-S503-2007, Standard for Safety for Carbon-Dioxide Fire Extinguishers

*This 8/11/2006 proposal bulletin includes revisions to the temperature and humidity requirements for the nameplate and adhesion tests.*

UL 155-2004, Fire Resistance for Vault and File Room Doors, Tests for

*These requirements cover the test procedure applicable to the fire-resistance classification of doors intended for the protection of openings of vaults and file rooms. Recommendations for record protection equipment and techniques, including the use and installation of vault or file room door assemblies, are contained in the Standard for Protection of Records, NFPA 232. The terms ²vault doors² and ²file room doors² refer to assemblies consisting of doors, single or in pairs, the frame into which doors are hung, and the necessary hardware.*

UL 1559-2003, Standard for Safety for Insect-Control Equipment-Electrocution Type (Bulletin dated October 31, 2003)

*Covers insect-electrocution equipment of the household and commercial types with an input rating of 250 V or less and are intended for use in ordinary locations in accordance with the National Electrical Code. They cover products that employ electrocution as the primary means of exterminating insects.*

UL 1561-2005, Dry-Type General Purpose and Power Transformers

*Resolve comments received in response to a proposal to revise the Definition of Type 3R Enclosures Provided in Table 5.3 of UL 1561. The original proposal was posted by UL on March 25, 2005.*

UL 1564-2006, Standard for Safety for Industrial Battery Chargers

*UL proposes the third edition of UL 1564. Various revisions are proposed to update the requirements: expanding scope to include outdoor use equipment, revisions to output wiring, revisions to transformer insulation, and other revisions.*

UL 1565-2004, Wire Positioning Devices

*Comment resolution bulletin to address comments received on the 11-24-03 bulletin. Changes to original proposals are included. (bulletin dated 6-25-04)*

UL 1569-2004, Standard for Safety for Metal-Clad Cables (Bulletin dated September 27, 2004)

*These revisions are being issued to revise the tension test to conduct the test without a connector, the intent being to make the test more indicative of the armor performance.*

UL 1569-2006, Metal-Clad Cables

*1) Revised Circuit Conductor Identification Requirements, (2) Clarification of Tables 6.3 and 6.4 (3) Revised Limited Smoke Designation and (4) Updated NEC References.*

UL 1574-2004, Track Lighting System

*This bulletin contains the report of the STP meeting held April 14, 2004 and contains the STP's disposition of the comments from the ballot of UL 1574, bulletin dated December 12, 2003, and proposes substantive changes in requirements based on these comments.*

UL 1581-2006, Standard for Safety - Reference Standard for Electrical Wires, Cables, and Flexible Cords

*Addition of mPPE Insulation and Jacket Material for use in Appliance Wire.*

UL 1585-2006, Standard for Safety for Class 2 and Class 3 Transformers

*Propose the removal of all references to Fahrenheit from UL 1585 and a revision of the maximum allowable voltage potential of transformers specified in Table 21.2 of UL 1585.*

UL 1598-2004, Standard for Safety for Luminaires

*Review material consists of changes proposed to enhance the readability of the requirements. Proposed changes are not intended to change the meaning of the requirements.*

UL 1598A-2005, Standard for Safety for Luminaires for Installation on Marine Vessels

*This proposal contains revisions based on comments received to the proposals balloted February 18, 2005.*

UL 1598B-2005, Supplemental Requirements for Luminaire Reflector Kits for Installation on Previously Installed Fluorescent Luminaires

*This bulletin proposes to correct the cross-references to align with the Second Edition of UL 1598.*

UL 1610-2004, Standard for Central-Station Burglar-Alarm Units

*The requirements cover components of central-station burglar-alarm systems intended for burglary protection use at mercantile and banking premises.*

UL 1626-2003a, Residential Sprinklers

*Covers residential sprinklers intended for installation on sprinkler systems for fire-protection service. Requirements for the installation and use of residential sprinklers are included in the Standards for the Installation of Sprinkler Systems, NFPA 13, and Installation of Sprinkler Systems in One- and Two-Family Dwellings and Mobile Homes, NFPA 13D, and Residential Occupancies up to andIncluding Four Stories in Height Sprinkler Systems, NFPA 13R.*

UL 1635-2004, Digital Alarm Communicator System Units

*These requirements cover digital alarm communicator system units for use in central-station burglar-alarm systems, proprietary burglar alarm systems, police station connect burglar-alarm systems, residential burglar alarm systems, residential fire warning systems, and home health care medical alert systems.*

UL 1638-2003, Visual Signaling Appliances - Private Mode Emergency and General Signaling

*The requirements cover electrically-operated visual signaling appliances, rated 300 volts or less, and intended for indoor locations, outdoor locations, or both, in accordance with NFPA 70, National Electrical Code, and NFPA 72, National Fire Alarm Code.*

UL 1641-2005, Installation and Classification Of Residential Burglar Alarm Systems

*The requirements cover the installation of alarm protection products and devices connected to form a residential burglar alarm system.*

UL 1647-2004, Motor-Operated Massage and Exercise Machines

*Identification of Grounded Conductors.*

UL 1651-2003, Standard for Safety for Optical Fiber Cable

*These requirements cover single and multiple optical fiber cables for control, signaling, and communications as described in Article 770 and other applicable parts of the National Electrical Code (NEC).*

UL 1653-2006, Electrical Nonmetallic Tubing

*This Standard applies to corrugated electrical nonmetallic tubing (ENT) and mechanically-attached fittings, for use in accordance with C22.1, Canadian Electrical Code, Part I (CEC), and NFPA 70, National Electrical Code (NEC). These requirements also apply to mechanically-attached fittings integral with an outlet box.*

UL 1655-2004, Standard for Safety for Community-Antenna Television Cables

*Proposed new edition, with revisions including revised energy markings for optical-fiber cables, optional reduced non-integral jacket thicknesses, addition of new air-gap insulated constructions.*

UL 1659-2005, Standard for Safety for Attachment Plug Blades for Use in Cord Sets and Power Supply Cords

*Proposed Third Edition of UL 1659 including revised requirements for the brass composition of attachment plug blades.*

UL 1660-2004, Standard for Safety for Liquid-Tight Flexible Nonmetallic Conduit

*The requirements cover liquid-tight nonmetallic conduit intended to be installed in accordance with the National Electrical Code, NFPA 70, as a flame-retardant nonmetallic raceway in lengths not in excess of 6 ft or 1.83 m for 600 V and lower-potential wires and cables.*

UL 1666-2002, Test for Flame Propagation Height of Electrical and Optical-Fiber Cables Installed Vertically in Shafts

*1. Deletion of the Wall Density and Thermal Conductivity Values; 2. Nominalization of the Wall and Floor Thicknesses; 3. Making the Location of the Access Means Nonspecific.*

UL 1678-2003, Standard for Safety for Household, Commercial, and Professional-Use Carts and Stands for Use with Audio/Video Equipment

*Substantive Changes to Proposed Revision to the Supporting Surface Loading and Marking Requirements*

UL 1682-1998, Standard for Safety for Plugs, Receptacles, and Cable Connectors, of the Pin and Sleeve Type

*Covers pin and sleeve type plugs, receptacles, power inlets, and connectors, rated up to 800 ampres and up to 600 volts ac or dc, and may include two or fewer pilot contacts. These multipin devices are intended to provide power from branch circuits, or for direct connection to the brach circuit in accordance with the American National Standard National Electrical Code, ANSI/NFPA 70-1996, using copper conductors, for use in either indoor or outdoor nonhazardous locations.*

UL 1684-2002, Reinforced Thermosetting Resin Conduit (RTRC) and Fittings

*Specifies the requirements for halogen-free reinforced thermosetting resin conduit (RTRC), and associated fittings for installation and use in accordance with the Rules of the Canadian Electrical Code, (CEC) Part I, and the National Electrical Code (NEC) for nonhazardous locations.*
*The products specified in this Standard are intended for use at, but not limited to, -40°C (-40°F) to 110°C (230°F) continuous operating temperature.*
*This Standard covers conduit Type AG for use above ground and/or below ground, and Type BG for use below ground only.*
*This Standard covers conduit Type ID (dimensions based on inside diameters) and Type IPS (dimensions based on outside diameters of iron pipe sizes). Trade sizes (metric designators)*

UL 1684A-2007, Supplemental Requirements for Extra Heavy Wall Reinforced Thermosetting Resin Conduit (RTRC) and Fittings

*Proposal to revise the Nominal Outside Diameter dimensions of Type XW conduit in Table 3.1 and to revise the conduit product marking specified in paragraph 5.2.*

UL 1686-2007, Standard for Safety for Pin and Sleeve Configurations (Proposal dated October 20, 2006)

*These configurations cover attachment plugs, receptacles, and cord connectors, for use in accordance with the National Electrical Code (NEC), ANSI/NFPA 70. These configurations do not cover devices rated at more than 800 A or for more than 600 V.*

UL 1690-2006, Standard for Safety for Data-Processing Cable

*1.) Deletion of references to the Standard Test for Flame Propagation and Smoke Density Values for Electrical and Optical Fiber Cables Used in Spaces Transporting Environmental Air, UL 910.*
*2.) Addition of Paragraph 3.2, addressing undated references, and deletion of year designations to referenced standards.*
*3.) Deletion of Table 7.1 and Table 11.2 to coordinate with references to UL 1581, which covers additional wire sizes.*
*4.) Addition of maximum lay length 16 times the conductor diameter to Table 12.2.*
*5.) Addition of material type MFA to Tables 13.1, 13.2, 13.3, 13.4 and 16.1, editorial correction to material type TPE, and addition of HDFRPE and LDFRPE jacket materials to Table 16.1.*

UL 1692-2004, Standard for Safety for Polymeric Materials – Coil Forms

*Describes the various test procedures and the use of polymeric insulation systems and parts that are used within motors, contactors, relays, solenoids, transformers, and the like. These requirements do not cover the specific insulation systems that are covered under American National Standard for Systems of Insulating Materials, ANSI/UL 1446-1991*

UL 1693-1998, Standard for Safety for Electric Radiant Heating Panels and Heating Panel Sets

*Covers radiant heating panels and heating panel sets, for use on AC supply system voltages not exceeding 600 V, designed for installation indoors in nonhazardous locations in household, commercial, and industrial applications, in accordance with Article 424, Part J, of the American National Standard National Electrical Code, ANSI/NFPA 70.*

UL 1694-2005, Standard for Safety for Tests for Flammability of Small Polymeric Component Materials

*The following (Proposal dated June 10, 2005) are subject to comment:*
*(1) Updating reference to Needle Flame Test based on issuance of IEC 60695-11-5.*
*(2) Clarification of total flame time for application of flame/burner if flame is inadvertently extinguished.*

UL 1696-2005, Standard for Safety for the Standard for Nonmetallic Mechanical Protection Tubing (NMPT

*This Standard applies to nonmetallic mechanical protection tubing (NMPT) and fittings in 10 to 53 (1/4 to 2) trade sizes for use as support and protection of insulated conductors in equipment intended for use in non-hazardous locations. This Standard does not include tubing used to supply power from the fixed wiring of structures to utilization equipment.*

UL 1699-2006, Standard for Safety for Arc-Fault Circuit-Interrupters (Bulletin dated December 16, 2005)

*The following changes in requirements are being proposed: Placement of LCDI Requirements in UL 1699 Supplement SB.*

UL 1703-2004, Standard for Safety for Flat-Plate Photovoltaic Modules and Panels

*The following items are subject to comment:*
*1.) Correction of test references in Table 18.1.*
*2.) Addition in paragraph 40.1.1 of equation for limit voltage (VL).*

UL 1709-2005, Standard for Safety for Rapid Rise Fire Tests of Protection Materials for Structural Steel

*(Proposals dated 03-25-05) These requirements describe a test method measuring the resistance of protective materials to rapid-temperature-rise fires. The test method covers a full-scale fire exposure, intended to evaluate the thermal resistance of protective material applied to structural members and the ability of the protective material to withstand the fire exposure. The test method also covers a small-scale fire exposure, intended to evaluate the ability of protective materials to withstand a variety of environmental conditions anticipated.*

UL 1715-2003, Standard for Safety for Fire Test of Interior Finish Material

*Describes the testing procedures and requirements applicable to the classification of interior finish material assemblies by use of a standardized room fire exposure. This test method is intended for use in the evaluation of the flammability contribution of wall material assemblies, ceiling material assemblies, or both, exposed to early fire growth under specified room fire exposure conditions. The effectiveness of fire barrier materials as protection for other combustible materials or components within the assembly is of primary interest for this evaluation.*

UL 1738-2006, Standard for Safety for Venting Systems for Gas-Burning Appliances, Categories II, III, IV

*This proposal to UL 1738 modifies proposals announced in the March 10, 2006 issue of ANSI's Standards Action.*

UL 1739-2004, Pilot-Operated Pressure-Control Valves for Fire-Protection Service

*These requirements cover pilot-operated pressure-control valves intended to reduce the water pressure in the supply piping for standpipe systems, or sprinkler systems, or both. The valves covered by these requirements are intended for use in: a) Standpipe systems installed in accordance with the Standard for Installation of Standpipe and Hose Systems, NFPA 14; or b) Sprinkler systems installed in accordance with the Standard for Installation of Sprinkler Systems, NFPA 13.*

UL 174-2005, Standard for Safety for Household Electric Storage Tank Water Heaters (dated 8/26/05)

*The following changes in requirements are being proposed: 1. Revised Label Requirements for Household Storage Tank Water Heater when Connected to a Supplemental Heat Source.*

UL 1746-2007, Standard for Safety for External Corrosion Protection Systems for Steel Underground Storage Tanks, UL 1746

*The Third Edition of the Standard for Safety for External Corrosion Protection Systems for Steel Underground Storage Tanks, UL 1746 which includes proposals discussed at the STP 58 meeting held May 2, 3 and 4, 2006.*

UL 1767-2005, Standard for Safety for Early-Suppression Fast-Response Sprinklers

*These requirements cover early suppression fast response (ESFR) sprinklers intended for installation as part of sprinkler systems for fire-protection service. Requirements for installation and use of ESFR sprinklers are included in the Standard for the Installation of Sprinkler Systems, NFPA 13, as well as various other NFPA standards such as the Standard for General Storage, NFPA 231, and the Standard for Rack Storage of Materials, NFPA 231C.*

UL 1769-2006, Standard for Cylinder Valves

*A recirculation proposal is being issued to address comments to the UL 1769 proposals dated September 9, 2005, which were discussed at the STP 1769 meeting in February 2006. The following topic is being recirculated: 1. Proposed Revisions to UL 1769 and Approval as an ANSI Standard a) Add new paragraph 1.5; b) Paragraph 5.7 is being revised to clarify the valve construction requirements; c) New paragraph 11.6 is being revised to clarify the valve stem specifications and new Section 22A is being revised to clarify the valve stem torque test requirements; and d) New Section 22B is being revised to clarify the adapter requirements.*

UL 1776-2005, Standard for Safety for High-Pressure Cleaning Machines

*(Bulletin dated April 1, 2005) Revision of Switch Marking Requirements.*

UL 1778-2005, Standard for Safety for Uninterruptible Power Systems

*(bulletin dated 6-15-05) This comment resolution bulletin includes all comments received on the UL 1778 proposed new edition bulletin dated 8-31-04, and the responses to the comments. Revisions to the 8-31-04 proposals are included.*

UL 1784-2004, Standard for Safety for Air Leakage Tests for Door Assemblies

*The following items are subject to comments:*
*1.) Addition of glossary term.*
*2.) Update references to NFPA 105.*

UL 1786-2005, Standard for Safety for Direct Plug-In Nightlights

*This bulletin contains the resolution of comments received by UL and CSA on the proposed 3rd Edition of the Standard for Direct Plug-In Nightlights and the proposed changes to the requirements based on the comments, as prepared by the CANENA Technical Harmonization Committee (THC) charged with this work. The original requirements were balloted to the STP on December 12, 2003. UL participated on the THC resolution activities and supports the resolutions and proposals contained in this document.*

UL 180-1997, Liquid-Level Indicating Gauges and Tank-Filling Signals for Petroleum Products

*Covers the construction and performance of liquid-level indicating gauges for use on vented tanks for the storage of oil burner fuel.*

UL 181-2005, The Standard for Safety for Factory-Made Air Ducts and Air Connectors

*The 4/1/05 181 recirculaton document includes revisions for Figure 17.1, Sand Bag for the Impact Test and for Paragraph 25.5 in the Marking Section.*

UL 181A-2005, Standard for Safety for Closure Systems for Use With Rigid Air Ducts

*These requirements cover closure systems for use with factory-made rigid air ducts or air connectors complying with the Standard for Factory-Made Air Ducts and Air Connectors, UL 181. Closure systems consist of pressure sensitive tapes, heat-activated tapes, and mastics. Closure systems are intended for use with rigid air ducts installed in accordance with the Standard for the Installation of Air Conditioning and Ventilating Systems, NFPA 90A, and the Standard for the Installation of Warm Air Heating and Air Conditioning Systems, NFPA 90B; and/or Model codes.*

UL 181B-2005, Standard for Safety for Closure Systems for Use With Flexible Air Ducts and Air Connectors

*These requirements cover pressure-sensitive tapes, mastic systems, and non-metallic mechanical fasteners for use as a part of the closure system of factory-made flexible air ducts or air connectors complying with the Standard for Factory-Made Air Ducts and Air Connectors, UL 181.*

UL 1820-2004, Fire Test of Pneumatic Tubing for Flame and Smoke Characteristics (Standard dated 8/22/97)

*Test method for determining values of flame propagation distance and optical smoke density for pneumatic tubing that is to be installed in ducts, plenums, and other spaces used for environmental air. Test method is to determine whether the flame-propagation and smoke-generating characteristics of these tubes are in accordance with the Installation of Air Conditioning and Ventilating Systems, NFPA 90A.*

UL 1821-2006, Standard for Thermoplastic Sprinkler Pipe and Fittings for Fire Protection Service

*The following changes in requirements are being proposed: 1. Revision to Long Term Hydrostatic Pressure Test 2. Deletion of Polybutylene Pipe Reference 3. Addition of Stress Cracking Test for Stainless Steel Parts 4. Miscellaneous Revisions.*

UL 183-2004, Manufactured Wiring Systems

*The UL 183 Comment Resolution Bulletin dated 8-12-04 provides the comments received on the UL 183 bulletin dated 2-23-04. Also included in the bulletin are the responses to the comments.*

UL 1838-2002, Standard for Safety for Low Voltage Landscape Lighting Systems

*Applies to low-voltage landscape lighting systems and components that may consist of an isolating type power unit, wiring, and luminaire. Only covers equipment where the maximum output of each secondary circuit is 25 A, 15 V ac (21.2 V peak) open circuit voltage, 300 VA. The luminaires intended for garden, walkway, patio areas, or similar outdoor locations and for certain indoor locations such as atriums and shopping malls. The power units may be installed indoors or outdoors. The equipment is intended to be installed in accordance with the National Electrical Code, ANSI/NFPA 70.*

UL 1839-2006, Standard for Safety for Automotive Battery Booster Cables

*1. Editorial Revisions to scope including clarification on types of equipment covered by the standard. 2. Revision to the definition of the term “conductors” to allow copper or copper clad aluminum. 3. Clarification of intent of paragraph 3.5 regarding cable insulation. 4. Revision and addition of requirements regarding contact with metal parts. 5. Revision of marking requirement with respect to conductor material.*

UL 1863-2004, Communications-Circuit Accessories

*To address and resolve the comments received in response to UL's Subject 1863 proposal bulletin dated 5/19/03, proposing revisions to the 3rd Edition of UL 1863, and balloting the body of the standard for ANSI approval.*

UL 1887-2004, Fire Test of Plastic Sprinkler Pipe for Visible Flame and Smoke Characteristics (Standard dated 12/20/96)

*Test method for determining values of flame propagation distance and optical smoke density for plastic pipe that is to be installed in ducts, plenums, and other spaces used for environmental air. This test method does not cover the construction requirements for sprinkler pipe for pressure or other performance requirements.*

UL 1889-2004, Standard for Safety for Commercial Filters for Cooking Oil

*The requirements cover commercial filters for cooking oil rated 600 volts or less and intended for use in accordance with the NEC, NFPA 70. These requirements cover both portable filters and fixed filters intended to be used with a specific fryer or fryers or with any fryer or fryers. The requirements cover oil filters used to filter cooking oil used in deep fat fryers usually found in commercial kitchens, restaurants, or other business establishments where food is dispensed.*

UL 1897-2004, Standard for Safety for Uplift Tests For Roof Covering Systems

*The following items are subject to comments:*
*1.) Proposed requirements based on comments received to ANSI canvass*
*2.) Miscellaneous proposed revision*

UL 1917-2002 (R2007), Standard for Safety for Solid-State Fan Speed Controls

*These requirements cover solid state speed controls rated 300 volts or less, single phase, intended to be connected to 15 - 20 ampere branch circuits and intended to be installed in accordance with the National Electrical Code, ANSI/NFPA 70 and used with: (a) Fans and blowers that circulate air, such as desk, bracket, ceiling, hassock, pedestal, and utility fans; (b) Fans and blowers that ventilate air, such as attic, wall-insert, ceiling-insert, household hoodand canopy-types, and window fans; (c) Evaporative coolers; (d) Air-filtering appliances; (e) Fan-type deodorizers; and (f) Fan-type air fresheners.*

UL 193-2003, Alarm Valves for Fire-Protection Service

*Proposed New Edition for UL 193.*

UL 1951-2003, Standard for Safety for Electric Plumbing Accessories

*These requirements cover equipment connected to or used with plumbing in commercial or household locations. Examples of equipment covered by these requirements are irrigation equipment, sprinkler controls, water controls located in kitchens and bathrooms, electric faucets, and toilet flushing systems. All equipment is intended for installation and use in accordance with the National Electrical Code, NFPA 70, and is rated 600 volts or less.*

UL 1963-2005, Standard for Safety for Refrigerant Recovery/Recycling Equipment

*Revisions to the previously balloted proposed third edition of UL 1963, Standard for Safety for Refrigerant Recovery/Recycling Equipment.*

UL 197-2004, Commercial Electric Cooking Appliances

*The UL 197 bulletin dated 8-27-04 contains the comments received on the 3-31-04 bulletin. The responses to the comments are also included, along with a proposed revision to Figure 46.1, the leakage current figure.*

UL 1971-1995, Standard for Safety for Signaling Devices for the Hearing Impaired

*Covers emergency signaling devices for the hearing impaired. The devices and/or systems covered by this standard are to be used in ordinary locations in accordance with the requirements in the standard for the Installation, Maintenance, and Sue of the Protective Signaling Systems, NFPA 782. A signaling device as covered by these requirements consists of unit assembly of electrical parts having provisions for the connection of power circuits routed through the equipment by a prescribed scheme of circuiting. The circuits may extend to separate devices by which additional units may be actuate for signals. As installation wiring diagram attache to the products, or referenced in the product marking, indicates the devices and circuits that are acceptable for connection to the signalling device.*

UL 1971-2004, Signaling Devices for the Hearing Impaired (Bulletin dated December 5, 2003)

*These requirements cover emergency-signaling devices for the hearing impaired. The evices and/or systems covered by this standard are suitable for use in a controlled environment, or in an uncontrolled environment as indicated in the product marking.*

UL 1978-2005, Standard for Safety for Grease Ducts

*Changes are being proposed to address comments received on the Proposed Third Edition bulletin for the Standard for Safety for Grease Ducts dated August 30, 2004.*

UL 198M-2003, Mine-Duty Fuses

*These requirements cover Class K and Class R fuses having an additional D-C rating and that are intended for use in protecting trailing cables in D-C circuits in mines in accordance with the requirements of the United States Department of Labor, Mine Safety and Health Administration.*

UL 199-2005, Standard for Automatic Sprinklers for Fire Protection Service

*Recirculation of proposals with substantive changes for the proposed Eleventh Edition of the Standard for Automatic Sprinklers for Fire Protection Service, UL 199.*

UL 1990-2005, Standard for Safety for Nonmetallic Underground Conduit with Conductors

*(proposal dated 5-20-05) These requirements cover nonmetallic underground conduit with conductors. These products consist of a factory assembly of conductors or cables inside a coilable, smooth-wall, continuous length conduit with a circular cross section. The conduit is Schedule-40, Schedule-80, EPEC-A or EPEC-B High Density Polyethylene (HDPE) in trade sizes 1/2 (16) - 4 (103). This product is intended for installation in accordance with the National Electrical Code, NFPA 70. This product is for aboveground use where encased in not less than 2 inches (51 mm) of concrete and for underground use by direct burial or encasement in concrete.*

UL 1995-2003, Heating and Cooling Equipment

*The following items, Bulletin dated 10/31/02 are being considered for public comment:*
*Clarification to the Pressure Vessel Requirements.*
*Wiring for Equipment Rated Over 2000 Volts.*

UL 1996-2006, Standard for Safety for Electric Duct Heaters

*Revision to the previously balloted proposal for UL 1996, Standard for Safety for Electric Duct Heaters.*

UL 1998-1999 (R2004), Standard for Safety for Software in Programmable Components

*Applies to non-networked embedded microprocessor software whose failure is capable of resulting in a risk of fire, electric shock, or injury to persons. This is a reference standard in which the requirements are to be applied when specifically referenced by other standards or product safety requirements. These requirements are intended to supplement applicable product or component standards and requirements, and are not intended to serve as the sole basis for investigating the risk of fire, electric shock, or injury to persons.*

UL 20-2004a, General-Use Snap Switches

*Revised and/or Additional Requirements for:*
*1. Single Pole Switches*
*2. General-Use AC/DC Switches*
*3. Key-Operated Switches*
*4. "Natural" Grey.*

UL 201-2006, Standard for Safety for Garage Equipment

*BSR/UL 201-2005, Standard for Safety for Garage Equipment (proposals dated 3/17/06) (revision of ANSI/UL 201-2005) The following change is being proposed: Alternate Integral Motor Overload Protection.*

UL 2017-2004, General-Purpose Signaling Devices & Systems

*The requirements cover cover signaling devices intended for emergency or non-emergency use, used in indoor and/or outdoor locations, and where applicable, installed and used in accordance with the National Electrical Code, NFPA 70.*

UL 2024-2004, Optical Fiber Cable Raceway

*Comments and substantive changes received on ANSI ballot of 2/21/03 for second edition of UL 2024; proposes changes in scope and title and clarification of 15.1 regarding raceway systems*

UL 203-2005, Standard for Safety for Pipe Hanger Equipment for Fire Protection Service

*These requirements cover the performance of pipe hanger equipment for use in supporting piping employed in sprinkler systems, water-spray systems, and other piping systems used for fire-protection service. Requirements for the installation of pipe hangers and auxiliary equipment are included in the Standard for the Installation of Sprinkler Systems, NFPA 13, and the Standard for Water-Spray Fixed Systems for Fire Protection, NFPA 15.*

UL 2034-2005, Standard for Safety for Single and Multiple Station Carbon Monoxide Detectors

*These requirements cover electrically operated single and multiple station carbon monoxide (CO) alarms intended for protection in ordinary indoor locations of dwelling units, including recreational vehicles, mobile homes, and recreational boats with enclosed accommodation spaces and cockpit areas.*

UL 2044-2004, Standard for Safety for Commercial Circuit Television Equipment

*These requirements CCTV equipment intended for commercial use on supply circuits as defined in NFPA 70, and receive their signals from a video-recorded medium or image-producing devices in a CCTV system. These requirements CCTV equipment such as video tape recorders; video-receiving, -processing, -recording, -producing, and -amplification equipment; video cameras; aux. equipment and accessories intended for use with CCTV systems; portable CCTV equipment that are intended for use with a vehicular, marine, or any other battery circuit as the power supply means.*

UL 2075-2004, Gas and Vapor Detectors and Sensors

*These requirements cover toxic and combustible gas and vapor detectors and sensors intended to be portable or employed in indoor or outdoor locations*

UL 2079-2006, Standard for Safety for Tests for Fire Resistance of Building Joint Systems

*Addition of an optional evaluation of joint systems for water leakage (a W-Rating) (This topic contains an editorial correction.*

UL 207a-2004, Standard for Safety for Refrigerant-Containing Components and Accessories, Nonelectrical (Bulletin dated 09/03/04)

*The follwoing items are subject to review:*
*1.) Clarifying the discharge pressure requirements for pressure relief valves.*
*2.) Revising the Rupture Member Test with respect to the nominal burst pressure.*
*3.) Revising the Manufacturing and Production Tests section to clarify the necessary production line leakage and hydrostatic strength tests on low side components.*
*4.) Revising markings for clarification purposes.*

UL 2085-1999, Standard for Safety for Insulated Aboveground Tanks for Flammable and Combustible Liquids

*Covers insulated aboveground, atmospheric tanks intended for aboveground storage of noncorrosive, stable, flammable or combustible liquids that have a specific gravity not exceeding that of water. This is the second public review for this standard. It previously appeared in the June 23, 1995 issue of Standards Action and is being resubmitted now due to substantive changes to the text.*

UL 209-2005, Standard for Safety for Cellular Metal Floor Raceways and Fittings

*These requirements cover cellular metal floor raceway systems intended to be installed as an integral part of the building structure and constructed for the installation of wires and cables in accordance with the National Electrical Code (NEC), NFPA 70. A cellular metal floor raceway consists of the hollow spaces in cellular metal floors and associated fittings that serve as enclosures for wires and cables. Cellular metal floor raceway is always installed with concrete poured over the raceway and may be installed on top of a concrete slab.*

UL 2108-2006a, Standard for Safety for Low Voltage Lighting Systems

*The following changes in requirements are being proposed: (1) Revision of Normal Temperature Test requirements for exposed bare conductor power units and systems.*

UL 2111-2002, Standard for Safety for Overheating Protection for Motors

*Covers: a) Impedance-protected motors; b) Thermal-device-protected motors; and c) Thermal-protective devices. The requirements in this standard apply only to motors rated 600 V or less. The requirements in this standard are intended to evaluate a specific motor with a given protector. When either the motor or the protector is changed, a separate evaluation is required.The requirements in this standard cover: a) Impedance-protected motors; b) Thermal-device-protected motors; and c) Thermal-protective devices. The requirements in this standard apply only to motors rated 600 V or less. The requirements in this standard are intended to evaluate a specific motor with a given protector. When either the motor or the protector is changed, a separate evaluation is required. This standard was listed for public review in the 3/23/2001 issue of Standards Action. It is being resubmitted due to the*

UL 2129 CAN/ULC-S566-2007, Standard for Safety for Halocarbon Clean Agent Fire Extinguishers

*This 8/11/06 proposal bulletin includes revisions to: the operation test requirements; and the temperature and humidity requirements for the nameplate exposure and adhesions tests.*

UL 213-2004, Standard for Safety for Rubber Gasketed Fittings for Fire Protection Service

*Covers rubber gasketed fittings intended for assembling sections of pipe in fire protection systems, for example, couplings to attach pipe sections end to end, and side outlets to attach pipe sections at right angles. The products covered by this standard are intended for use in fire protection service as outlined by the following Standards of the National Fire Protection Association: Installation of Sprinkler Systems, ANSI/NFPA 13; Installation of Standpipe, Private Hydrant, and Hose Systems, ANSI/NFPA 14; Water Spray Fixed Systems for Fire Protection, ANSI/NFPA 15; Installation of Private Fire Service Mains and Their Appurtenances, ANSI/NFPA 24.*

UL 2157-2004, Standard for Safety for Electric Clothes Washing Machines and Extractors

*Proposed changes in requirements based on comments received from the May 2001 and September 2002 ballot periods.*

UL 2158-2004, Standard for Safety for Electric Clothes Dryers

*Revision of marking requirements for indoor venting of the exhaust of clothes dryers.*

UL 2167-2004, Standard for Safety for Water Mist Nozzles for Fire-Protection Service

*This Standard contains requirements for water mist nozzles for use with water mist fire-protection systems intended for the protection of residential, light and ordinary hazard areas as well as shipboard machinery, control spaces, service areas, and public spaces. The intended application and use of a water mist nozzle is referenced in the Manufacturer's Design and Installation Instructions. This Standard is intended to address minimum fire-protection performance, construction, and marking requirements for water mist nozzles.*

UL 217-2006, Single and Multiple Station Smoke Detectors

*The original proposal to extend the minimum secondary power supply capacity to 7 days is being modified to provide additional details on specific test requirements.*

UL 218-2005, Standard for Safety for Fire Pump Controllers

*The requirements cover controllers intended for starting and stopping centrifugal fire pumps, including automatic and non-automatic types for electric motor or engine driven pumps in accordance with NFPA 20. Types of controllers covered include full service, limited service, high voltage and residential. Controllers may be provided with transfer switches. Controllers may be suitable for use as service equipment. This equipment is for use in ordinary locations in accordance with NFPA 70.*

UL 2182-2006, Standard for Safety for Refrigerants

*Revisions to the previously balloted proposed second edition of UL 2182, Standard for Safety for Refrigerants.*

UL 218A-2004, Battery Contactors for Use in Diesel Engines Driving Centrifugal Fire Pumps

*These requirements cover battery contactors for use in the starting systems of diesel engines driving centrifugal fire pumps, in accordance with the Standard for Centrifugal Fire Pumps, NFPA 20. These requirements cover battery contactors for use in starting systems rated 50 volts maximum.*

UL 2196-2006, Standard for Tests for Fire Resistive Cables

*Revisions to the proposed Electrical Conductor Tensile Strength Test as the result of comments received.*

UL 22-2004, Amusement Machines

*Covers electrical, electronic, and electromechanical commercial amusement and gaming machines and accessories that are intended to be used in accordance with the National Electrical Code, NFPA 70. Amusement and gaming machines as covered by this standard are intended for indoor use only, except that they will be investigated for outdoor use or use in a protected location if so designated by the manufacturer.*

UL 2200-2004, Standard for Safety for Stationary Engine Generator Assemblies

*The following items are being considered for public comment:*
*1. Addition of requirements covering microturbines.*
*2. Definitions of bus bar and heat sink.*
*3. The deletion of a test covering oxide inhibiting compounds.*
*4. The deletion of a requirement covering fuses.*
*5. The addition of a test temperature for the synthetic-rubber part immersion test.*
*6. Editorial corrections*

UL 2202-2004, Standard for Safety for Electric Vehicle (EV) Charging System Equipment

*The following items are subject to comment:*
*1.) Deleting the term "natural" from "natural gray" throughout the standard.*
*2.) Allowing the length of electrical supply equipment cable to exceed 25 feet where applicable.*
*3.) Deleting the term "No." in "No. X AWG" throughout the stanard.*

UL 2205-1999, Standard for Safety for Field Conversion/Retrofit of Alternative Refrigerants in Household Refrigerators and Freezers

*Provides information for the evaluation of the construction and operation of household refrigerators and freezers for the field conversion/retrofit to an alternative refrigerant, including a refrigerant that has been identified as having flammable characteristics. These requirements are primarity intended to be used to investigate the retrofit of existing equipment to alternative refrigerants for compliance with the requirements in this document. These requirements apply to equipment that has been previously investigated and found to comply with an apllicable UL Standard of Safety since the year 1973. This standard was originally listed for public review in the October 23, 1998 issue of Standards Action. It is being resubmitted due to substantive changes.*

UL 2208-2005, Solvent Distillation Units

*These requirements cover solvent distillation units (SDU), with a maximum capacity of 60 gallons (227 l), used for recycling flammable or combustible liquids as indicated in the instruction manual provided with each unit. SDUs which utilize electricity, steam, or heated liquids to distill solvents. These units are intended for installation and use in accordance with the National Electrical Code, NFPA 70, the Flammable and Combustible Liquids Code, NFPA 30, and the Uniform Fire Code, published by the International Fire Code Institute.*

UL 2208-2006, Solvent Distillation Units (Proposals dated 10/20/06)

*Revised to update standard references in paragraphs 1.6 and 4.3.4.*

UL 2225-2005, Standard for Safety for Cables and Cable-Fittings for Use in Hazardous (Classified) Locations

*These requirements cover the following products for use in hazardous (classified) locations: Type MC-HL metal-clad cable Type ITC-HL instrumentation tray cable Explosion-proof & dust ignition-proof cable sealing fittings Explosion-proof & dust ignition-proof cable sealing fittings & increased safety “e” & flameproof “d” cable fittings intended for use on mobile offshore oil rigs, drilling platforms & other marine vessels Increased safety “e” cord termination fittings & flameproof “d” cord termination fittings for use only with UL Listed extra-Hard Usage Cor.*

UL 2227-2007, Standard for Overfilling Prevention Devices (Proposals dated 12/15/06

*Based on comments received during the ballot of UL 2227, further revisions to paragraphs 5.12, 12.1 and 12A.2 are being proposed.*

UL 2239-2004, Standard for Hardware for the Support of Conduit, Tubing and Cable

*These requirements cover hardware for the support of conduit, tubing, and cable, such as hangers, staples, straps, and similar devices for installation in accordance with the National Electrical Code, NFPA 70, and the Canadian Electrical Code (CEC), Part I. These requirements also cover standoffs for nonmetallic-sheathed cable and protector plates.*

UL 224-2006, Standard for Extruded Insulating Tubing

*Request for comments on the proposed binational Sixth Edition of the Standard for Extruded Insulating Tubing, UL 224.*

UL 2250-2006, Standard for Safety for Instrumentation Tray Cable

*The following items are subject to comments:*
*1.) Revision of surface marking of cables from "Open Wiring" to "-ER.*
*2.) Addition of material type MFA to Tables 13.1, 13.2, 16.1 and 26.1.*
*3.) Revisions to Table 17.2 to allow variance from the dimensions for the metal strip armor.*
*4.) Revisions to Paragraph 17.3.1 to allow welded and corrugated metal sheath to be made of copper alloy or bronze alloy.*
*5.) Revisions to Section 34, Tension Test of Interlocked Armor, to specify that the Tension Test is to be conducted without a connector.*
*6.) Revisions to the Dielectric Voltage-Withstand Test to allow for an equavilent dc voltage test.*

UL 2255-2006, Standard for Safety for Receptacle Closures

*Addition of Units to the Dielectric Strength Requirement of Paragraph 7.1.*

UL 2267-2006, Standard for Safety for Fuel Cell Power Systems for Installation in Industrial Electric Trucks

*Revisions to the Proposed First Edition of the Standard for Fuel Cell Power Systems for Installation in Industrial Electric Trucks, UL 2267.*

UL 2305-2003, Exhibition Display Units, Fabrication and Installation

*Requirements cover exhibition display units that are intended for indoor use for illuminating, animating, activating, or displaying in temporary exhibits, show conventions, meetings, or assemblies, intended for temporary construction and display at exposition events. Electrical components and systems shall be used in accordance with the National Electrical Code, NFPA 70 and with the installation requirements of this standard. These requirements also cover portable tradeshow displays, hanging components, convention center cord sets, and other exhibit assemblies.*

UL 2333-2003, Standard for Safety for Infrared Thermometers

*These requirements cover portable, battery operated infrared thermometers and accessories affecting accuracy intended for food safety. These requirements do not cover temperature indicating devices intended for non-food uses.*

UL 2335-2004, Fire Tests of Storage Pallets

*The standard measures the fire performance of pallets in idle palletized and rack storage arrangements. Variations from the construction or conditions tested are capable of substantially changing the performance characteristics of the pallets. The standard does not measure mechanical or structural properties of pallets. The standard does not measure the hazards from the smoke generated.*

UL 234-2005, Low-Voltage Lighting Fixtures for Use in Recreational Vehicles

*This bulletin contains substantive changes to UL 234 based on comments received to the ballot of the proposed Fifth Edition, bulletin dated March 19, 2004.*

UL 2351-2004, Standard for Safety for Spray Nozzles for Fire-Protection Service

*These requirements cover automatic and non-automatic (open) type water spray nozzles for installation in accordance with the Standard for Installation of Sprinkler Systems, NFPA 13, and the Standard for Water Spray Fixed Systems for Fire Protection, NFPA 15.*

UL 2360-2004, Test Methods for Determining the Combustibility Characteristics of Plastics Used in Semi-Conductor Tool Construction

*These requirements cover the test methods for measuring the fire performance of sheet plastics used in semi-conductor wet bench tool construction. Plastic materials that are classified as Class 1 or Class 2 demonstrate limited fire propagation without the use of sprinklers. Variations from the construction or conditions that are tested are capable of substantially changing the performance characteristics of the plastic. This standard is not intended for evaluation of small plastic components used in semi-conductor tool constructions such as tubing or wiring.*

UL 2388-2006, Standard for Safety for Flexible Lighting Products

*This recirculation proposal provides revisions to the UL 2388 proposal dated 3-10-06. The proposed revisions are based on comments received during the ballot and review of the proposal document. The following topics are being recirculated: 2. Clarification of requirements for enclosures 4. Revised requirements for non-extendable ropelights using a detachable power supply cord 6. Clarification of requirements for Class 2 circuits 13 . Miscellaneous revisions and clarifications*

UL 2390-2004, Standard for Safety for Test Method for Wind Resistant Asphalt Shingles with SealedTabs

*Addition of specific dates for standards*

UL 242-2004, Nonmetallic Containers for Waste Paper

*These requirements cover portable, nonmetallic containers for waste paper intended primarily for temporary, indoor storage of waste paper and other similar materials. These containers are intended to be emptied regularly and their contents disposed of.*

UL 2438-2006, Standard for Safety for Outdoor Seasonal-Use Cord-Connected Wiring Devices

*Covers outdoor seasonal-use cord-connected wiring devices that are intended for temporary outdoor use - not to exceed 90 days - with outdoor equipment, Christmas-tree, and other seasonal decorative-lighting outfits. These requirements only cover devices rated 15 A, 125 V, and of the 2-pole, 3-wire, 5-15 configuration as shown in Wiring Devices - Dimensional Specifications, ANSI/NEMA WD6.*

UL 248-1-2005, Standard for Safety for Low-Voltage Fuses – Part 1: General Requirements

*(bulletin dated November 4, 2004): The UL 248-1 Comment Resolution Bulletin dated 5-5-05 provides comments received on the UL 248-1 bulletin dated 11-4-04. Also included in the bulletin are the responses to the comments and revised proposals.*

UL 248-10-2004, Standard for Safety for Low-Voltage Fuses – Part 10: Class L Fuses

*This Part applies to Class L fuses rated 601 — 6000 A and 600 V ac. DC ratings are optional.*

UL 248-11-2005, Standard for Safety for Low-Voltage Fuses – Part 11: Plug Fuses

*These UL 248 proposals include increased use of International symbology, clarifications, editorial revisions, establishment of minimum samples in the Operation Test for Fuses, the addition of Canadian requirements for Class K fuses with Class H dimensions, miniature fuse requirements, withdrawal of body temperature requirements and the addition of 600 V ratings to Class T fuses.*

UL 248-12-2005, Standard for Safety for Low-Voltage Fuses – Part 12: Class R Fuses

*These UL 248 proposals include increased use of International symbology, clarifications, editorial revisions, establishment of minimum samples in the Operation Test for Fuses, the addition of Canadian requirements for Class K fuses with Class H dimensions, miniature fuse requirements, withdrawal of body temperature requirements and the addition of 600 V ratings to Class T fuses.*

UL 248-13-2005, Standard for Safety for Low-Voltage Fuses – Part 13: Semiconductor Fuses

*These UL 248 proposals include increased use of International symbology, clarifications, editorial revisions, establishment of minimum samples in the Operation Test for Fuses, the addition of Canadian requirements for Class K fuses with Class H dimensions, miniature fuse requirements, withdrawal of body temperature requirements and the addition of 600 V ratings to Class T fuses.*

UL 248-14-2005, Standard for Safety for Low-Voltage Fuses – Part 14: Supplemental Fuses

*(bulletin dated November 4, 2004): The UL 248-14 Comment Resolution Bulletin dated 5-5-05 provides comments received on the UL 248-14 bulletin dated 11-4-04. Also included in the bulletin are the responses to the comments and revised proposals.*

UL 248-15-2005, Standard for Safety for Low-Voltage Fuses – Part 15: Class T Fuses

*These UL 248 proposals include increased use of International symbology, clarifications, editorial revisions, establishment of minimum samples in the Operation Test for Fuses, the addition of Canadian requirements for Class K fuses with Class H dimensions, miniature fuse requirements, withdrawal of body temperature requirements and the addition of 600 V ratings to Class T fuses.*

UL 248-16-2004, Standard for Safety for Low-Voltage Fuses – Part 16: Test Limiters

*This Part applies to test limiters calibrated to specific limits of peak let-through current and clearing it at 250, 300, 2 480, or 600 V ac.*

UL 248-2-2005, Standard for Safety for Low-Voltage Fuses – Part 2: Class C Fuses

*These UL 248 proposals include increased use of International symbology, clarifications, editorial revisions, establishment of minimum samples in the Operation Test for Fuses, the addition of Canadian requirements for Class K fuses with Class H dimensions, miniature fuse requirements, withdrawal of body temperature requirements and the addition of 600 V ratings to Class T fuses.*

UL 248-3-2005, Standard for Safety for Low-Voltage Fuses – Part 3: Class CA and CB Fuses

*These UL 248 proposals include increased use of International symbology, clarifications, editorial revisions, establishment of minimum samples in the Operation Test for Fuses, the addition of Canadian requirements for Class K fuses with Class H dimensions, miniature fuse requirements, withdrawal of body temperature requirements and the addition of 600 V ratings to Class T fuses.*

UL 248-4-2005, Standard for Safety for Low-Voltage Fuses – Part 4: Class CC Fuses

*These UL 248 proposals include increased use of International symbology, clarifications, editorial revisions, establishment of minimum samples in the Operation Test for Fuses, the addition of Canadian requirements for Class K fuses with Class H dimensions, miniature fuse requirements, withdrawal of body temperature requirements and the addition of 600 V ratings to Class T fuses.*

UL 248-5-2005, Standard for Safety for Low-Voltage Fuses – Part 5: Class G Fuses

*These UL 248 proposals include increased use of International symbology, clarifications, editorial revisions, establishment of minimum samples in the Operation Test for Fuses, the addition of Canadian requirements for Class K fuses with Class H dimensions, miniature fuse requirements, withdrawal of body temperature requirements and the addition of 600 V ratings to Class T fuses.*

UL 248-6-2005, Standard for Safety for Low-Voltage Fuses – Part 6: Class H Non-Renewable Fuses

*These UL 248 proposals include increased use of International symbology, clarifications, editorial revisions, establishment of minimum samples in the Operation Test for Fuses, the addition of Canadian requirements for Class K fuses with Class H dimensions, miniature fuse requirements, withdrawal of body temperature requirements and the addition of 600 V ratings to Class T fuses.*

UL 248-7-2005, Standard for Safety for Low-Voltage Fuses – Part 7: Class H Renewable Fuses

*These UL 248 proposals include increased use of International symbology, clarifications, editorial revisions, establishment of minimum samples in the Operation Test for Fuses, the addition of Canadian requirements for Class K fuses with Class H dimensions, miniature fuse requirements, withdrawal of body temperature requirements and the addition of 600 V ratings to Class T fuses.*

UL 248-8-2005, Standard for Safety for Low-Voltage Fuses – Part 8: Class J Fuses

*These UL 248 proposals include increased use of International symbology, clarifications, editorial revisions, establishment of minimum samples in the Operation Test for Fuses, the addition of Canadian requirements for Class K fuses with Class H dimensions, miniature fuse requirements, withdrawal of body temperature requirements and the addition of 600 V ratings to Class T fuses.*

UL 248-9-2005, Standard for Safety for Low-Voltage Fuses – Part 9: Class K Fuses

*These UL 248 proposals include increased use of International symbology, clarifications, editorial revisions, establishment of minimum samples in the Operation Test for Fuses, the addition of Canadian requirements for Class K fuses with Class H dimensions, miniature fuse requirements, withdrawal of body temperature requirements and the addition of 600 V ratings to Class T fuses.*

UL 25-2005, Meters for Flammable and Combustible Liquids and LP-Gas

*These requirements cover positive displacement liquid meters for flammable and combustible liquids of the type and size commonly used in the assembly of motor fuel dispensing devices and liquefied petroleum gas (LP-Gas) of the type and size commonly used in the assembly of motor fuel dispensing devices and tank trucks.*

UL 250-1997, Household Refrigerators and Freezers

*This standard applies to self-contained household refrigerators and freezers designed to be installed and used in residential occupancies in accordance with the Canadian Electrical Code, Part 1, CSA Standard C22.1, and the National Electrical Code, ANSI/NFPA 70. These requirements apply to household refrigerators and freezers intended for connection to 15 or 20 A, 100 to 140 V or 15A, 200 to 250 V, single phase, alternating-current (AC) circuits; and combination ac/dc circuits or direct-current (dc) circuits where the dc voltage does not exceed 30 V. The terms “appliance”, “refrigerator”, “product”, “equipment”, and “unit”, are used interchangeably and refer to all household refrigerators, combination refrigerator-freezers, freezers, and refrigerated kitchen units or any part thereof covered by this Standard unless specifically noted otherwise. The equipment is air-cooled employing*

UL 252-2003, Compressed Gas Regulators

*The requirements cover regulators used to reduce the pressure of compressed industrial gasesfrom a source or storage cylinder pressure of not more than 5500 psig (37.91 MPa) to the use pressure. Regulators covered by these requirements are intended for use ,,ith compressed gases such as air, carbon dioxide, inert gases, fuel gases, nitrogen, nitrogen oxide, and oxygen.Regulators for welding, cutting, and heating operations are intended for use in accordance with the Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes, NFPA 51-1992.*

UL 252A-2003, Compressed Gas Regulator Accessories

*The requirements cover accessories intended for direct connection to the low or delivery pressureside of compressed gas regulators. These devices are not intended for direct connection to high or storage cylinder pressures. Accessories covered by these requirements are intended for use with compressed gases such as air, carbon dioxide, inert gases, fuel gases, nitrogen, nitrous oxide and oxygen. The suitability of an accessory in combination with a compressed gas regulator shall be judged under the applicable requirements of the Standard for Compressed Gas Regulators, UL 252.*

UL 2556-2005, Standard Test Methods for Wires and Cables (Bulletin

*The tri-national UL 2556 standard is being issued to harmonize the UL, Mexican, and Canadian measurement and test methods applicable to the flexible cord and power wire*

*products that are covered in the standards currently being harmonized (UL 44, 62, and 83 in the US) and other wire products.*

UL 260-2004, Standard for Safety for Dry Pipe and Deluge Valves for Fire-Protection Service

*These requirements cover valve equipment intended for installation in piping systems to supply water automatically to dry pipe, deluge, and preaction sprinkler systems for fire-protection service.*

UL 263-2003, Standard for Safety for Fire Tests of Building Construction and Materials

*Editorial clarifications and corrections.*

UL 263-2003a, Standard for Safety for Fire Tests of Building Construction and Materials

*Applies to assemblies of masonry units and to composite assemblies of structural materials for buildings, including bearing and other walls and partitions, columns, girders, beams, slabs, and composite slab and beam assemblies for floors and roofs. Also applies to other assemblies and structural units that constitute permanent integral parts of a finished building. The classifications for building construction and materials are intended to register performance during the period of fire exposure and are not intended to be interpreted as having determined their acceptability for use after fire exposure. These requirements are intended to evaluate the length of time that the types of assemblies specified above will contain a fire or retain their structural integrity, or both, dependent upon the type of assembly involved, during a predetermined test exposure. The test evaluates the assembly's resistance to heat,*

UL 268-2006, Detectors for Fire Alarm Signaling Systems (Proposal dated May 12, 2006)

*Correction of proposal regarding smoke generating method used for test.*

UL 268A-2006, Smoke Detectors for Duct Application

*These requirements cover air duct smoke detectors intended for indoor use within or protruding into a duct, or mounted in a housing with sampling tubes extending into or traversing a duct. Air duct smoke detectors are intended to be installed in ducts where the maximum air temperature inside the duct does not exceed 100°F (38°C), nor does the minimum temperature become less than 32°F (0°C.*

UL 283-2005, Standard for Safety for Air Fresheners and Deodorizers

*Changes are being proposed to address comments received on the proposal bulletin for the Standard for Safety for Air Fresheners and Deodorizers dated October 29, 2004.*

UL 291-2006, Automated Teller Systems (Proposals dated 12/9/05)

*These requirements cover the construction and security of equipment intended to automatically dispense currency when operated as intended by an authorized customer, and to provide a limited degree of protection against unauthorized removal of currency. If the product also receives deposits, the same degree of protection shall also be provided for the deposits. Records shall be made in order that the authorized customer may be debited for the currency dispensed. A limited degree of protection against unauthorized manipulation or removal of the records that will prevent proper debit shall be provided.*

UL 294-2004, Access Control System Units

*The requirements apply to the construction, performance, and operation of systems intended to regulate or control entry into an area or access to or the use of a device(s) by electrical, electronic or mechanical means. The requirements apply to computer equipment that, when used in conjunction with the main control, is necessary for proper operation of the access control system.*

UL 296-2006, Standard for Safety for Oil Burners

*These revisions are to the UL 296 proposals announced in the March 18, 2005 issue of ANSI's "Standards Action.*

UL 296A-2004, Standard for Safety for Waste Oil-Burning Air-Heating Appliances

*These requirements cover air-heating appliances of the central furnace and unit heater types intended for burning waste oil fuels and having fuel inputs rated no more than 20 gallons/hour (75.7 liters/hour) or approximately 3,000,000 Btu/hour (3,160,000 kj/hour). These requirements also cover automatically-lighted, mechanical-atomizing type burners that typically are used with these appliances. The burner is to be factory-installed on or provided with each appliance*

UL 299 CAN/ULC-S504-2007, Standard for Safety for Dry Chemical Fire Extinguishers

*This proposal bulletin includes revisions to: correct a reference; operation test requirements; vibration test requirements; and temperature and humidity test requirements for the nameplate exposure and adhesion tests.*

UL 30-2004, Metal Safety Cans

*The following items are subject to comment:*
*1.) Deletion of the Scope paragraph 1.3.*
*2.) The updating of the Units of Measurement text entity in Section 2.1.*
*3.) Updating the references to ASTM Standards.*
*4.) The 9th Edition of the Standard for Safety for Metal Safety Cans, UL 30. These requirements cover metal safety cans that have nominal capacities of five gallons (18.9 L) or less and that are primarily intended to store and handle flammable and combustible liquids, such as gasoline, naphtha, kerosene, acetone, MEK, and similar liquids in accordance with the Flammable and Combustible Liquids Code, NFPA 30.*

UL 300-2005, Standard for Safety for Fire Testing of Fire Extinguishing Systems for Protection of Restaurant Cooking Areas

*These requirements cover the performance during fire tests of pre-engineered fire extinguishing system units intended for the protection of restaurant cooking areas. For installation requirements please refer to the following documents: NFPA 17, Standard for Dry Chemical Extinguishing Systems; NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations; and NFPA 17A, Standard for Wet Chemical Extinguishing Systems. Note that local authorities having jurisdiction should be consulted prior to installation. The 3/18/05 STP 300 comment resolution and proposal bulletin includes UL 300 amended proposals for the performance requirements for cooking areas protected with multiple nozzles. This bulletin is a recirculation of the August 24, 2004 UL 300 proposed new edition.*

UL 3044-1998, Standard for Safety for Surveillance Closed Circuit Television Equipment

*Covers commercial closed circuit television equipment that: (a) is intended to be used in a surveillance system to provide a means of observing and/or recording activities in the surveyed area; (b) is intended for commercial use and connection to supply circuits in accordance with the American National Standard National Electrical Code, ANSI/NFPA 70-1996; and (c) complies with the American National Standard for Commercial Closed Circuit Television Equipment, ANSI/UL 2044-1994. This standard was first listed for Public Review in the May 31, 1996 issue of Standards Action. It is being listed now due to substantive changes.*

UL 305-2004, Standard for Safety for Panic Hardware

*Requirements cover releasing devices actuated by an actuating bar (crossbar or push pad) for outward-opening doors, designed to facilitate the egress of persons from buildings in the event of panic or other emergency.*

UL 307A-1997 (R2005), Liquid Fuel-Burning Heating Appliances for Manufactured Homes and Recreational Vehicles

*The following is being proposed: 1. Continuance of the Standard for Liquid Fuel-Burning Heating Appliances for Manufactured Homes and Recreational Vehicles, UL 307A, as an American National Standard.*

UL 310-2005, Electrical Quick-Connect Terminals

*The following changes in requirements are being proposed: 1. Removal of Non-Tubular Insulation Requirements Paragraphs 13.3 and 14.2 2. Editorial Revisions.*

UL 312-2003, Check Valves for Fire-Protection Service

*Proposed New Edition for UL 312*

UL 32-2004, Metal Waste Cans

*The following items are subject to comment:*
*1.) The deletion of the scope paragraph 1.2.*
*2.) The updating of text entities in Sections 2.1 and 2.2.*
*3.) The updating of references to ASTM Standards.*
*4.) The revision of Marking Requirements in Section 17.*
*5.) The 5th Edition of the Standard for Metal Waste Cans, UL 32. These requirements cover metal waste cans intended to be employed in factories, garages, workshops, and other locations where there is need for a receptacle for temporary storage inside buildings of oily waste, rags, and other similar combustible waste materials.*

UL 325-2003, Standard for Safety for Door, Drapery, Gate, Louver, and Window Operators and Systems (Bulletin dated 01/7/03)

*Revisions to address the risk of injury to persons crawling under a stopped, partially open garage door.*

UL 325-2003, Standard for Safety for Door, Drapery, Gate, Louver, and Window Operators and Systems (Comment Matrix Bulletin (Bulletin dated 07/19/02)

*Addition of paragraph 3.2A and revision of paragraph 32.1.3 to specify that a combination sectional overhead garage door operator system cannot drive the door in the closing direction.*

UL 325-2003, Standard for Safety for Door, Drapery, Gate, Louver, and Window Operators and Systems (Comment Matrix Bulletin (Bulletin dated 07/19/02)

*Editorial revisions.*

UL 325-2003, Standard for Safety for Door, Drapery, Gate, Louver, and Window Operators and Systems (Comment Matrix Bulletin (Bulletin dated 07/19/02)

*Clarification on the placement of external entrapment protection devices.*

UL 325-2006, Standard for Safety for Door, Drapery, Gate, Louver, and Window Operators and Systems (Comment Matrix Bulletin (Bulletin dated 07/19/02)

*The following items are subject to comment:*
*1.) Revision of the current rating of a residential garage door operator.*
*2.) Clarifications regarding the use of a separate entrance for pedestrians with respect to a vehicular gate.*
*3.) Clarification of the location of controls with respect to a vehicular gate.*

UL 33-2005, Standard for Heat Responsive Links for Fire-Protection Service

*Request for comments on the proposed revisions to the Seventh Edition of the Standard for Heat Responsive Links for Fire-Protection Service.*

UL 330-1999, Standard for Safety for Hose and Hose Assemblies for Dispensing Flammable Liquids

*Covers hose and hose assemblies, including vapor recovery hose and assemblies, for use on dispensing devices for flammable liquids. For the purpose of this standard flammable liquids are gasoline and diesel fuel. The term "gasoline" includes gasoline with small amounts of additives such as detergents, solvents for detergents, and anti-icing chemicals and gasoline with up to 15 percent ethanol or methyl tertiary butyl ether (MTBE). This is the second public review for this standard. It first appeared in the October 10, 1998 issue of Standards Action and is being resubmitted now due to substantive changes to the text.*

UL 331-2005, Strainers for Flammable Fluids and Anhydrous Ammonia

*The requirements cover complete, self-contained strainer or filter assemblies intended for use with designated flammable fluids and anhydrous ammonia (fertilizer grade) in residential and commercial fuel-burning, dispensing, and handling facilities. Although these devices are designated strainers, they may be either strainers or filters according to the common terminology of the industry.*

UL 346-2005, Standard for Safety for Waterflow Indicators for Fire Protective Signaling Systems

*These requirements cover vane type waterflow indicators intended for use in fire protective signaling systems to be employed in ordinary indoor locations, in accordance with the National Fire Alarm Code, NFPA 72. Waterflow indicators covered by these requirements include sizes 3/4 inch and larger. The indicator sizes refer to the nominal inside diameter of the main sprinkler pipe or tubing on which they are installed.*

UL 347-2000, Standard for Safety for High Voltage Industrial Control Equipment

*These requirements cover enclosed industrial control equipment and associated components intended for starting, stopping, regulating, controlling, or protecting electric motors or other electrical loads including refrigeration equipment, having a-c voltage ratings in the range of 2.2 - 2.5 or 4.0 - 5.0 kV or 6.2 - 7.2 kV. These requirements cover equipment intended for use in ordinary locations in accordance with the National Electrical Code.*
*These requirements, as modified by the Standard for Centrifugal Fire Pumps, NFPA 20, also cover Fire Pump Controllers.*

UL 355-2006, Cord Reels

*1. Proposal for revisions to clarify cord types that can be employed 2. Proposal for revisions to clarify the use of protection devices with respect to abnormal working conditions.*

UL 360-2002, Liquid-Tight Flexible Steel Conduit

*Reference Subject 6 Bulletin Dated 7/29/02 and Subject 360 Standard dated 8/16/96. The requirements cover the 3/8, 1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, and 4 inch trade sizes of liquid-tight flexible steel conduit. The conduit covered is intended for installation in accordance with the National Electrical Code (NFPA 70) as raceway for wires and cables in motor circuits operating at potentials over 600 volts, in electric-sign circuits operating at potentials up through 1000 volts, over 1000 volts, and in other circuits operating at 0 - 600 V.*

UL 365-2004, Standard for Safety for Police Station Connected Burglar Alarm Units and Systems

*These requirements cover police station connected burglar-alarm units and systems for use in mercantile premises, safes and vaults.*

UL 38-2005, Manually Actuated Signaling Boxes for Use with Fire-Protective Signaling Systems

*Manual signaling boxes for fire alarm systems intended for permanent installation and used in ordinary locations*

UL 385-2006, Play Pipes for Water Supply Testing in Fire Protection Service

*Play pipes for testing of water supplies for fire protection service.*

UL 391-2006, Standard for Safety for Solid-Fuel and Combination-Fuel Central and Supplementary Furnaces

*This proposal to UL 391 modifies proposals announced in the February 24, 2006 issue of ANSI's Standards Action.*

UL 399-2004, Standard for Safety for Drinking Water Coolers

*The following items are for comment:*
1. *Addition of requirements for plastics.*
2. *Revision to production line pressure test.*
3. *Revisions to the marking section.*
4. *Addition of glossary terms.*
5. *Editorial and miscellaneous revisions.*

UL 4-2003, Armored Cable

*These revisions are being issued to add provision for color coating of armor and to editorially clarify and technically update the text of the UL 4 Standard.*

UL 401-2004, Standard for Safety for Portable Spray Hose Nozzles for Fire-Protection Service (bulletin dated February 16, 2004)

*Covers portable spray hose nozzles intended for use with fire department*

UL 404-2006, Standard for Safety for Gauges, Indicating Pressure, for Compressed Gas Service

*New requirements are being proposed to provide clarification and additional detail regarding testing procedures and sample requirements.*

UL 405-2004, Standard for Safety for Fire Department Connections

*Applies to fire department connections intended for exterior installation on or for buildings having standpipe and hose, water spray, or sprinkler systems to enable a fire department to connect hose lines directly to the system to supplement existing water supplies. Requirements for the installation and use of fire department connections for fire protection service are included in the following Standards of the National Fire Protection Association. NFPA 13, Installation of Sprinkler Systems; NFPA 14, Standpipe and Hose Systems; NFPA 15, Water Spray Fixed Systems; NFPA 24, Installation of Private Fire Service Mains.*

UL 407-2004, Standard for Safety for Manifolds for Compressed Gases

*Requirements cover equipment for manifolding high-pressure gas cylinders to supply gas for various industrial and commercial applications. Cylinders are manifolded for the purpose of centralizing the gas supply, to provide a continuous supply of gas, or to provide gas at a rate in excess of that which may be obtained from a single cylinder. Manifolds for services other than or for nonflammable medical gases are to be installed and used in accordance with NFPA 51 or NFPA 56F respectively.*

UL 412-2003, Coolers, Refrigeration Unit

*Clarification to the materials that may be used to enclose Group A wiring.*

UL 414-2006, Standard for Safety for Meter Sockets

*Propose new and revised requirements for the following topics of UL 414: 1. Removal of Outdated Enclosure Requirements; 2. Clarification of Requirements for Live Parts Mounted on the Underside of an Insulating Base; 3. Clarification of Requirements for Metering Transformer Cabinets and Metering Transformer Cabinet Interiors; 4. Editorial Revision of Paragraph 13.19; 5. Clarification of Requirements for Overall Current Rating of a Meter Socket Assembly With More Than One Metering Position; 6. Renumbering Sections 25.11 and 25.12 to Properly Identify Short Circuit Requirements; and 7. Clarification of Marking Requirements.*

UL 416-2003, Standard for Refrigerated Medical Equipment

*These requirements cover refrigerated medical equipment such as thermia and oxygen therapy devices for use in hospitals, nursing homes, medical care centers, medical and dental offices, and similar health care facilities in accordance with the National Electric Code, NFPA 70. Equipment covered by these requirements employ hermetic refrigerant motor-compressors and air- or water-cooled condensers, designed for use on alternating current circuits rated not more than 600 volts.*

UL 4248-1-2007, Standard for Safety for Fuseholders - Part 1: General Requirements

*These fuseholders and devices accommodate fuses to be employed in electrical circuits and are intended to be used in accordance with the Canadian Electrical Code, Part I (CE Code Part I), CSA C22.1, the National Electrical Code (NEC), ANSI/NFPA 70, or the Mexican Electrical Code, NOM-001. These requirements cover: a) fuseholders for fuses intended for use with fuse classes covered in the ANCE NMX-J-009- 248; CSA C22.2 No. 248 and UL 248 series of standards, Parts 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15; and b) fuseholder accessories (such as covers, indicators, adapters, etc.*

UL 4248-11-2007, Standard for Safety for Fuseholders - Part 11: Type C (Edison Base) and Type S Plug Fuse

*These requirements cover: a) fuseholders intended for use with Type C (Edison-base) and Type S Plug Fuses as described in NMX-J-009/248/11-2000-ANCE, CSA C22.2 No. 248.11, UL 248-11, Low-Voltage Fuses - Part 11: Plug Fuses; b) devices intended to be added to Edison-base fuseholders to reject fuses with larger ampere ratings; and c) devices intended to adapt Type S plug fuses for use in Edison-base fuseholders.*

UL 4248-12-2007, Standard for Safety for Fuseholders - Part 12: Class R

*These requirements cover fuseholders intended for use with Class R Fuses as described in NMX-J-009/248/12-2000-ANCE, CSA C22.2 No. 248.12, UL 248-12, Low-Voltage Fuses - Part 12: Class R Fuses.*

UL 4248-15-2007, Standard for Safety for Fuseholders - Part 15: Class T

*These requirements cover fuseholders intended for use with Class T Fuses as described in NMX-J-009/248/15-2000-ANCE, CSA C22.2 No. 248.15, UL 248-15, Low-Voltage Fuses - Part 15: Class T Fuses.*

UL 4248-4-2007, Standard for Safety for Fuseholders - Part 4: Class CC

*These requirements cover fuseholders intended for use with Class CC Fuses as described in NMX-J-009/248/4-2000-ANCE, CSA C22.2 No. 248.4, UL 248-4, Low-Voltage Fuses - Part 4: Class CC Fuses.*

UL 4248-5-2007, Standard for Safety for Fuseholders - Part 5: Class G

*These requirements cover fuseholders intended for use with Class G Fuses as described in NMX-J-009/248/5-2000-ANCE, CSA C22.2 No. 248.5, UL 248-5, Low-Voltage Fuses - Part 5: Class G Fuses.*

UL 4248-6-2007, Standard for Safety for Fuseholders - Part 6: Class H

*These requirements cover fuseholders intended for use with Class H Fuses as described in NMX-J-009/248/6-2000-ANCE, CSA C22.2 No. 248.6, UL 248-6, Low-Voltage Fuses - Part 6: Class H Non-Renewable; and NMX-J-009/248/7-2000-ANCE,CSA C22.2 No. 248.7, UL 248- 7, Low-Voltage Fuses - Part 7: Class H Renewable Fuses.*

UL 4248-8-2007, Standard for Safety for Fuseholders - Part 8: Class J

*These requirements cover fuseholders intended for use with Class J Fuses as described in NMX-J-009/248/8-2000-ANCE, CSA C22.2 No. 248.8, UL 248-8, Low-Voltage Fuses - Part 8: Class J Fuses.*

UL 4248-9-2007, Standard for Safety for Fuseholders - Part 9: Class K

*These requirements cover fuseholders intended for use with Class K Fuses as described in NMX-J-009/248/9-2000-ANCE, CSA C22.2 No. 248.9, UL 248-9, Low-Voltage Fuses - Part 9: Class K Fuses.*

UL 427-2006, Standard for Safety for Refrigerating Units

*The fourth edition of the Standard for Refrigerating Units is being proposed, which includes: new requirements for cord-connected refrigerating units, the deletion of Section 50 to remove specific test requirements for the testing of HBF, HF-1, and HF-2 materials and replace them with a reference to UL 94, revision of the scope of the standard, and reformatting and renumbering of the standard.*

UL 430-2006, Waste Disposers

*1) Alternative Loading Method For The Input Current Test.*

UL 437-2004, Key Locks

*The requirements cover key locks categorized as follows: Cabinet locking cylinders; Door locks; Locking cylinders; Security container key locks, Type 1 and Type 2; and Two-key locks.*

UL 44-2005a, Standard for Safety for Thermoset-Insulated Wires and Cables (Proposal dated September 2, 2005)

*This bulletin proposes revisions of Clause 8.18 of the UL 44 Standard for Thermoset- Insulated Wires and Cables to make editorial changes and correct the crushing test for Types XHHW, XHHW-2, and XHH from specifying use of a flat plate and a rod to specifying the intended use of two flat plates.*

UL 441-2006, Standard for Safety for Gas Vents

*The following changes in requirements are being proposed: 1. Decorative termination shrouds. 2. Undated references. 3. Wire size designation. 4. Deletion of Scope paragraph addressing new or unusual constructions.*

UL 444-2006, Standard for Safety for Communications Cables

*1. Revisions to Clause 6.13, Cold Impact of Outdoor Type CMX Cable, to address more current and common test methodology. 2. Addition of new Clauses 6.22 and 7.3.8 indicating marking and test requirements for communication wires and cables located outdoors, and exposed to direct sunlight.*

UL 448-2004, Pumps for Fire Protection Service

*These requirements cover fire pumps intended for use in water-supply systems for fire-protection service. The pumps covered by these requirements are intended for installation and use in accordance with the Standard for the Installation of Centrifugal Fire Pumps, NFPA 20.*

UL 452-1997, Standard for Safety for Antenna-Discharge Units

*Covers antenna-discharge units for radio and television receiving equipment and amateur radio-transmitting and receiving equipment, to be employed in accordance with American National Standard National Electrical Code, ANSI/NFPA 70-1996. An antenna-discharge unit – hereinafter referred to as a discharge unit – as covered by these requirements consists of a gap, a fixed resistance or other discharge element, or a combination of such features, connected between each antenna lead-in terminal and a grounding terminal.*

UL 458-2006, Recreational Vehicles, Safety Standard for Power Converters and Power-Converter Systems

*1. Addition of the definition for "unit" and replacement of the terms converter, inverter, converter system, or inverter system as appropriate throughout the Standard. 2. Revision of requirements to require a distribution panelboard when two to five circuits are provided.*

UL 464-2003, Audible Signal Appliances

*The requirements cover electrically and electronically operated bells, buzzers, horns, and similar audible signal appliances, rated 300 volts or less, for general or fire-protective signaling service and intended for indoor or outdoor locations or both in accordance with NFPA 70, and the National Fire Alarm Code, NFPA 72. The requirements cover audible signal appliances for use in ordinary locations.*

UL 466-2004, Electric Scales

*The requirements cover portable counter scales, ordinarily of the computing type, that are rated 250 volts or less. These scales consist of an attachment plug, a length of flexible cord, a switch, one or more lamps, lampholders, ballasts if electric-discharge lamps are used, and associated internal wiring. They are intended to be used in accordance with the National Electrical Code, NFPA 70.*

UL 467-2004, Grounding and Bonding Equipment

*Proposed changes in requirements and editorial corrections for proposed Eighth Edition.*

UL 47-2004, Semiautomatic Fire Hose Storage Devices

*Covers semiautomatic fire hose storage devices (SHSD) intended for use in controlling incipient fires by occupants of buildings. An SHSD is intended for use with specifically-identified fire hose. Requirements for the installation, use, and care of hose storage devices and fire hose are included in the following standards of the National Fire Protection Association: Installation of Standpipe and Hose Systems, NFPA 14; and Care, Use, and Service Testing of Fire Hose, Including Connections and Nozzles, NFPA 1962.*

UL 471-2006, Standard for Safety for Commercial Refrigerators and Freezers

*Revisions to the previously balloted proposed ninth edition of UL 471, Standard for Safety for Commercial Refrigerators and Freezers.*

UL 474-2004, Dehumidifiers

*These requirements cover movable, household, self-contained dehumidifiers employing hermetic refrigerant motor-compressors and intended for connection to single-phase, alternating-current (ac) circuits rated not more than 20 amperes, 125 volts or 15 amperes, 208 or 230 volts. The requirements also cover dehumidifiers which incorporate electric air heaters.*

UL 482-2005, Standard for Safety for Portable Sun/Heat Lamps

*This bulletin proposes the Ninth Edition of the Standard for Portable Sun/Heat Lamps, UL 482, be recognized as an American National Standard. This new edition contains editorial updates to the scope, removal of "No." preceding the wire gauge (AWG), renumbered paragraphs where necessary, and corrected titles of UL Standards found in Appendix A, where appropriate.*

UL 484-2005, Standard for Safety for Room Air Conditioners

*Temperature limiting controls employed to comply with 17.2.1 shall be of the manual reset type.*

UL 486A-486B-2006, Standard for Wire Connectors (Proposals dated 3/17/06)

*Proposed revisions submitted by the CANENA Technical Harmonization Subcommittee, THSC 99.*

UL 486C-2006, Standard for Splicing Wire Connectors (Proposals dated 3/17/06)

*Proposals submitted by the CANENA Technical Harmonization Subcommittee, THSC 99.*

UL 486D-2005, Standard for Safety for Sealed Wire Connectors

*Based on comments received to the April 22, 2005 ballot of the proposed Fifth Edition of UL 486D, changes are being proposed for (a) outdoor applications in the scope, (b) reference to an ASTM standard for Mexico, and (c) miscellaneous editorial corrections.*

UL 486E-2000, Equipment Wiring Terminals for Use with Aluminum and/or Copper Conductors

*These requirements apply to pressure type equipment wiring terminals intended for use with appliances or equipment with either copper, aluminum, or copper-clad aluminum wire in accordance with the National Electrical Code, NFPA 70. The terminals may be constructed so that they are also acceptable for use with any wire.*

UL 489-2006, Standard for Safety for Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit-Breaker Enclosures (Proposals dated March 10, 2006)

*Substantive changes to the following items of UL's Sujbect 489 Proposals dated July 15, 2005; 2. Revision of Requirements for the Identification of Grounded Conductors 3. Clarification of Temperature Test Requirements 6. Clarification of Terminal Marking Requirements for Circuit Breakers with Equipment Ground-Fault Protection 9. Addition of Figure C6.2.*

UL 493-1997, Thermoplastic-Insulated Underground Feeder and Branch-Circuit Cables

*Covers Nos. 14-4/0 AWG single-conductor PVC-insulated and -jacketed underground feeder and branch-circuit cable and flat multiple-conductor PVC-jacketed underground feeder and branch-circuit cables containing two or three Nos. 14-6 AWG PVC-insulated circuit conductors with or without a grounding conductors.*

UL 496-2004, Edison Base Lampholders

*UL proposes a new Twelfth Edition of UL 496, Standard for Lampholders. The proposed requirements have been harmonized with the requirements of Canada and reflect changes based on comments received by UL to the material proposed in a Subject 496 (542) bulletin dated October 9, 1998.*

UL 497-2004, Standard for Safety for Protectors for Paired Conductor Communications Circuits

*Covers protectors for paired-conductor communications circuits intended to protect equipment, wiring, and personnel against the effects of excessive potentials and currents in telephone lines caused by lightning, contacts with power conductors, power induction, and rises in ground potential.*

UL 497A-2004, Secondary Protectors for Communication Circuits

*The requirements cover secondary protectors for use in single- or multiple-pair-type communications circuits used in the protected side of telecommunications networks that have an operating rms voltage to ground less than 150 volts and installed or used in accordance with the National Electrical Code, NFPA 70.*

UL 497B-2004, Protectors for Data Communication and Fire Alarm Circuits

*Covers protectors for data communications and fire alarm circuits intended to protect equipment, wiring, and personnel against the effects of excessive potentials and currents caused by lightning in communication alarm initiating or alarm indicating loop circuits.*

UL 497C-2004, Protectors for Coaxial Communications Circuits

*The requirements cover protectors for use on coaxial cable circuits consisting of single or multiple air gap arresters, gas tube arresters, or solid-state arresters, with or without fuses or other current-limiting devices.*

UL 498-2006, Standard for Safety for Attachment Plugs and Receptacles (Proposal dated 12/23/05)

*Further substantive changes to UL's proposal dated 4/22/05 and recirculation dated 8/26/05; Item 1: Clarification of the Test Gauge Specifications for the Retention of Blades Test.*

UL 498A-2003, Standard for Safety for Current Taps and Adapters

*Revision of Noninterchangeability Requirements.*

UL 499-2005, Standard for Safety for Electric Heating Appliances

*The following changes in requirements to UL 499 are being proposed: 1. Addition of Alternative (IEC) Grounding Symbol, 2. Elimination of "A" from "W-A" Suffix for Outdoor Power Supply Cord Designations, 3. Additional Requirement Intended to Exempt Industrial Ovens and Furnaces From the Requirement That Resistance Heaters Larger Than 48 Amperes Be Broken Down Into Subdivided Circuits Not to Exceed 48 Amperes, 4. Additional Marking and Instruction Requirements for Steam Bath Steam Generators Relative to the Effects of Steam and Heat.*

UL 5-2003, Surface Metal Raceways and Fittings

*Covers surface metal raceways and fittings for use in accordance with the National Electrical Code, NFPA 70. Raceways of the following thicknesses are intended to enclose circuits operating at potentials not exceeding 600 volts between conductors: a) Raceways that are entirely of metal at least 0.040 inch (1.02 mm) thick nominal and b) Raceways consisting of nonmetallic covers on metal bases of the thickness indicated in (a).*

UL 50-2003, Cabinets and Boxes

*Covers electrical equipment enclosures for use in accordance with the National Electrical Code, NFPA 70. Specific applications covered by this standard include cabinets and cutout boxes and junction and pull boxes. Each type of enclosure covered by this standard is described in general and functional terms where practicable, and omits reference to structural details and specific applications except where they are essential to the identification of the enclosure type. Such additional details and specifications are included in applicable standards for the end-product involved.*

UL 506-2005, Specialty Transformers

*Resolve comments received in response to proposals to revise UL 506 by: 1) Adding New Requirements for Applying Insulation Between the Input and Output Windings of Concentrically Wound Transformers; 2) Revising the Procedure for Conducting the Heating Test; and 3) Adding Requirements for Specialty Step-Up Transformers. The original proposals were posted by UL on March 25, 2005.*

UL 507-2005 (Report of the Meeting of the Standards Technical Panel of UL for Electric Fans dated April 21, 2004), Electric Fans

*This project documents the comments received on, and substantive changes made to proposals from the Report of the Meeting of the Standards Technical Panel of UL for Electric Fans dated April 21, 2004.*

UL 507-2006, Electric Fans

*The following items are subject to comment:*
*1.) Clarification of Impact Testing In The As-Received Condition, and Testing Other Than Polymeric Guards.*
*2.) Definitions and Additional Requirements for Convenience Receptacles.*
*3.) Miscellaneous Revisions.*

UL 508-2005, Industrial Control Equipment

*Covers industrial control devices, rated 1500 volts or less, and devices accessory thereto, for starting, stopping, regulating, controlling, or protecting electric motors. Also covers industrial control devices or systems that store or process information and are provided with an output motor control function(s). For use in ordinary locations in accordance with the NEC, NFPA 70. Industrial control equipment covered by these requirements is intended for use in an ambient temperature of 0 - 40°C (32 - 104°F) unless specifically indicated for use in other conditions.*

UL 5085-1-2006, Standard for Safety for Low Voltage Transformers - Part 1: General Requirements

*Resolve comments received by UL in response to the proposed new Standard UL 5085-1. The original proposal for the new standard was posted by UL on April 22, 2005.*

UL 5085-2-2006, Standard for Safety for Low Voltage Transformers - Part 2: General Purpose Transformers

*Resolve comments received by UL in response to the proposed new Standard UL 5085-2. The original proposal for the new standard was posted by UL on April 22, 2005.*

UL 5085-3-2006, Standard for Safety for Low Voltage Transformers - Part 3: Class 2 and Class 3 Transformers

*Resolve comments received by UL in response to the proposed new Standard UL 5085-3. The original proposal for the new standard was posted by UL on April 22, 2005.*

UL 508C-2005, Standard for Safety for Power Conversion Equipment

*These requirements cover open or enclosed equipment that supplies power to control a motor or motors operating at a frequency or voltage different than that of the input supply. These requirements also cover power-supply modules, input/output modules, Silicon Controlled Rectifier (SCR) or Transistor output modules, dynamic braking units, and input/output accessory kits for use with power conversion equipment. Proposed requirements relating to Type 4 and 4X Ratings.*

UL 51-1999, Power-Operated Pumps for Anhydrous Ammonia and LP-Gas

*Covers power-operated pumps for anhydrous ammonia and liquefied petroleum gas (LP-Gas) for use in liquid transfer operations in nonrefrigerated systems in installations covered by the following Standards: Safety Requirements for the Storage and Handling of Anhydrous Ammonia, ANSI/K61.1. Storage and Handling of Liquefied Petroleum Gases, ANSI/NFPA No. 58.*

*SUMMARY OF CHANGES TO UL 51*

*UL 51 was originally listed for comment in the February 16, 1996 issue of Standards Action. Only the revised text outlined below is being resubmitted due to substantive changes in the text. The revisions include: changes based on the replacement of the Mercurous Nitrate Immersion Test with a 10-Day Moist Ammonia Air Stress Cracking Test; changes due to the*

UL 514A-2004, Metallic Outlet Boxes

*The following items are subject to comments:*
*1. Revisions to the Proposed Tenth Edition based on comments received during the ANSI Canvass.*
*2. Clarification of the term "air-circulating oven."*
*3. Revisions to the Alternative Corrosion Protection Systems Test, Annex B.*
*4. Editorial Revisions.*

UL 514B-2006, Standard for Safety for Conduit, Tubing, and Cable Fittings

*1) New Marking And Current Test Requirements Applicable To Specific Types Of Flexible Conduit And Cable.*
*2) New Construction And Marking Requirements For Fittings For Use With Metal Clad (MC) Cable.*

UL 514C-2006, Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers

*Revisions to proposal to add Supplement SB to UL 514C, based on comments received on the August 25, 2006 ballot.*

UL 514D-2003, Standard for Safety for Cover Plates for Flush-Mounted Wiring Devices

*The following items are subject to comment:*
*1.) Revision of clauses 4.2.1.1 and 4.3.1.1 to clarify test receptacle dimension requirements.*
*2.) Addition of clause 4.1.1.2 to address construction requirements for receptacle dimensions.*
*3.) Revision of clause 3.2.1 to align with changes proposed as a result of the canvass of the October 14, 2002 bulletin.*

UL 521-2004, Heat Detectors for Fire Protective Signaling Systems

*Heat detectors for fire protective signaling systems intended for installation in ordinary indoor and outdoor locations.*

UL 536-2000, Flexible Metallic Hose

*Covers flexible metallic hose having a nominal inside diameter of not more than 4 inches intended for use in piping systems carrying compressed gases, such as anhydrous ammonia, and flammable and combustible gases and liquids, at pressures not exceeding 500 psig (3.45 Mpa) and temperatures not greater than 450oF (232oC) nor lower than minus 40oF (minus 40oC).*

*This standard was originally listed for public review in the October 9, 1998 issue of Standards Action. It is being resubmitted due to substantive changes in the text, which are listed here in their entirety.*

*1.3.1 Flexible metal hose is not considered a substitute for standard pipe or tubing and its use should be confined to applications where flexible connections cannot be avoided. It*

UL 539-2005, Single and Multiple Station Heat Detectors

*(proposals dated 06/03/05) These requirements cover heat-activated, mechanically- or gas-opreated, single and multiple station heat detectors intended for indoor installation.*

UL 541-2005, Vending Machines, Refrigerated

*Addition of Ground Fault Circuit Interrupter (GFCI) Requirements for Cord-Connected Refrigerated Vending Machines.*

UL 542-2005, Standard for Fluorescent Lamp Starters

*This proposal includes revisions to the requirements based on comments received to the ballot dated March 4, 2005.*

UL 555-2006, Standard for Safety for Fire Dampers

*Revision of allowable clearance between parts during and after a fire test.*
*The following Proposals dated 2-17-06 are subject to comment:*
*1.) Revision of allowable clearance between parts during and after a fire test.*
*2.) Revision to delete the "Ambient" rating from 14.1.3.*
*3.) Deletion of paragraph 1.13 which addresses issues specific to the certification of a product.*
*4.) Revisions to update references throughout the standard.*
*5.) Editorial revisions throughout standard.*

UL 555C-2006, Ceiling Dampers (proposal dated 8-18-06)

*1. Revisions to the Proposed Third Edition of the Standard for Ceiling Dampers, UL 555C.*

UL 555S-2006, Standard for Safety for Smoke Dampers

*Revision of the modulating fire and smoke damper with actuator test.*

UL 558-1998, Internal-Combustion-Engine-Powered Industrial Trucks

*This standard was first listed in the October 25, 1996 issue of Standards Action with the following scope:*

*Covers the fire safety aspects of industrial trucks with internal-combustion engines, such as tractors, platform-lift trucks, fork-lift trucks, and other specialized vehicles for industrial use. These requirements do not cover other possible safety aspects of such equipment. These requirements do not cover farm or road vehicles or automotive vehicles for highway use. Internal-combustion engine-powered industrial trucks covered by these requirements are identified as follows:*
*Types G, D, LP, and G/LP - Trucks fueled with gasoline (G), diesel fuel (D),*
*liquefied petroleum gas (LP), or either gasoline or liquefied petroleum gas*
*(G/LP), having fuel, electrical, and exhaust*

### UL 563-2001, Ice Makers

*Covers automatic ice makers designed for connection to alternating-current circuits rated not more than 600 volts. These requirements apply to unitary and remote ice makers. For the purpose of this standard, an ice maker includes a means for automatically manufacturing and harvesting ice in cube, flake, or other readily usable form, with or without provision for storage or means of dispensing ice. Self-contained ice makers covered by these requirements employ hermetic refrigerant motor-compressors and air- or water-cooled condensers. These requirements do not apply to ice makers of the tray type, ice vending machines, or to ice makers and ice maker kits used in household refrigerators and freezers. Requirements for the installation of ice makers are included in the National Electrical Code, NFPA 70, and the Safety Code for Mechanical Refrigeration, ASHRAE 15.*

### UL 567-2004, Emergency Breakaways Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas

*These requirements cover emergency breakaway fittings, swivel connectors and pipe-connecting fittings of the threadless compression type. Connectors and fittings covered by these requirements are intended only for the following services. Swivel connector is for use in the assembly of dispensing devices to facilitate handling of the hose nozzle valve or lever-operated fuel transfer valve (LP-Gas Service). Emergency breakaway fitting is used between the outlet of the dispensing device and the hose nozzle valve or lever-operated fuel transfer valve (LP-Gas Service).*

### UL 568-2004, Standard for Safety for Nonmetallic Cable Tray Systems

*UL 568 specifies the requirements for nonmetallic cable trays and associated fittings designed for use in accordance with the rules of the Canadian Electrical Code (CEC) Part 1, and the National Electrical Code® (NEC).*

### UL 569-2000, Pigtails and Flexible Hose Connectors for LP-Gas

*These requirements cover pigtails and flexible hose connectors used in the assembly of fuel-supply systems other than those outlined in 1.2 (b) and (c), intended for liquefied petroleum gas (LP-Gas). Low or high pressure flexible hose connectors are also suitable for low pressure (1.0 psig (6.9 kPa) or less) natural gas service. LP-Gas systems use either Department of Transportation (DOT) cylinders or ASME tanks and are intended to be installed in accordance with the Standard for the Storage and Handling of Liquefied Petroleum Gases, NFPA/ANSI 58. Low pressure flexible hose connectors used in natural gas systems are intended to be installed in accordance with the National Fuel Gas Code, NFPA 54/ANSI Z223.1. Pigtails and flexible hose connectors are used to make connection between parts of equipment or between equipment and service piping.*

### UL 574-2004, Electric Oil Heaters

*These requirements cover electric oil heaters for use with Nos. 5 and 6 fuel oil as defined in Specifications for Fuel Oils, ASTM D396, or other oils such as heat transfer oils. Electric oil heaters are to be used in ordinary locations and installed in accordance with the National Electrical Code, NFPA 70.*

### UL 583-2006, Standard for Electric-Battery-Powered Industrial Trucks

*Addition of a reduced spacings alternative to the current requirements in UL 583.*

### UL 586-2004, High-Efficiency Particulate Air Filter Units

*These requirements cover high-efficiency, particulate, air-filter units intended for the removal of very fine particulate matter (not less than 99.97 percent of 0.3 micron diameter particles) from the air of industrial and laboratory exhaust and ventilating systems. These requirements cover single air filter units. These requirements do not cover multiple assembly air filter units.*

### UL 588-2006, Standard for Safety for Seasonal and Holiday Decorative Products

*This recirculation proposal provides revisions to the UL 588 proposal dated 3-10-06. The revisions being proposed are based on comments received during the ballot and review of the proposal document. The following topics are being recirculated: 2. Revision of individual flashing lamp requirements to allow alternative constructions that do not permit an individual-flashing lamp to be installed in a lampholder intended for a steady-illuminating lamp in the same lighting string 8. Requirements for lighting sculptures consisting of multiple sections 12. Increased current rating for motorized tree stands and lighting sculptures. 14. Addition of requirements for lighting strings intended for use on a patio umbrella 17. Revision to allow a light string that operates without bulbs in the sockets 18. Addition of alternate rain test for series connected lighting strings 19. Clarification of*

### UL 5A-2003, Standard for Safety for Non-Metallic Surface Raceways and Fittings

*The requirements cover nonmetallic raceways and fittings. These products are for use as surface wiring systems in accordance with the National Electrical Code (NEC), NFPA 70. Raceways of the following thicknesses are to be considered as being intended to enclose circuitsoperating at potentials not exceeding 600 volts between conductors: All-nonmetallic raceways of any thickness and Raceways consisting of metal covers at least 0.040 inch (1.02 mm) thick nominal on nonmetallic bases. Raceways consisting of nonmetallic bases with thinner metal covers are to be considered as being intended for circuits operating at potentials lower than 300 volts between conductors.*

UL 5B-2004, Strut-Type Channel Raceways and Fittings

*These requirements cover strut-type channel raceways and fittings for use only in dry locations and in accordance with the National Electrical Code, NFPA 70. Strut-type channel raceways of the following thicknesses are intended to enclose circuits operating at potentials not exceeding 600 volts between conductors: a) that are entirely of metal having a channel (base) at least 0.071 inch (1.81 mm) thick and a metal closure strip (cover) at least 0.040 inch (1.02 mm) thick. b) consisting of a nonmetallic closure strip (cover) on a metal channel (base) of the thickness indicated in (a).*

UL 5C-2003, Standard for Safety for Surface Raceways and Fittings for Use with Data, Signal and Control Circuits

*These requirements cover surface raceways and fittings for use with Class 2 data, signal, and control circuits. These raceway systems are intended for mechanical protection and routing of circuits. They are not intended for applications which require the use of a raceway in accordance with the National Electrical Code, NFPA 70. These requirements do not apply to cable trays, wireways, or metal or nonmetallic raceways that are intended for use on Class 1 circuits. These requirements do not apply to the conductors, connectors, or similar items that are used as part of the circuit.*

UL 6-2004, Electrical Rigid Metal Conduit - Steel

*These requirements cover steel electrical rigid metal conduit (RMC), nipples, elbows, and couplings. This conduit is provided in trade sizes 3/8 - 6 (12 - 155), for use as a metal raceway for the installation of wires and cables in accordance with the National Electrical Code. The values in parentheses are metric designators of conduit.*

UL 60065-2006a, Audio, Video and Similar Electronic Apparatus -- Safety Requirements (Proposal dated 8/18/06)

*Proposal for touch current limits for Class II apparatus for use in health care facilities; correction of typographical error in Table Q.1 and proposal to revise items j and k of subclause 5.1 to not require the marking durability and legibility test (rubbing test) for the date of manufacture and factory identification markings.*

UL 60079-0-2005, Standard for Safety for Electrical Apparatus Gas Explosive - Part 0: General Requirements

*This standard specifies the general requirements for construction, testing and marking of electrical apparatus and Ex components intended for use in Class I, Zone 0, 1, or 2 hazardous (classified) locations as defined by the National Electrical Code ANSI/NFPA 70.*

UL 60079-1-2005, Standard for Safety for Electrical Apparatus Gas Explosive - Part 6: Flameproof enclosurers “d”

*The UL 60079-0 (60079-1) Comment Resolution Bulletin dated 8-12-04 provides the comments received on the UL 60079-0 (60079-1) bulletin dated 3-10-04. Also included in the bulletin are the responses to the comments and revised proposals.*

UL 60079-11-2002, Standard for Safety for Electrical Apparatus Gas Explosive - Part 11: Intrinsic Safety “i”

*Covers equipment for use and installation in Class I, Zones 0, 1, and 2, Gas Groups IIA, IIB, and IIC, hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70. These requirements also cover Class I, Zone 0, 1, and 2 equipment for use and installation in Class I, Division 2, Gas Groups A, B, C, and D hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70. Proposal: Recognition of United States National Differences for IEC 60079 Series of Standards*

UL 60079-15-2002, Standard for Safety for Electrical Apparatus Gas Explosive - Part 15: Type of Protection “n”

*Covers equipment for use and installation in Class I, Zones 0, 1, and 2, Gas Groups IIA, IIB, and IIC, hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70. These requirements also cover Class I, Zone 0, 1, and 2 equipment for use and installation in Class I, Division 2, Gas Groups A, B, C, and D hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70. Proposal: Recognition of United States National Differences for IEC 60079 Series of Standards*

UL 60079-18-2005, Standard for Safety for Electrical Apparatus for Explosive Gas Atmospheres - Part 18: Encapsulation "m”

*This standard: -gives the specific requirements for the construction, testing & marking of electrical apparatus, parts of electrical apparatus & Ex components with the type of protection encapsulation “m”. -only applies for encapsulated electrical apparatus, encapsulated parts of electrical apparatus & encapsulated Ex components where the rated voltage does not exceed 10 kV with a relative tolerance of +10 %. -supplements the general requirements in UL 60079-0. The U.S. version of IEC 60079-18 does not include requirements for Group I electrical apparatus.*

UL 60079-5-2002, Standard for Safety for Electrical Apparatus Gas Explosive - Part 5: Powder Filling “q”

*Covers equipment for use and installation in Class I, Zones 0, 1, and 2, Gas Groups IIA, IIB, and IIC, hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70. These requirements also cover Class I, Zone 0, 1, and 2 equipment for use and installation in Class I, Division 2, Gas Groups A, B, C, and D hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70. Proposal: Recognition of United States National Differences for IEC 60079 Series of Standards*

UL 60079-6-2002, Standard for Safety for Electrical Apparatus Gas Explosive Part 6: Oil-Immersion “o”

*Covers equipment for use and installation in Class I, Zones 0, 1, and 2, Gas Groups IIA, IIB, and IIC, hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70. These requirements also cover Class I, Zone 0, 1, and 2 equipment for use and installation in Class I, Division 2, Gas Groups A, B, C, and D hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70. Proposal: Recognition of United States National Differences for IEC 60079 Series of Standards*

UL 60079-7-2002, Standard for Safety for Electrical Apparatus Gas Explosive - Part 7: Increased safety “e”

*Covers equipment for use and installation in Class I, Zones 0, 1, and 2, Gas Groups IIA, IIB, and IIC, hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70. These requirements also cover Class I, Zone 0, 1, and 2 equipment for use and installation in Class I, Division 2, Gas Groups A, B, C, and D hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70. Proposal: Recognition of United States National Differences for IEC 60079 Series of Standards*

UL 60079-7-2002, Standard for Safety for Electrical Apparatus Gas Explosive - Part 7: Increased safety “e”

*Covers equipment for use and installation in Class I, Zones 0, 1, and 2, Gas Groups IIA, IIB, and IIC, hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70. These requirements also cover Class I, Zone 0, 1, and 2 equipment for use and installation in Class I, Division 2, Gas Groups A, B, C, and D hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70. Proposal: Recognition of United States National Differences for IEC 60079 Series of Standards*

UL 603-1997, Power Supplies for Use with Burglar-Alarm Systems

*Excerpt:*
*a) Power supplies for use with burglar-alarm systems installed in accordance with the Standard for Installation and Classification of Mercantile and Bank Burglar-Alarm Systems, UL 681; and*
*b) Power supplies used to provide electrical power and standby power for burglar-alarm equipment constructed in accordance with the following: (1) the Standard for Police Station Connected Burglar Alarm Units and Systems, UL 365; (2) the Standard for Local Burglar-Alarm Units and Systems, UL 609; (3) the Standard for Central-Station Burglar-Alarm Systems, UL 611; (4) the Standard for Holdup Alarm Units and Systems, UL 636; (5) the Standard for Intrusion-Detection Units, UL 639; (6) the Standard for Household Burglar-Alarm System Units, UL 1023; (7) the Standard for Antitheft Alarms and Devices, UL 1037; (8) the*

UL 60335-1-2005, Standard for Safety for Household and Similar Electrical Appliances, Part 1: General Requirements

*A national difference deleting the statement related to EMI requirements, would be added to UL 60335-1 (This topic contains an editorial correction.*

UL 60335-2-24-2006, Standard for Safety for Household and Similar Electrical Appliances, Part 2: Particular Requirements for Refrigerating Appliances, Ice-Cream Appliances, and Ice-Makers

*Editorial corrections as a result of the recent ballot and public review of the First Edition of UL 60335-2-24, Standard for Safety for Household and Similar Electrical Appliances, Part 2: Particular Requirements for Refrigerating Appliances, Ice-Cream Appliances, and Ice-Makers.*

UL 60335-2-3-2005, Standard for Safety of Household and Similar Electrical Appliances, Part 2: Particular Requirements for Electric Irons

*1. Addition of a new national difference to specify cord types HPD, HPN, HS, HSJ, HSJO, HSO are to be used with electric irons.*

UL 60335-2-34-2005, Standard for Safety for Household and Similar Electrical Appliances, Part 2: Particular Requirements for Motor-Compressors

*This International standard deals with the safety of sealed (hermetic and semi-hermetic type) MOTOR-COMPRESSORS, their protection and control systems, if any, which are intended for use in equipment for household and similar purposes and which conform with the standards applicable to such equipment. It applies to MOTOR-COMPRESSORS tested separately, under the most severe conditions which may be expected to occur in normal use, their RATED VOLTAGE being not more than 250 V for single-phase MOTOR-COMPRESSORS and 480 V for other MOTOR-COMPRESSORS.*

UL 60335-2-8-2006, Standard for Safety for Household and Similar Electrical Appliances, Part 2: Particular Requirements for Shavers, Hair Clippers, and Similar Appliances

*1. Revision to harmonize UL 60335-2-8 with edition 5.1 of IEC 60335-2-8 published in October 2005, which includes: a) revision to Note 101 in Clause 7.1 to provide an exception for the color of the symbols, b) revision to number the "Addition" under Clause 21 as 21.1, c) revision to add two new paragraphs to Clause 24.1.3, specifying the number of cycles of operation for hair clippers and shavers intended only for household use, and d) revision to the Bibliography to include a reference to ISO 3864-1. 2. Editorial revision to update references to figure 1DV of the UL part 1 to 12DV.*

UL 60691-2003, Thermal-Links - Requirements and Application Guide

*This International Standard is applicable to thermal-links intended for incorporation in electrical appliances, electronic equipment and component parts thereof, normally intended for use indoors, in order to protect them against excessive temperatures under abnormal conditions.*

UL 60745-1-2005, Standard for Hand-Held Motor-Operated Electric Tools - Safety - Part 1: General Requirements

*This bulletin proposes the following changes in requirements: 1. Adding Reference for Switches to Reflect Current Requirements 2. Clarification for Type Y Attachment Definition 3. Clarification for Number of Testing Samples 4. Instruction Manual Revisions 5. Changes to Impact and Electric Strength Testing for Handle and Grasping Surfaces 6. Changes to Thickness of Quick-Connect Tabs 7. Correction to Creepage Distances and Clearances 8. Clarification for Electric Strength Test.*

UL 60745-2-1-2006, Hand-Held Motor-Operated Electric Tools - Safety - Part 2-1: Particular Requirements for Drills and Impact Drills

*Proposed changes to align the wording of Clauses 17.2, 19.101, 23, 23.2, 23.2DV, Figures 101, 102, and 103, and the Bibliography with the corresponding wording of IEC 60745-2-1.*

UL 60745-2-11-2004, Standard for Safety for Hand-Held Motor-Operated Electric Tools - Safety - Part 2-11: Particular Requirements for Reciprocating Saws

*This International Standard deals with the safety of hand-held motor-operated or magnetically driven electric tools, the rated voltage of the tools being not more than 250 V for single-phase a.c. or d.c. tools, and 440 V for three-phase a.c. tools. This standard applies to reciprocating saws (jig and sabre saws).*

UL 60745-2-12-2005, Standard for Safety for Hand-held Motor-operated Electric Tools - Safety - Part 2-12: Particular Requirements for Concrete Vibrators

*This bulletin proposes the following changes in requirements: Proposed Second Edition of the Standard for Hand-Held Motor-Operated Electric Tools – Safety – Part 2-12: Particular Requirements for Concrete Vibrators, UL/CSA 60745-2-12.*

UL 60745-2-14-2006, Hand-Held Motor-Operated Electric Tools - Safety - Part 2-14: Particular Requirements for Planers

*Proposed changes to align the wording of Clauses 3, 21.18 and the Bibliography with the corresponding wording of IEC 60745-2-14.*

UL 60745-2-17-2006, Hand-Held Motor-Operated Electric Tools - Safety - Part 2-17: Particular Requirements for Routers and Trimmers

*Proposed changes to align the wording of Clause 12.4, Clause 19.1, Figure 101 and the Bibliography with the corresponding wording of IEC 60745-2-17.*

UL 60745-2-18-2005, Standard for Safety for Hand-held Motor-operated Electric Tools - Safety - Part 2-18: Particular Requirements for Strapping Tools

*This bulletin proposes the following changes in requirements: Proposed First Edition of the Standard for Hand-Held Motor-Operated Electric Tools – Safety – Part 2-18: Particular Requirements for Strapping Tools, UL/CSA 60745-2-18.*

UL 60745-2-19-2005, Standard for Safety for Hand-Held Motor-Operated Electric Tools - Safety - Part 2-19: Particular Requirements for Jointers

*Request for comments on the proposed harmonized First Edition of the Standard for Hand-Held Motor-Operated Electric Tools - Safety - Part 2-19: Particular Requirements for Jointers.*

UL 60745-2-2-2006, Hand-Held Motor-Operated Electric Tools - Safety - Part 2-2: Particular Requirements for Screwdrivers and Impact Wrenches

*Proposed changes to align the wording of Clause 3.101, Clause 17.2, and the Bibliography with the corresponding wording of IEC 60745-2-2.*

UL 60745-2-20-2005, Standard for Safety for Hand-held Motor-operated Electric Tools - Safety - Part 2-20: Particular Requirements for Band Saws

*This bulletin proposes the following changes in requirements: Proposed First Edition of the Standard for Hand-Held Motor-Operated Electric Tools – Safety – Part 2-20: Particular Requirements for Band Saws, UL/CSA 60745-2-20.*

UL 60745-2-21-2005, Standard for Safety for Hand-held Motor-operated Electric Tools - Safety - Part 2-21: Particular Requirements for Drain Cleaners

*This bulletin proposes the following changes in requirements: Proposed First Edition of the Standard for Hand-Held Motor-Operated Electric Tools – Safety – Part 2-21: Particular Requirements for Drain Cleaners, UL/CSA 60745-2-21.*

UL 60745-2-4-2006, Hand-Held Motor-Operated Electric Tools - Safety - Part 2-4: Particular Requirements for Sanders and Polishers Other Than Disk Type

*Proposed changes to align the wording of Clauses 3.103, 3.106, and 17.2 with the corresponding wording of IEC 60745-2-4.*

UL 60745-2-5-2004, Standard for handheld Motor-Operated Electric Tools - Safety - Part 2: Particular Requirements for Circular Saws

*Editorial Changes to the Third Edition of UL 60745-1 and UL 60745-2-5; and the Second Edition*
*of UL 60745-2-1, UL 60745-2-6, UL 60745-2-14, and UL 60745-2-17. These changes modify*
*proposed requirements from the following bulletins:*
*July 31, 2002*
*September 6, 2002*
*January 3, 2003*
*April 7, 2003*

UL 60745-2-6-2006, Safety for Hand-Held Motor-Operated Electric Tools - Safety - Part 2-6: Particular Requirements for Hammers

*Proposed revisions to align with IEC Amendment No. 1 for IEC 60745-2-6 dated January, 2006. The proposed changes include: (a) Clause 20.3 - Addition to the existing replacement to specify mechanical strength requirements for hammers up to 10 kg, and (b) Clause 21 - Modification of existing text to specify requirements for switch lock-on devices for percussion and rotary hammers.*

UL 60745-2-8-2006, Hand-Held Motor-Operated Electric Tools - Safety - Part 2-8: Particular Requirements for Shears and Nibblers

*Proposed changes to align the wording of Clauses 8.1 and 24.4, and the Bibliography with the corresponding wording of IEC 60745-2-8.*

UL 60745-2-9-2006, Hand-Held Motor-Operated Electric Tools - Safety - Part 2-9: Particular Requirements for Tappers

*Proposed changes to align the wording of Clause 8.1 and the Bibliography with the corresponding wording of IEC 60745-2-9.*

UL 608-2004, Burglary-Resistant Vault Doors and Modular Panels

*These requirements cover vault doors, and vault modular panels for use in the construction of vault floors, walls, and ceilings, of the type intended for use in financial institutions, commercial, industrial and mercantile properties, and the like, and that are relied upon to protect the contents from burglary attack. These requirements are intended to establish the burglary resistant rating of vault doors and modular panels according to the length of time they withstand attack.*

UL 609-2004, Local Burglar Alarm Units and Systems

*These requirements cover construction, performance, and maintenance of local burglar-alarm units and systems for use in mercantile premises, mercantile safes and vaults, and bank safes and vaults.*

UL 60947-1-2007, Standard for Safety for Low-Voltage Switchgear and Controlgear - Part 1: General Rules

*The purpose of this standard is to harmonize as far a practicable all rules and requirements of a general nature applicable to low-voltage switchgear and controlgear in order to obtain uniformity of requirements and tests throughout the corresponding range of equipment and to avoid the need for testing to different standards. This standard applies, when required by the relevant product standards, to switchgear and controlgear hereinafter referred to as “equipment” and intended to be connected to circuits, the rated voltage of which does not exceed 1000V a.c. or 1500V d.c.*

UL 60947-4-1-2007, Standard for Safety for Low-Voltage Switchgear and Controlgear - Part 4-1: Contactors and motor-starters - Electromechanical contactors and motor-starters

*The purpose of this standard is to harmonize as far as practicable all rules and requirements applicable to contactors and motor starters in order to obtain uniformity of requirements and tests throughout the corresponding range of equipment and to avoid the need for testing to different standards. This standard is intended to be used in conjunction with the Standard for Safety for Low -Voltage Switchgear and Controlgear - Part 1: General Rules, UL 60947-1, where applicable.*

UL 60947-7-1-2004, Standard for Terminal Blocks for Copper Conductors

*Request for Comments on the Proposed Requirements for the Fourth Edition of the Standard for Terminal Blocks, UL 1059; the Proposed First Edition of the Standard for Terminal Blocks for Copper Conductors, UL 60947-7-1; and the Proposed First Edition of the Standard for Protective Conductor Terminal Blocks for Copper Conductors, UL 60947-7-2.*

UL 60947-7-2-2004, Standard for Protective Conductor Terminal Blocks for Copper Conductors

*This part of IEC 60947 specifies requirements for protective conductor terminal blocks with PE function up to 120 mm2 (250 kcmil) and for protective conductor terminal blocks with PEN function equal to and above 10 mm2 (AWG 8) with screw-type or screwless-type clamping units, primarily intended for industrial applications.*

UL 60947-7-2-2004, Standard for Protective Conductor Terminal Blocks for Copper Conductors

*This part of IEC 60947 specifies requirements for protective conductor terminal blocks with PE function up to 120 mm2 (250 kcmil) and for protective conductor terminal blocks with PEN function equal to and above 10 mm2 (AWG 8) with screw-type or screwless-type clamping units, primarily intended for industrial applications.*

UL 60947-7-3-2005, Standard for Fuse Terminal Blocks

*Request for Comments on the Proposed Requirements for the Proposed First Edition of the Standard for Fuse Terminal Blocks, UL 60947-7-3.*

UL 60950-1-2006, Information Technology Equipment - Safety - Part 1: General Requirements

*Proposal to update requirements in UL 60950-1 for document (paper) shredders used in the home/home office including: (a) new definitions of Household/Home Office and Commercial/ Industrial Document Shredders, (b) new set of markings, (c) required on/off switch, (d) new implementation of the UL Articulated Accessibility Probe for assessing access to safety interlocks and potentially hazardous moving parts, and (e) a new method of evaluating access through openings with spreading force applied via a new accessibility probe/wedge.*

UL 60950-21-2003, Information Technology Equipment - Safety - Part 21: Remote Power Feeding

*This part of IEC 60950 applies to information technology equipment intended to supply and receive operating power via a telecommunicaiton network, where the voltage exceeds the limits for TNV circuits.*

UL 60974-1-2004, Standard for Arc Welding Equipment, Part 1: Welding Power Sources

*The following items are subject to comment:*
*1.) Revision to the requirements for engine powered rotating welding power sources.*
*2.) Revision to add the word "terminal" to the national difference for wire connectors.*

UL 61010-1-2005, Standard for Safety for Electrical Equipment for Measurement, Control, and Laboratory Use; Part 1: General Requirements

*Addition of a New "US Only" Annex for the Adoption of IEC 61010 Part 2 Standards for Particular Requirements.*

UL 61058-1-2005, Standard for Safety for Switches for Appliances

*Minor revisions to the third edition of UL 61058-1 based on comments received during the January, 2005 comment stage.*

UL 61496-1-2001, Electro-Sensitive Protective Equipment, Part 1: General Requirements and Tests

*Specifies general requirements for the design, construction and testing of electro-sensitive protective equipment (ESPE) for the safeguarding of machinery. Special attention is directed to functional and design requirements that ensue an appropriate safety-related performance is achieved. An ESPE may include optional safety-related functions, the requirements for which are given in annex A. This standard was listed for public review in the 11/3/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

UL 61496-2-2001, Standard for Safety for Electro-Sensitive Protective Equipment, Part 2: Particular Requirements for Equipment Using Active Opto-electronic Protective Devices

*Specifies requirements for the design, construction and testing of electro-sensitive protective equipment (ESPE) for the safeguarding of machinery, employing active opto-electronic protective devices (AOPDs) for the sensing function. Special attention is directed to feature that ensure an appropriate safety-related performance is achieved. An ESPE may include optional safety-related functions, the requirements for which are given in annex A of part 1. This standard was listed for public review in the 11/6/1998 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

UL 618-2003, Standard for Safety for Concrete Masonry Units

*Covers concrete masonry units classified for use in fire resistive walls in accordance with the conditions of acceptance of the Standard for Fire Tests of Building Construction and Materials, UL 263.*

UL 61965-2004, Mechanical Safety of Cathode Ray Tubes

*Applicable to cathode ray tubes and cathode ray tube assemblies (CRTs) which are intended for use as components in apparatus and which have integral protection with respect to the effects of implosion. These requirements apply to CRTs intended for use in apparatus including electrical and electronic measuring and testing equipment, ITE, medical equipment, telephone equipment, television equipment and other similar electronic apparatus.*

UL 62-2006, Flexible Cord and Fixture Wire

*This bulletin proposes a further revision to the Proposed Trinational UL 62 as a result of comments received on the Subject 62 bulletin dated November 11, 2005.*

UL 621-2005, Standard for Safety for Ice Cream Makers

*These requirements cover unitary ice cream makers designed for connection to alternating current circuits rated not more than 600 volts. For the purposes of this standard, ice cream makers include equipment for preparing products such as hard ice cream, soft serve ice cream, milk shakes, and sherbets and may include means for dispensing the product directly into containers.*

UL 626 CAN/ULC-S507-2007, Standard for Safety for Water Fire Extinguishers 5

*This 8/11/05 proposal bulletin includes revisions to: the discharge range test requirements; and the temperature and humidity requirements for the nameplate exposure and adhesion tests.*

UL 639-1997, Standard for Safety for Intrusion-Detection Units

*Covers intrusion-detection units intended to be used in burglary-protection signaling systems. These units are intended to be used in indoor or outdoor locations to automatically indicate the presence of an intruder by actuating electrical control circuits.*

UL 641-2005, Standard for Safety for Type L Low-Temperature Venting Systems

*This revision is to the UL 641 proposal dated February 11, 2005 and that was shown in the February 4, 2005 issue of ANSI's Standards Action.*

UL 651-2005, Standard for Safety for Schedule 40 and 80 Rigid PVC Conduit

*New 7th Edition of UL 651 covering Schedule 40 and 80 extruded rigid PVC electrical conduit and fittings. New edition includes (a) revised formatting, (b) updated references, (c) addition of metric designators, (d) updated Resistance to Impact and Resistance to Specific Reagents tests, and (e) other editorial revisions.*

### UL 651A-2003, Type EB and A Rigid PVC Conduit and HDPE Conduit

*The requirements cover Type EB and Type A extruded rigid PVC (polyvinyl chloride) electrical conduit and fittings consisting of elbows and other bends made from and for use with these types of conduit; Extruded rigid Schedule 40 high-density PE (polyethylene) electrical conduit and thefollowing fittings: Elbows and other bends from and for use with this conduit and Rigid high-density PE couplings for use with this conduit.*

### UL 651B-2002, Continuous Length HDPE Conduit

*Covers coilable, smooth-wall, continuous length conduit with a circular cross section. The conduit is Schedule-40, Schedule-80, EPEC-A, or EPEC-B High Density Polyethylene (HDPE) in trade sizes 1/2 (16) - 6 (155). This product is intended for installation in accordance with the National Electrical Code, NFPA 70. The values in parentheses are metric trade designators of conduit. The designations Schedule-40, Schedule-80, EPEC-A, and EPEC-B refer to conduit having specific outside diameters and wall thicknesses.*
*This product is for aboveground use where encased in not less than 2 inches (51 mm) of concrete and for underground use by direct burial or encasement in concrete.*

### UL 66-2005, Fixture Wire

*This bulletin proposes revisions of UL 66 to make several corrections and to add Types PAFF and PAF.*

### UL 668-2004, Hose Valves for Fire Protection Service

*Covers angle-pattern and straightway-pattern hose valves intended for use on standpipes, fire pumps, and hydrants supplying water for fire protection service. Requirements for the installation of hose valves include the Standards of the National Fire Protection Association for the Installation of Sprinkler Systems, NFPA 13; for Standpipe and Hose Systems, NFPA 14; for Installation of Centrifugal Fire Pumps, NFPA 20; and for Installation of Private Fire Service Mains, NFPA 24.*

### UL 67-2006, Standard for Safety for Panelboards

*Recirculation of Comments received and substantive changes resulting from comments regarding the proposed revisions to the Eleventh Edition of the Standard for Panelboards, UL 67.*

### UL 674-2003, Electric Motors and Generators for Use in Hazardous Locations, Class I Groups C and D, Class II Groups E, F and G

*Covers the following equipment for installation & use in hazardous (classified) locations:Electric motors & generators, submersible & nonsubmersible sewage pumps & systems, Class 1, Div. 1, Groups B, C, D & Class II, Div. 1 Groups E, F, & G.Explosion-proof equipment for use in Class 1, Zone 1, Groups IIA, IIB, & IIB plus hydrogen, horizontal & vertical machines with fractional & integral horsepower ratings for use on alternating current or direct current.*

### UL 680-2004, Emergency Vault Ventilators and Vault-Ventilating Ports

*These requirements cover emergency vault ventilators (EMVs) and vault-ventilating ports for installation in a wall. EMVs are intended to provide fresh air to persons locked in the vault by accident or during a robbery. Vault-ventilating ports are intended for connection to an outside ventilating system that provides circulating air while the vault is open. These requirements are intended to evaluate the integrity of electrical wiring and components and to establish burglary resistant ratings.*

### UL 687-2005, Burglary-Resistant Safes

*Revisions to 5.1.4, 6.1.4 and 9.1.4, change to intermediate material thickness.*

### UL 69-2005, Electric-Fence Controllers

*Update of the reference to the Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process, ASTM A525.*

### UL 696-2006, Standard for Safety for Electric Toys (Proposal dated April 7, 2006)

*The following items are subject to comment:*
*1. Clarification of Products Covered by UL 696*
*2. Addition of Requirements to Address Toys Employing Battery-Operated Features*
*3. Clarification of Referenced Standard Titles*
*4. Revision to Requirements for Flexible Plastic Film Bags and Flexible Film Sheets Used as Packaging Materials to Reference Applicable Standard*
*5. Revision of the Requirements for the Enclosures of Toys Subjected to the Abuse Test (Enclosure - Drop) for Toys Over 10 Pounds*
*6. Clarification of Temperature Test Requirements with Respect to Ambient Temperature*
*7. Clarification of Specifications for Markings with Respect to Area of Surface.*

### UL 697-2004, Toy Transformers

*This comment resolution bulletin proposes changes to the March 15, 2004 bulletin for UL 697. The comments, responses, and proposed revisions are provided.*

### UL 6A-2003a, Electrical Rigid Metal Conduit - Aluminum, Bronze and Stainless Steel

*The requirements cover aluminum and stainless steel electrical rigid metal conduit (RMC), nipples, elbows, and couplings in trade sizes 3/8 – 6 (12 – 155), for use as a metal raceway for the installation of wires and cables in accordance with the National Electrical Code. Steel conduit provided with an exterior coating of zinc or a zinc-based, nonmetallic, or other alternate corrosion-resistant material and an interior coating of an organic or zinc material, is covered by the Standard for Electrical Rigid Metal Conduit – Steel, UL 6.*

### UL 705-2006, Power Ventilators

*The following items are subject to comment:*
*1.) Revised requirements for nonmetallic parts, including enclosures, parts other than enclosures, flame spread and smoke developed, and accessibility of moving parts.*
*2.) Clarification of ventilator current rating requirements relative to full load amperes and service factor full load amperes.*

UL 710B-2004, Standard for Safety for Recirculating Systems

*Changes are being proposed to address comments received on the Proposed First Edition bulletin for the Standard for Safety for Recirculating Systems dated January 23, 2004.*

UL 711 CAN/ULC-S508-2004, Fire Extinguishers, Rating and Fire Testing of

*Includes proposed revisions to the heptane specifications.*

UL 719-2007, Standard for Safety for Nonmetallic-Sheathed Cables

*Revision to UL 719 to Reference the Correct Physical Properties Requirements in UL 1581 for PVC Jacket Material for Type NM Cable.*

UL 72-2005, Standard for Safety for Tests for Fire Resistance of Record Protection Equipment

*Revisions to the Explosion Test.*

UL 723-2005, Standard for Safety for the Test for Surface Burning Characteristics of Building Materials

*The following items are subject to comment: (Proposals dated 04/01/05)*
*1.) Clarification of rounding procedure for smoke values 200 or over.*
*2.) Updating of Appendix A, Guide to Mounting Methods.*

UL 729-2003, Oil-Fired Floor Furnaces

*These requirements apply to oil-fired floor furnaces.Requirements for the installation and use of oil-burning equipment are included in the Standard for the Installation of Oil-Burning Equipment, ANSI/NFPA 31. Requirements for the installation of oil-burning equipment are also included in codes such as the BOCA Basic National Mechanical Code, the Standard Mechanical Code, and the Uniform Mechanical Code.*

UL 73-2004, Motor-Operated Appliances

*The following items are subject to comment:*
*1.) Revision of 12.1.2.10 to clarify the rating requirement of an attachment plug.*
*2.) Revision of marking requirement in 56.1.6 to add international symbols for ON and OFF.*
*3.) Revision of requirements for outdoor-use appliances to correctly identify the cord type designation in 12.1.2.13, and to clarify compliance criteria for the marking in 56.8.2.*
*4.) Removal of references to cord types not allowed.*
*5.) Revision of 33.3 to clarify the requirement for a motor control switch.*

UL 730-2003, Oil-Fired Wall Furnaces

*These requirements apply to oil-fired, vented, fan-type wall furnaces. Requirements for the installation and use of oil-burning equipment are included in the Standard for the Installation of Oil-Burning Equipment, NFPA 31.*

UL 731-2004, Oil-Fired Unit Heaters

*These requirements apply to oil-fired unit heaters as defined herein.*

UL 732-1997 (R2005), Oil-Fired Storage Tank Water Heaters

*The following is being proposed: 1. Continuance of the Standard for Oil-Fired Storage Tank Water Heaters, UL 732, as an American National Standard.*

UL 745-1-2004, Standard for Safety for Portable Electric Tools - Part 1: General Requirements

*Comment resolution and proposed modification for proposed instruction manual requirement dated May 7 ,2004.*

UL 745-2-3-2006, Standard For Safety For Particular Requirements for Grinders, Polishers and Disk-Type Sanders

*First Edition of the Standard for Particular Requirements for Grinders, Polishers and Disk-Type Sanders, UL 745-2-3, as an American National Standard.*

UL 745-2-30-2006, Standard For Safety For Particular Requirements for Staplers

*This standard applies to hand-held portable electric motor-operated or magnetically-driven tools, intended for indoor or outdoor use, in non-hazardous locations, in accordance with the Canadian Electric Code, Part 1 and the National Electrical Code (NFPA70). It applies to tools rated not more than 440V (not more than 250V for tools employing a universal motor). Replacement: This standard applies to hand-held magnetically operated staplers.*

UL 745-2-31-2006, Standard for Safety for Particular Requirements for Diamond Core Drills

*This standard applies to hand-held portable electric motor-operated or magnetically-driven tools, intended for indoor or outdoor use, in non-hazardous locations, in accordance with the Canadian Electric Code, Part 1 and the National Electrical Code (NFPA70). It applies to tools rated not more than 440V (not more than 250V for tools employing a universal motor). Replacement: This standard applies to diamond cord drills.*

UL 745-2-32-2006, Standard for Safety for Particular Requirements for Magnetic Drill Presses

*This standard applies to hand-held portable electric motor-operated or magnetically-driven tools, intended for indoor or outdoor use, in non-hazardous locations, in accordance with the Canadian Electric Code, Part 1 and the National Electrical Code (NFPA70). It applies to tools rated not more than 440V (not more than 250V for tools employing a universal motor). Replacement: This standard applies to magnetic drill presses.*

UL 745-2-36-2006, Standard for Safety for Particular Requirements for Hand Motor Tools

*This standard applies to hand-held portable electric motor-operated or magnetically-driven tools, intended for indoor or outdoor use, in non-hazardous locations, in accordance with the Canadian Electric Code, Part 1 and the National Electrical Code (NFPA70). It applies to tools rated not more than 440V (not more than 250V for tools employing a universal motor). Replacement: This standard applies to hand motor tools.*

UL 745-4-36-2006, Standard for Safety for Particular Requirements for Battery Operated Hand Motor Tools

*This standard applies to hand-held portable electric motor-operated or magnetically-driven tools, intended for indoor or outdoor use, in non-hazardous locations, in accordance with the Canadian Electric Code, Part 1 and the National Electrical Code (NFPA70). It applies to tools rated not more than 440V (not more than 250V for tools employing a universal motor). Replacement: The term "tools" is replaced by "hand motor tools."*

UL 746A-2006, Standard for Safety for Polymeric Materials - Short Term Property Evaluations

*UL is issuing a Recirculation Proposal to address comments received on the previous UL 746A Proposal dated October 14, 2005. The following Topics are subject to comment: Polymer Variations - Revision of Table 8.1; Revising Section 23 to Denote Differences between ASTM 3638 and IEC 60112; Added Exceptions for Ambient Temperature Limits for Some 746A Tests; Elimination of Dated References to Codes; and Correction of Ball-Pressure Test Description to Match IEC Standard.*

UL 746B-2006, Standard for Safety for Polymeric Materials - Long Term Property Evaluations

*The following (Proposal dated October 14, 2005) are subject to comment: Editorial Correction for UL 746B*

UL 746C-2006, Polymeric Materials – Use in Electrical Equipment Evaluations

*The following (Proposal dated October 14, 2005) are subject to comment:*
*(1) Removal of Conformal Coating Test Descriptions in Sections 43 and 70*

*(2) Changes in UL 746C to Align with IEC Standards*
*(3) Clarification of 127 mm (5-inch) Flame Test*
*(4) Clarification of Sequence of Abnormal Overload Tests*
*(5) Alignment of Mechanical Property Requirements in UL 746B and UL 746C*
*(6) Add Reference to UL 746A in Dielectric Strength Test in UL 746C*
*(7) Clarification of Glow-Wire End-Product Test*
*(8) Substitute "Thermal Endurance" for Maximum-Use Temperature in Table 6.1*

UL 746D-2003, Polymeric Materials – Fabricated Parts

*Editorial Revisions*

UL 746E-2006, Standard for Safety for Polymeric Materials - Industrial Laminates, Filament Wound Tubing, Vulcanized Fibre, and Materials Used in Printed Wiring Boards

*Propose new and revised requirements for Standard UL 746E described in the proposals for Subject 746E dated October 14, 2005.*

UL 746F-2006, Standard for Safety for Polymeric Materials - Flexible Dielectric Film Materials For Use in Printed Wiring Boards and Flexible Material Interconnect Constructions

*The requirements in UL 746F cover short term and long term test procedures to be used for the evaluation of flexible material, film, base material, conductor adhesive material, bonding film, cover lay, and other thin film materials used for parts intended for specific applications in end products.*

UL 749-2002, Household Dishwashers

*This Standard applies to electric household dishwashers intended to be used in nonhazardous locations in accordance with the Canadian Electrical Code, Part I (CEC), and the (US) National Electrical Code (NEC), on circuits having a nominal voltage not exceeding 250 V.*

*This Standard applies to both cord-connected and permanently connected appliances.*

*This Standard does not apply to commercial appliances. Commercial appliances are covered under the scope of CSA C22.2 No. 168, Commercial Dishwashing Machines, or UL 921, Commercial Electric Dishwashers.*

UL 751-2005, Standard for Safety for Vending Machines

*Addition of Ground Fault Circuit Interrupter (GFCI) Requirements for Cord-Connected Vending Machines.*

UL 752-2006, Bullet-Resisting Equipment (Proposals dated 10/20/06)

*This proposal to UL 752 modifies the proposed revisions to Table 3.1, 4.11, and 4.12 (Addition of Bullet-Resisting Requirements to Resist .50 Caliber and 7.62 mm Armor Piercing Rounds) as announced in the 11/11/05 issue of ANSI's Standards Action.*

UL 758-2007, Standard for Appliance Wiring Material (proposals dated 3/3/06)

*Revise UL 758 by (1) adding Types mPPE and mPPE-PE materials to Table 7.1 and (2) adding reference to newly approved mPPE insulation material for AWM to Table 19.1.*

UL 763-2004, Standard for Safety for Motor-Operated Commercial Food Preparing Machines

*Changes are being proposed to address comments received on the 10/3/2002 bulletin. The changes are in reference to the defining of guards and grounded conductors.*

UL 768-2006, Standard for Safety for Combination Locks

*These requirements cover combination locks intended for attachment on doors of safes, chests, vaults, and the like, to provide a means of locking the boltwork against unauthorized opening. These requirements are intended to test the ability of combination locks to resist unauthorized opening of the combination locks by sense of sight, touch, or hearing. Combination locks covered by these requirements may or may not have integral protection against entry by force.*

UL 771-2006, Night Depositories (Proposals dated 12/9/05)

*These requirements cover the construction and security of night depository entrances. The units are intended to permit the deposit of cash, checks, and similar items, from outside a building into a chute connected to a depository within the building. A night depository is intended primarily for protection against theft of deposits by: a) Fishing the deposits from the depository; b) Trapping the deposits by preventing them from entering the depository, and then extracting the deposits; and c) Entering the night depository by force with the aid of common burglary tools.*

UL 773A-2006, Standard for Safety for Nonindustrial Photoelectric Switches for Lighting Control

*The following items are subject to comments:*
*1.) Updating references to 8.1.1 and the deletion of 8.1.2.*
*2.) Clarification of the requirements in 8.3.1 and replacement of the rating "Junior Hard" with "Hard usage" or "Extra hard usage.*
*3.) Clarification of the proposal to prohibit current flow in the equipment-grounding circuit.*

UL 778-2006, Motor Operated Water Pumps

*Propose the addition of requirements for Class F and Class H Motor Insulation Systems in UL 778.*

UL 781-2003, Portable Electric Lighting Units for Use in Hazardous (Classified) Locations

*Covers portable electric light units for indoor use in hazardous (classified) locations, Class I, Division 1, Groups C and D, and Class II, Division 1, Groups F and G, in accordance with the National Electrical Code, NFPA 70. These requirements also cover explosion-proof electrical equipment for use in Class I, Zone 1, Groups IIA, IIB, and IIC hazardous (classified) locations.*

UL 783-2003, Electric Flashlights and Lanterns for Use in Hazardous (Classified) Locations

*These requirements cover battery-operated flashlights and lanterns for use in hazardous locations, Class I, Division 1, Groups A, B, C and D; Class I, Division 2, Groups A, B, C, and D; Class II, Division 1, Groups F and G; and Class II, Division 2, Groups F and G in accordance with the National Electrical Code, NFPA 70. These requirements apply to complete products with self-contained batteries, and include products consisting of a battery pack assembly and light assembly with interconnecting flexible cord.*

UL 786-2006, Key-Locked Safes (Class KL)

*This proposal to UL 786 modifies the proposed revision to 1.3 as announced in the 12/9/05 issue of ANSI's “Standards Action.*

UL 789-2003, Indicator Posts for Fire-Protective Services

*Proposed New Edition for UL 789*

UL 79-2005, Standard for Safety for Power-Operated Pumps for Petroleum Dispensing Systems (Proposal dated 4/8/05

*This proposal covers a revision to the scope of the standard for clarification.*

UL 790-2004, Standard for Safety for Tests for Fire Resistance of Roof Covering Materials

*Proposed revisions based on comments received during the canvass of the Seventh Edition of the Standard for Safety for Tests for Fire Resistance of Roof Covering Materials, UL 790, including various editorial clarifications and corrections.*

UL 793-2004, Standard for Safety for Automatically Operated Roof Vents for Smoke and Heat

*Covers automatically operated roof vents for smoke and heat that fall into two general categories: mechanically-opened and gravity-opened. Mechanically-opened vents consist primarily of a body frame, one or more damper covers and hatches, and operating mechanisms which generally include a heat responsive device and spring(s). Gravity-opened vents consist primarily of a body frame and nonmetallic drop-out panel. The vents covered by these requirements are operated manually or automatically in the event of fire to remove smoke and heat from the building.*

UL 796-2006, Standard for Safety for Printed-Wiring Boards

*Propose new and revised requirements for Standard UL 796 described in the proposals for Subject 796 dated October 14, 2005.*

UL 796F-2006, Standard for Safety for Flexible Materials Interconnect Constructions (Proposals dated 6/16/06)

*The following changes are proposed for UL 796F: 1. Clarify the Definition of Immersion Silver; 2. Clarify the Requirement in Paragraph 5.1.2.6.3 for Representative Singlelayer Interconnect Construction Samples; 3. Clarify the Procedure for the Silver Migration Test Method; and 4. Clarify the Requirements for Flexible Materials Interconnect Construction Markings.*

UL 797-2004, Electrical Metallic Tubing

*These requirements cover steel electrical metallic tubing (EMT) and elbows in trade sizes 3/8 – 4 (12 – 103), for use as a metal raceway for the installation of wires and cables in accordance with the National Electrical Code. The values in parentheses are metric designators of tubing.*

UL 797A-2002, Electrical Metallic Tubing - Aluminum

*Corrections that were inadvertently omitted from the Subject 6 bulletin dated 7/29/02 covering the standards UL 6, 6A, 360, 797, 797A and 1242, which initiated the canvass of the UL 797A standard dated 7/19/00.*

UL 8 CAN/ULC-S554-2007, Standard for Safety for Water Based Agent Fire Extinguishers

*The 8/11/06 proposal bulletin includes revisions to: operating temperature requirements; operation test requirements; discharge range test requirements; and temperature and humidity requirements for the nameplate exposure and adhesion tests.*

UL 80-2003, Standard for Safety for Steel Tanks for Oil-Burner Fuel

*1. Modification to Added Vent Marking Requirement for Secondary Containment Tanks*
*2. Modification to Revised Label Requirements*
*3. Modification to Miscellaneous Editorial Revisions*

UL 810-1998, Standard for Safety for Capacitors

*Applies to enclosed capacitors with integral protection intended to reduce the risk of rupture and venting of the capacitor enclosure under internal fault conditions. These requirements apply to oil-filled capacitors rated 5 kilovolts or less, and dry-type capacitors rated 2 kilovolts or less, that are intended for use with ppliances, lighting equipment, air conditioning and refrigeration equipment, motors, and the like, and that comply with the requirements for such appliances and equipment. The requirements in Part II of this standard apply to general-use power-factor-correction units rated 600 volts maximum, intended for power-factor correction of circuits in accordance with the American National Standard National Electrical Code, ANSI/NFPA 70.*

UL 814-2006, Gas-Tube-Sign Cable (Proposals dated 11/4/05)

*Add requirements to 23.1, 1.2 and new Section 13A for assemblies that include integrally sleeved GTO Cable; Add minimal tensile strength for GTO Cable employing integral sleeve to 61. and 7.1; Relocate Spark Test, Section 14 to new Section 22A; Editorial correction for test reference in 20.4.1.*

UL 817-2005, Standard for Safety for Cord Sets and Power-Supply Cords (Bulletin dated 3/14/2005)

*Substantive changes to the following proposals of the UL 817 bulletin dated July 20, 2004: 1. Revision to Requirements to Reference ANSI/NEMA WD 6 Instead of UL 1681 2. Clarification of Outdoor-Use Cord Set and Noninterchangeability Requirements 8. Clarification of Requirements for Special-Use Power-Supply Cords 9. Clarification of Requirements for Switches Used in Cord Sets.*

UL 82-2002, Electric Gardening Appliances

*Covers cord-connected, electrically-operated gardening appliances, such as cultivators, edger-trimmers, and the like, rated 250 volts or less for use in accordance with the National Electrical Code, NFPA 70.*

UL 823-2006, Standard for Safety for Electric Heaters for Use in Hazardous (Classified) Locations

*These req cover: - explosion, dust-ignition proof & dust-tight portable & fixed elect htrs for install & use in haz (class) Loc, Cl I, Divs 1 & 2, Grps A, B, C, & D; Cl II, Div 1, Grps E, F, & G; Cl II, Div 2, Gps F & G; & Cl III, Divs 1 & 2, in accord w/ NEC, NFPA 70. - explosion-proof elect equip for install & use in Cl I, Zn 1, Grps IIA, IIB & IIC haz (class) loc & equip invest for use in one or more spec gas or vapor atmos w/ or w/o add'l Cl I Grps. - elect air htrs, elect hot-water or steam radiators, & elect hot plates rated 600 v or less. - paint htrs, rated 600 v or less, for use at pressures not exceeding.*

UL 826-2004, Household Electric Clocks

*The requirements cover electrically operated household clocks having an input rating of not more than 30 watts and 250 volts to be used in ordinary indoor locations in accordance with the National Electrical Code, NFPA 70.*

UL 83-2003, Thermoplastic-Insulated Wires and Cables

*Specifies the requirements for 600 V, single-conductor, thermoplastic insulated wires and cables, for use as follows: (a) in Canada, in accordance with CSA Standard C22.1, Canadian Electrical Code (CEC), Part 1: b) in Mexico in accordance with NOM-001-SEDE, Standard for Electrical Installations, and in the United States, in accordance with NFPA Standard 70, National Electrical Code (NEC).*

UL 834-2004, Electrical Heating, Water Supply, and Power Boilers

*These requirements cover electric heating, water supply, and power boilers rated at 600 volts or less intended for commercial or industrial applications utilizing hot water or steam. They may also be used for commercial, industrial, or*

UL 840-2004, Standard for Safety for Insulation Coordination Including Clearances and Creepage Distances for Electrical Equipment

*This bulletin proposes the Third Edition of UL 840. This is a periodic proposed new edition to ensure that the Standard remains up to date with regard to format and editorial issues such as numbering, pagination, and cross-referencing.*

UL 842-1999, Valves for Flammable Fluids

*Covers valves that are intended to be used for the control of flammable fluids. They are of the type commonly used in piping systems and in the assembly of motor fuel dispensing and fuel burning equipment. Valves covered by this standard are for use with flammable fluids which are handled at temperatures within the range of minus 29°C (minus 20°F) to 52°C (125°F). These requirements cover valves of the manually operated, pressure operated, or temperature operated types, or combinations of such to the exclusion of types operated wholly or partially by electricity.*

UL 844-2006a, Standard for Safety for Electric Lighting Fixtures for Use in Hazardous (Classified) Locations

*These requirements cover: Luminaires for installation & use in hazardous (classified) locations, Cl I, Div 1 & 2, Gps A, B, C, & D; Cl II, Div 1, Gps E, F, & G; Cl II, Div 2, Gps F & G; & Cl III, Div 1 & 2, in accordance with the NEC, ANSI/NFPA 70. Explosion-proof luminaires for installation & use in Cl I, Zone 1, Gps IIA, IIB, IIB plus Hydrogen & IIC hazardous (classified) locations. Luminaires for use only under the following atmospheric conditions: a) A min. ambient temperature of -25°C (-13°F), b) An oxygen concentration not greater than 21% by volume, and c) A nominal barometric pressure of one atmosphe.*

UL 845-2005, Standard for Motor Control Centers (bulletin dated August 19, 2004)

*The UL 845 Comment Resolution Bulletin dated 4-7-05 provides the comments received on the UL 845 bulletin dated 8-19-04. Also included in the bulletin are the responses to the comments and revised proposals.*

UL 854-2002a, Service-Entrance Cables

*Extension to 300 kcmil of the 4/0 AWG Size Limit for Aluminum and Copper-Clad Aluminum Conductors in Type SE Cable, Jacketed Multiple-Conductor Type USE and USE-2 Cables, and Submersible-Pump Cable.*

UL 858-2005, Household Electric Ranges

*New requirements for the location of the nameplate label to be provided in the installation instructions.*

UL 859-2005, Household Electric Personal Grooming Appliances

*Proposal dated 4/1/05 Proposals for 1) revising the Normal Temperature Test requirements for hand-supported hair dryers to require testing with less than two layers of fabric when the automatically-resetting thermostat operates under test conditions and 2) updating clause references (editorial corrections.*

UL 864-2006, Control Units and Accessories for Fire Alarm Systems (proposals dated 11/25/05)

*Propoals for ANSI/UL 864 to revise (1) exception to 55.2.1 to change the retard-reset-restart period duration, (2) 49.3 to indicate that ground-fault annunciation is not required where normal operation is not affected by a single ground-fault and Figure 49.1 editorially, and (3) revise NAC compatibility requirements in Sections 61.2 and 90.*

UL 867-2004, Electrostatic Air Cleaners

*The requirements cover electrostatic air cleaners rated at 600 volts or less, intended to remove dust and other particles from the air and intended for use in accordance with the National Electrical Code, NFPA 70.*

UL 870-2003, Wireways, Auxiliary Gutters, and Associated Fittings

*These requirements cover wireways, auxiliary gutters, and associated fittings to be employed in accordance with the National Electrical Code, NFPA 70.*

UL 875-2004, Electric Dry-Bath Heaters

*The requirements cover electric dry-bath heating equipment and other equipment rated 600 volts or less that is intended to produce a dry-heat environment to be installed in accordance with the National Electrical Code, ANSI/NFPA 70. These requirements do not cover steam-bath heaters, or cable-type radiant-heating equipment, nor any other electric heating equipment or appliances that are covered in separate, individual requirements.*

UL 879-2005, Electric Sign Components

*Components for use in signs and outline lighting systems.*

UL 884-2005, Standard for Safety for Underfloor Raceways and Fittings

*These requirements cover metal underfloor duct systems designed for use as raceways for the installation of wires and cables in accordance with the National Electrical Code (NEC), NFPA 70. General compliance of underfloor raceway systems in accordance with the construction and performance requirements in this standard shall be determined by a study of an actual installation of the system or a completely representative sample installation.*

UL 887-2004, Delayed-Action Timelocks

*The requirements cover delayed-action timelocks intended for attachment on the doors of safes, chests, vaults, and the like, to provide a means for locking the door for a predetermined length of time as protection against burglary or robbery or both. The timelocks covered by these requirements may be automatic, manual, or both, in operation depending upon their design.*

UL 891-2005, Dead-Front Switchboards (Bulletin dated 11/4/02)

*Comment responses and substantive change for the proposed Eleventh Edition of the Standard for Switchboards, UL 891. This is a proposed tri-national harmonized standard.*

UL 894-1998, Switches for Use in Hazardous (Classified) Locations

Covers switches for installation and use in hazardous (classified) locations Class 1, Division 1, Groups A, B, C, and D, and Class II Division 1, Groups E, F, and G, in accordance with *American National Standard National Electrical Code,* ASNI/NFPA 70. These requirements cover snap and similiar switches rated 60 amperes or less at 250 volts or less; 30 amperes or less at 600 volts or less; and 2 horsepower or less at 600 volts or less. These requirements apply to switches for hazardous locations under the following atmospheric conditions: an ambient temperture between minus 25°C (minus 13°F) and plus 40°C (plus 104oF), an oxygen concentration of not greater than 21 percent by volume, and a nominal barometric pressure of one atmosphere.These requirements do not cover knife, enclosed, clock-operated, or magnetically-opeated switches, or industrial control equipment such as auxiliary devices and

UL 896-2004, Standard for Safety for Oil-Burning Stoves

*These requirements apply to oil-burning flue-connected room heaters and ranges as defined herein. They may be used where a competent attendant will not be constantly on duty in the room where the appliance is located, while the appliance is in operation. They are required to be equipped with automatic primary safety controls to prevent abnormal discharge of oil at the burner in case of ignition failure or flame failure. They are not intended for use in spaces in which flammable vapors or gases may be present.*

UL 9-2004, Standard for Safety for Fire Tests of Window Assemblies

*Clarification of proposal relating to heat flux measurement by indicating that radiative heat flux is being measured.*

UL 900-2004, Test Performance of Air Filter Units

*This project includes a proposed seventh edition of UL 900. The proposed new edition is a periodic update with wording, organizational, and other miscellaneous editorial revisions.*

UL 907-2006, Standard for Safety for Fireplace Accessories

*The following changes in requirements are being proposed: 1. References to outside documents. 2. Miscellaneous revisions including: Deletion of Scope paragraph addressing new or unusual constructions, Undated references, Change of reference from NFPA 97 to NFPA 211, Removal of " natural" from the term "natural gray" , Correction to the reference to MC96.1, Changes in wire size designation terminology, Change of reference from UL 486A to UL 486A-486B, and Addition of reference to UL 61058.*

UL 913-2002, Standard for Safety for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, III, Division 1, Hazardous (Classified) Locations

*UL proposes a revision to paragraphs 12.1 and 12.4 of UL 913.The paragraphs address requirements for the separation of intrinsically safe and nonintrinsically safe internal wiring. The purpose of the revision is to align the wording of paragraphs 12.1 and 12.4 with the wording of the same requirements used in UL ↄ079-11, the Standard for Electrical Apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety ²i² .*

UL 913-2006, Standard for Safety for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, III, Division 1, Hazardous (Classified) Locations

*These requirements cover: Apparatus or parts of app. for install. & use in Cl I, II or III, Div 1 haz. (classified) loc. in accordance with the NEC, NFPA 70. Associated app. outside Cl I, II or III, Div 1 loc. whose design & constr. may influence the intrinsic safety of an elect. circuit within Cl 1, II or III, Div 1 loc. And are based on consideration of ignition in loc. class. as haz. loc. by the presence of flammable or combustible mat. under the foll. atmos. cond: a) Min. ambient temperature of*
*ambient temperature of 50°C (186°F) b) oxygen concentration not greater than 21% by vol., & c) Nom. barometric pressure of 1 atmosphere.*

UL 92-1999, Fire Extinguisher and Booster Hose

*Covers fire extinguisher and booster hose with or without couplings attached, in sizes of 3/8 inch (9.5 mm) up to and including a nominal internal diameter of 1-1/2 inches (38.1 mm) for use on portable, wheeled, and stationary fire extinguishers, and also as booster hose on fire apparatus.*
*This hose is intended for use at maximum working pressure of 200, 250, 400, 600, 800, 1000, or 1250 psig (1.38, 1.72, 2.76, 4.14, 5.52, 6.90, or 8.62 MPa).*
*These requirements also cover hose for use on fire extinguishers requiring characteristics for low-temperature flexibility at minus 54°C (minus 65°F).*

UL 921-2005, Standard for Safety for Commercial Dishwashers

*Harmonizing the Terms Used to Identify Low-Voltage Circuits.*

UL 923-2005, Standard for Safety for Microwave Cooking Appliances

*The following items are subject to comments:*
*1.) Addition of a spill test for microwave ovens with openings in the top of the microwave oven enclosure.*
*2.) Addition of Metal Enclosure Impact Test for judging suitability of a microwave oven enclosure.*
*3.) Addition of requirements to evaluate the suitability of power output control circuits.*
*4.) Addition to provide requirements for microwave ovens intended to be installed above a built-in wall oven.*
*5.) Clarification of thermal heating elements.*
*6.) Editorial correction of the reference in paragraph SB7.1.*
*7.) Revision of 6.8 to specify the location of tamper-resistant screws.*
*8.) Revision of the amount of oil increase/reduction for the abnormal operation - fire isolation test.*

UL 924-2006, Emergency Lighting and Power Equipment

*Covers emergency lighting and power equipment for use in unclassified locations and intended for connection to branch circuits of 600 volts or less. Such equipment is intended to supply automatically illumination or power or both to critical areas and equipment in the event of failure of the normal supply, in accordance with the National Electrical Code, the Life Safety Code, and the International Building Code. Examples include exit signs, emergency luminaires, unit equipment, central station battery banks, and automatic load control relays. Also covers auxiliary lighting and power equipment for use in unclassified locations.*

UL 935-2001, Fluorescent Lamp Ballasts

*Covers ballasts of the resistance, reactance, and electronic (high frequency) types for use with fluorescent lamps involving a potential of 2500 volts or less in accordance with the National Electrical Code, ANSI/NFPA 70. Fluorescent-lamp ballast may be determined by investigation to be acceptable for use, in a fixture or other device, with electric-discharge lamps of other than the fluorescent type. Fluorescent self ballasted lamps and ballast adaptors are evaluated using the standard for Self-Ballasted Lamps and Lamp Adapters, UL 1993. The component ballast is evaluated to requirements in this Standard. This standard was listed for public review in the 8/25/2000 issue of Standards Action. It is being resubmitted due to substantive changes to the text. [see email for 30-day PR text]*

UL 94-2006, Tests for Flammability of Plastic Materials for Parts in Devices and Appliances (Proposal dated March 17, 2006)

*UL is issuing a Recirculation Proposal to address comments received on the previous UL 94 Proposal dated October 14, 2005. These proposals affect paragraphs 1.2.1, 2.2.1, 5.1, 6.3, 11.1.1, and 11.1.1.1.*

UL 943-2005a, Standard for Safety for Ground-Fault Circuit-Interrupters

*Revised Proposed Trinational Standard (Fourth Edition) for Ground-Fault Circuit-Interrupters, UL 943, with Addition of Requirements for the GFCI Receptacle End of Life Test, Addition of Requirements for the Reverse Line-Load Miswire Test, and other miscellaneous revisions.*

UL 959-2006, Medium Heat Appliance Factory-Built Chimneys

*This proposal to UL 959 modifies proposals announced in the February 24, 2006 issue of ANSI's Standards Action.*

UL 96-2005 (Changes Balloted on November 23, 2004), Lightning Protection Components

*These requirements cover lightning protection components for use in the installation of complete systems of lightning protection on buildings and structures. This particular project covers substantive changes to proposed revisions which achieved consensus in a ballot due November 23, 2004.*

UL 96-2005, Lightning Protection Components

*These requirements cover lightning protection components for use in the installation of complete systems of lightning protection on buildings and structures.*

UL 969-2001 (R2006), Marking and Labeling Systems

*These requirements cover adhesive attached labels for use as nameplates or markers; bearing information, instructions, or identification. An adhesive for a label may be pressure sensitive, heat activated, or solvent activated. These labels are intended to be used by manufacturers for application to their products at their place of manufacture. These requirements also cover unprinted materials, such as face stocks, label stocks, overlaminations, laminating adhesives, and inks used by label printers to produce labels.*

UL 972-2006, Burglary Resistant Glazing Material (Proposals dated 12/2/05)

*These requirements cover clear, translucent, or opaque glazing material intended for indoor and outdoor use principally as a substitute for plate glass show windows or show case panels. The material is intended to resist burglarious attacks of the "hit and run" type. These requirements do not cover the glazing (mounting) methods used for the installation of burglary resisting glazing material.*

UL 977-2003, Fused Power-Circuit Devices

*These requirements cover fused power-circuit devices to be employed in accordance with the National Electrical Code (NEC). These requirements do not apply to low-voltage AC power circuit protectors as covered by the Standard for Low Voltage AC Power Circuit Protectors Used in Enclosures, ANSI/IEEE C37.29, or to low-voltage AC integrally fused power circuit breakers as covered by the Standard for Low-Voltage AC Power Circuit Breakers Used in Enclosures, ANSI/IEEE C37.13.*

UL 98-2006, Standard for Enclosed and Dead-Front Switches

*Proposed Revisions to the Thirteenth Edition of the Trinational Standard for Enclosed and Dead-Front Switches, UL 98.*

UL 982-2004, Motor-Operated Household Food Preparing Machines

*(Bulletin dated July 14, 2004) These requirements cover household motor-operated food preparing machines and kitchen accessories such as knife sharpeners and can openers, that are intended to be operated for short-periods of time resulting in cumulative use-time per year of less than 100 hours and that are for use in accordance with the National Electrical Code. These requirements cover cord-connected and permanently wired motor-operated appliances rated at a nominal 120 or 240 V including appliances supplied by low-voltage power supplies, and battery-operated appliances provided with battery chargers. These requirements cover appliances for household use.*

UL 985-2003, Household Fire Warning System Units

*The requirements cover household fire warning system control units intended to be installed in accordance with the National Fire Alarm Code, ANSI/NFPA 72, and the National Electrical Code, ANSI/NFPA 70.*

UL 987-2006, Standard for Safety for Stationary and Fixed Electric Tools

*The following items are subject to comment:*
*1) Addition Of Requirements For Spacings Between Traces On Printed Wiring Boards.*
*2) Clarification Of Compliance Criteria For The Switches And Controls Test.*
*3) Clarification Related To Determination Of Winding Temperature For The Temperature Test.*
*4) Addition Of Symbol For Double Insulation As An Alternative To The Wording "Double Insulation" In Marking Requirements.*

UL 998-2006, Standard for Safety for Humidifiers

*The requirements cover humidifers rated 600 V or less, and intended to be used in accordance with the National Electrical Code, NFPA 70, and the Rules of the Canadian Electrical Code (CEC), Part 1, C22.1.*

## USDA (U.S. Dept of Agriculture/ARS)

ANSI K62.10-1957 (R1997), silvex (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.100-1971 (R1997), triarimol (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.101-1971 (R1997), chlorothalonil (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.103-1971 (R1997), chlorpyrifos (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.104-1971 (R1997), methazole (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.105-1971 (R1997), leptophos (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.106-1971 (R1997), tetramethrin (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.108-1971 (R1997), acetochlor (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.109-1971 (R1997), ancymidol (plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.11-1957 (R1997), ovex (miticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.110-1972 (R1997), crufomate (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.111-1971 (R1997), fospirate (anthelmintic and insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.112-1971 (R1997), disugran (growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.114-1972 (R1997), chlordimeform (acaricide, ovicide, and insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.117-1972 (R1997), glyphosine (plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.118-1972 (R1997), mexacarbate (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.119-1972 (R1997), dinoseb (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.12-1958 (R1997), ethion (acaracide and insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.120-1972 (R1997), acephate (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.121-1975 (R1997), bufencarb (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.124-1972 (R1997), glyphosate (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.125-1973 (R1997), norflurazon (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.126-1972 (R1997), oxamyl (insecticide and nematicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.127-1972 (R1997), picloram (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.128-1972 (R1997), nitrapyrin (bactericide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.129-1972 (R1997), bentazon (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.13-1958 (R1997), diphacinone (rodenticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.130-1973 (R1997), chlorpyrifos-methyl (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.131-1973 (R1997), propargite (acaricide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.132-1973 (R1997), methoprene (insect growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.133-1973 (R1997), ethoprop (nematicide and soil insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.134-1973 (R1997), methidathion (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.135-1973 (R1997), dipropetryn (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.136-1973 (R1997), hydroprene (insect growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.137-1973 (R1997), kinoprene (insect growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.138-1973 (R1997), bifenox (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.139-1973 (R1997), desmedipham (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.140-1973 (R1997), fluchloralin (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.141-1973 (R1997), triprene (insect growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.142-1973 (R1997), ametryn (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.143-1973 (R1997), prometryn (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.144-1973 (R1997), prometon (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.145-1973 (R1997), propazine (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.146-1973 (R1997), captafol (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.147-1973 (R1997), dioxacarb (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.148-1973 (R1997), terbutryn (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.149-1973 (R1997), terbuthylazine (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.15-1958 (R1997), phosphamidon (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.150-1973 (R1997), chloropropylate (acaricide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.151-1973 (R1997), bromopropylate (acaricide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.152-1973 (R1997), profluralin (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.153-1974 (R1997), oxadiazon (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.154-1974 (R1997), butralin (herbicide and plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.155-1974 (R1997), malonoben (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.156-1974 (R1997), benzipram (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.157-1974 (R1997), cyprazole (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.158-1974 (R1997), tebuthiuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.159-1974 (R1997), butam (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.16-1958 (R1997), dimethoate (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.160-1974 (R1997), cyperquat (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.161-1974 (R1997), thiophanate methyl (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.162-1974 (R1997), pyroxychlor (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.163-1974 (R1997), ditalimfos (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.164-1974 (R1997), thiofanox (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.165-1974 (R1997), fluoridamid (plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.166-1974 (R1997), perfluidone (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.167-1974 (R1997), cisanilide (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.168-1974 (R1997), procyazine (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.169-1974 (R1997), triforine (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.170-1974 (R1997), daminozide (growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.171-1975 (R1997), triclopyr (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.172-1974 (R1997), difenzoquat (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.173-1974 (R1997), dichlofenthion (nematicide and insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.174-1974 (R1997), terbufos (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.175-1977 (R1997), pendimethalin (herbicide and plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.176-1974 (R1997), ethalfluralin (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.177-1974 (R1997), tricyclazole (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.178-1975 (R1997), prosulfalin (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.179-1974 (R1997), isopyrimol (plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.18-1958 (R1997), ronnel (pesticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.180-1975 (R1997), temephos (insecticide and ectoparasiticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.181-1975 (R1997), secbumeton (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.182-1976 (R1997), mefluidide (plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.183-1976 (R1997), terbuchlor (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.184-1975 (R1997), cyhexatin (arachnicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.185-1976 (R1997), fenarimol (fungitoxic chemical)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.186-1977 (R1997), diamidafos (nematicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.187-1977 (R1997), thiobencarb (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.188-1976 (R1997), tetrafluron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.189-1976 (R1997), dinitramine (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.19-1959 (R1997), zoalene (anti-coccide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.190-1977 (R1997), prodiamine (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.191-1976 (R1997), buthidazole (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.192-1976 (R1997), nuarimol (fungitoxic chemical)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.193-1976 (R1997), fluridone (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.194-1977 (R1997), furophanate (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.195-1977 (R1997), triazbutil (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.196-1977 (R1997), nitrofluorfen (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.197-1977 (R1997), oxyfluorfen (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.198-1976 (R1997), metolachlor (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.199-1977 (R1997), etrimfos (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.2-1957 (R1997), monuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.200-1977 (R1997), thidiazuron (defoliant and plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.201-1977 (R1997), diflubenzuron (insect growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.202-1977 (R1997), methamidophos (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.203-1977 (R1997), amitraz (acaricide and insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.204-1977 (R1997), nitrilacarb (miticide and insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.205-1974 (R1997), diclofop (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.206-1978 (R1997), fosamine (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.207-1977 (R1997), trifenofos (insecticide and miticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.209-1978 (R1997), aldoxycarb (nematicide and insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.21-1959 (R1997), dodine (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.210-1977 (R1997), pirimicarb (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.211-1977 (R1997), pirimiphos-ethyl (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.213-1977 (R1997), bupirimate (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.215-1978 (R1997), acifluorfen (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.216-1977 (R1997), pirimiphos-methyl (insecticide and acaricide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.217-1977 (R1997), permethrin (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.218-1978 (R1997), diethatyl (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.219-1978 (R1997), chlorthiophos (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.22-1959 (R1997), phorate (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.220-1979 (R1997), thiodicarb (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.221-1978 (R1997), hexazinone (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.222-1979 (R1997), octhilinone (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.223-1978 (R1997), ethofumesate (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.224-1978 (R1997), profenofos (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.225-1978 (R1997), pyrinuron (rodenticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.226-1979 (R1997), fosthietan (nematicide and insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.227-1979 (R1997), fenapanil (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.228-1979 (R1997), methfuroxam (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.23-1960 (R1997), barban (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.231-1978 (R1997), bendiocarb (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.232-1978 (R1997), resmethrin (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.233-1978 (R1997), propetamphos (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.234-1979 (R1997), brodifacoum (rodenticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.235-1979 (R1997), metalaxyl (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.236-1981 (R1997), ofurace (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.237-1979 (R1997), propamocarb (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.239-1979 (R1997), dikegulac (plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.24-1961 (R1997), amitrole (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.241-1980 (R1997), difenopenten (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.242-1980 (R1997), cymoxanil (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.243-1980 (R1997), bromethalin (rodenticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.244-1980 (R1997), prochloraz (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.245-1980 (R1997), cypermethrin (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.246-1980 (R1997), imazalil (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.247-1981 (R1997), isouron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.248-1981 (R1997), carbosulfan (insecticide and nematicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.249-1981 (R1997), chlorsulfuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.25-1961 (R1997), folpet (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.250-1981 (R1997), fenridazon (plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.251-1982 (R1997), flucythrinate (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.252-1981 (R1997), cyromazine (ectoparasiticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.253-1981 (R1997), diazinon (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.254-1983 (R1997), fenpirithrin (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.255-1982 (R1997), pyroxyfur (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.256-1982 (R1997), benzofluor (herbicide and plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.257-1982 (R1997), iprodione (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.258-1982 (R1997), fluvalinate (insecticide and acaricide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.259-1982 (R1997), dimethipin (plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.26-1961 (R1997), atrazine (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.260-1982 (R1997), flurprimidol (turfgrass growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.261-1982 (R1997), fluazifop (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.263-1983 (R1997), nifluridide (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.265-1983 (R1997), sulfometuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.266-1985 (R1997), isoxaben (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.268-1983 (R1997), tridiphane (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.269-1983 (R1997), fomesafen (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.270-1985 (R1997), hydramethylnon (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.271-1983 (R1997), benazolin (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.272-1983 (R1997), haloxyfop (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.273-1985 (R1997), clopyralid (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.275-1984 (R1997), lactofen (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.276-1983 (R1997), trimethacarb (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.277-1985 (R1997), cloproxydim (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.278-1984 (R1997), metsulfuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.279-1985 (R1997), fenoxycarb (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.28-1961 (R1997), simazine (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.280-1984 (R1997), imazaquin (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.281-1986 (R1997), imazapyr (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.282-1985 (R1997), cinmethylin (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.283-1988 (R1997), metsulfovax (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.284-1991 (R1997), imazamethabenz (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.285-1984 (R1997), cyprofuram (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.286-1986 (R1997), fluoroglycofen (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.287-1985 (R1997), fenoxaprop (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.288-1985 (R1997), abamectin (miticide and insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.289-1985 (R1997), paclobutrazol (plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.29-1961 (R1997), trietazine (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.290-1986 (R1997), clofentezine (acaricide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.291-1986 (R1997), fluazifop-P (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.292-1986 (R1997), bifenthrin (insecticide and miticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.293-1986 (R1997), myclobutanil (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.294-1986 (R1997), imazethapyr (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.295-1986 (R1997), chlorimuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.297-1988 (R1997), bensulfuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.298-1986 (R1997), quizalofop (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.299-1986 (R1997), azaconazole (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.3-1957 (R1997), diuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.30-1962 (R1997), endosulfan (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.300-1989 (R1997), clomazone (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.301-1988 (R1997), pyrifenox (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.302-1989 (R1997), cadusafos (insecticide and nematicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.303-1989 (R1997), forchlorfenuron (plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.304-1990 (R1997), flusilazole (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.305-1988 (R1997), isazofos (insecticide and nematicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.306-1990 (R1997), thifensulfuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.307-1989 (R1997), clethodim (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.309-1990 (R1997), hexaconazole (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.31-1961 (R1997), tetradifon (miticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.310-1988 (R1997), diniconazole (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.311-1988 (R1997), uniconazole (plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.312-1990 (R1997), flurtamone (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.313-1990 (R1997), tefluthrin (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.314-1990 (R1997), flutrialfol (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.315-1990 (R1997), halosafen (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.316-1990 (R1997), hexaflumuron (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.317-1989 (R1997), dithiopyr (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.319-1990 (R1997), trialomethrin (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.32-1962 (R1997), dimethrin (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.321-1990 (R1997), butathiofos (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.322-1990 (R1997), sulfluramid (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.323-1990 (R1997), tribenuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.327-1991 (R1997), fenazaquin (araricide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.328-1990 (R1997), fenpropathrin (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.329-1991 (R1997), nicosulfuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.33-1962 (R1997), carbophenothion (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.330-1992 (R1997), rimsulfuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.331-1992 (R1997), ethametsulfuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.332-1992 (R1997), chlorethoxyfos (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.333-1992 (R1997), fenbuconazole (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.334-1991 (R1997), glufosinate (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.335-1992 (R1997), debacarb (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.336-1993 (R1997), zeta-cypermethrin (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.337-1993 (R1997), flumetsulam (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.338-1993 (R1997), emamectin (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.339-1993 (R1997), tebufenozide (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.34-1962 (R1997), linuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.340-1993 (R1997), thifluzamide (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.341-1993 (R1997), triflusulfuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.342-1993 (R1997), thiazopyr (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.343-1995 (R1997), Common name “flupropacil” (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.344-1993 (R1997), nithiazine (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.345-1993 (R1997), sulfentrazone (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.346-1993 (R1997), metosulam (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.348-1995 (R1997), Common Name “azimsulfuron” (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.349-1995 (R1997), clofencet (pesticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.35-1962 (R1997), naled (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.350-1994 (R1997), flumiclorac (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.351-1997, "chlorfenapyr" (insecticide/acaricide)

*Establishes the common name "chlorfenapyr" for the pest control chemical 4-bromo-2-(4-chlorophenyl) -1-(ethoxymethyl) -5-(trifluoromethyl) -=1H-pyrrole-3-carbonitrile*

ANSI K62.352-1994 (R1997), pyrithiobac (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.353-1995 (R1997), cyclosulfamuron (pesticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.354-1995 (R1997), cyhalofop (pesticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.355-1997, "flupyrsulfuron" (herbicide)

*Establishes the common name "flupyrsulfuron" for the pest control chemical 2-[[[[(4,6-dimethoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-=6-(trifluoromethyl)-3-pyridinecarboxylic acid*

ANSI K62.356-1997, “carfentrazone” (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.357-1994 (R1997), flumioxazin (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.358-1997, imazamox (herbicide)

*Establishes the common name “imazamox” for the pest control chemical 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo 1H-imidazol-2-yl]-=5-(methoxymethyl)-3-pyridinecarboxylic acid*

ANSI K62.359-1997, “polyoxorim” (fungicide)

*Establish a common name for the pest control chemical:*
*5-[ [2-amino-5-O-(aminocarbonyl) -2-deoxy-L-xylonoyl]amino-=1-(5-carboxy-3, 4-dihydro-2, 4-dioxo-1 (2H)-=pyrimidinyl)-1, 5-dideoxy-B-Dallofuranuronic acid.*

ANSI K62.36-1962 (R1997), endothall (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.360-1997, “famoxadone” (fungicide)

*Establish a common name for the pest control chemical: 5-methyl-5-(4-phenoxyphenyl) -3-(phenylamino)-2,4-oxazolidinedione*

ANSI K62.361-1997, “azafenadin” (Herbicide)

*Establishes a common name for the pest control chemical: 2-[2,4-dichloro-5-(2-propynyloxy)phenyl]-5,6,7, 8-tetrahydro-=1,2,4-triazolo[4,3-a]pyridin-3(2H)-one*

ANSI K62.362-1997, spinosad (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.364-1997, “halofenozide” (insecticide)

*Establishes a common name “halofenozide” for the pest control chemical 4-chlorobenzoic acid 2-benzoyl-2(1, 1-dimethylethyl) hydrazide*

ANSI K62.365-1998, Common Name “indoxacarb” (insecticide)

*Establishes a common name for the pest control chemical:*
*(S)-methyl 7-chloro-2, 5-dihydro-2-[[(methoxycarbonyl)= [4-(trifluormethoxy) phenyl] amino]carbonyl]=indeno[1,2-e ][1,3,4]oxadiazine-4a (3H) -carboxylate.*

ANSI K62.366-1997, “quinoxyfen” (fungicide)

*Establishes the common name “quinoxyfen” for the pest control chemical 5, 7-dichloro-4-(4-fluorophenoxy) quinoline*

ANSI K62.367-1997, cloransulam (herbicide)

*Establishes the common name “quinoxyfen” for the pest conrol chemical 5, 7-dichloro-4-(4-fluorophenoxy) quinoline*

ANSI K62.368-1997, diclosulam (herbicide)

*Establishes the common name “quinoxyfen” for the pest conrol chemical 5, 7-dichloro-4-(4-fluorophenoxy) quinoline*

ANSI K62.369-1997, fluroxypyr (herbicide)

*Establishes the common name “fluroxypyr” for the pest control chemical 4-amino-3, 5-dichloro-6-fluoro-2-pyridinyl) oxy]acetic acid*

ANSI K62.370-1997, bifenazate (acaricide)

*Establish a common name for the pest control chemical:*
*1-methylethyl 2-(4-methoxy[1,1’-biphenyl]-3-yl)=hydrazinecarboxylate*

ANSI K62.371-1998, Common Name “methoxyfenozide” (insecticide)

*Establishes the common name “methoxyfenozide” for the pest control chemical 3-methoxy-2-methylbenzoic acid 2-(3, 5-dimethylbenzoyl) -2-=(1,1-dimethylethyl) hydrazide.*

ANSI K62.38-1962 (R1997), carbaryl (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.39-1962 (R1997), isocil (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.40-1962 (R1997), binapacryl (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.42-1963 (R1997), diphenamid (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.43-1963 (R1997), trifluralin (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.44-1962 (R1997), diquat (herbicide, desiccant, and defoliant)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.45-1962 (R1997), paraquat (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.46-1963 (R1997), swep (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.50-1963 (R1997), bromacil (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.52-1963 (R1997), dichlobenil (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.53-1963 (R1997), norea (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.54-1963 (R1997), dioxathion (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.55-1963 (R1997), dicamba (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.56-1963 (R1997), tricamba (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.57-1964 (R1997), norbormide (rodenticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.59-1965 (R1997), cypromid (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.6-1957 (R1997), erbon (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.60-1965 (R1997), siduron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.62-1966 (R1997), pyrazon (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.63-1965 (R1997), lenacil (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.64-1966 (R1997), chloroneb (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.65-1966 (R1997), bromoxynil (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.66-1966 (R1997), terbacil (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.67-1967 (R1997), phosalone (acaracide and insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.68-1966 (R1997), milneb (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.7-1958 (R1997), fenuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.70-1967 (R1997), methomyl (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.71-1968 (R1997), formetanate (acaracide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.74-1968 (R1997), carbofuran (pesticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.75-1968 (R1997), carbetamide (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.77-1968 (R1997), aldicarb (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.78-1968 (R1997), benomyl (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.8-1957 (R1997), neburon (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.80-1969 (R1997), fluometuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.82-1969 (R1997), metobromuron (pesticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.83-1969 (R1997), chloroxuron (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.84-1969 (R1997), oryzalin (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.85-1969 (R1997), dichlormate (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.86-1969 (R1997), phenmedipham (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.87-1969 (R1997), dialifor (insecticide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.88-1969 (R1997), alachlor (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.89-1971 (R1997), delachlor (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.9-1957 (R1997), dalapon (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.90-1971 (R1997), butachlor (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.91-1970 (R1997), chloramben (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.92-1970 (R1997), ethephon (plant growth regulator)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.94-1970 (R1997), karbutilate (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.95-1971 (R1997), cyprazine (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.96-1971 (R1997), isopropalin (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.97-1970 (R1997), carboxin (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.98-1971 (R1997), oxycarboxin (fungicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

ANSI K62.99-1971 (R1997), asulam (herbicide)

*Provides the accepted common name for the chemical compound given. Includes the use of the common name and the physical and chemical properties of the chemical compound.*

## USGBC (U.S. Green Building Council)

## VITA (VMEbus International Trade Association (VITA))

ANSI/VITA 1-1994 (R2002), VME64

*Defines a framework for 8-, 16-, 32-, and 64-bit parallel bus computer architectures that can implement single and multiprocessor systems. Based on the VMEbus specification released by the VMEbus Manufacturers Group (now VITA) in August 1982, this bus includes the initial four basic subbuses: (1) data transfer bus, (2) priority interrupt bus, (3) arbitration bus, and (4) utility bus. Other architectures with other subbuses are possible within this VME framework.*

ANSI/VITA 1.1-1997 (R2003), VME64x

*This standard provides a variety of extensions to ANSI/VITA 1, VME64*

ANSI/VITA 1.3-1997 (R2003), VME64x 9U x 400 mm Format

*This standard defines a 9U x 400 mm form factor for the VME64*

ANSI/VITA 1.5-2003, 2eSST

*This proposed standard is an extension to the VME64 (ANSI/VITA 1-1994) and VME64x (ANSI/VITA1.1-1997) standards. It defines a new transfer protocol, based upon source synchronous concepts that permits the VMEbus to operate at rates up to 320MB/s.*

ANSI/VITA 1.6-2000 (R2005), Keying for Conduction Cooled VME64x

*This standard defines a keying system that can be added to VME64x boards and backplanes in a conduction cooled environment (IEEE 1101.2) where keying as defined in the VME64 Extensions standard cannot be applied.*

ANSI/VITA 1.7-2003, Increased Current Level for 96 Pin & 160 Pin DIN/IEC Connector Standard

*This standard describes increased current levels, test methods, test data and compliance criteria for 3 row DIN and 5 row DIN connectors when used in VME, VME64 and VME64 Extension P1/J1 and P2/J2 pin out arrangements.*

ANSI/VITA 10-1995 (R2002), SKYchannel Packet Bus on VME P2

*This standard defines the electrical and signal definitions for a high performance packet switched bus to run on the VMEbus user defined pins on the P2 connector.*

ANSI/VITA 12-1997 (R2002), M-Modules

*This standard defines the mechanical and electrical specifications for a mezzanine module that can be used to add functionality to base level printed circuit boards.*

ANSI/VITA 17-1998 (R2004), Front Panel Data Port (FPDP)

*This standard provides an extension to the VME standard that consists of a multidrop synchronous parallel non-addressable bus connection between front panels on multiple boards in a single chassis.*

ANSI/VITA 17.1-2003, Serial FPDP

*This standard defines "Serial FPDP", a high-speed low-latency serial communications protocol for use in high-speed data transfer applications, typically using a fiber optic link.*

ANSI/VITA 19.1-1998, Busnet Media Access Control (MAC) Specification

*Describes the VME BusNet Protocol, which is designed to provide a common and unique method for use by two or more devices for network communication across a backplane. This standard was listed for comment in the June 5, 1998 issue of Standards Action. Only the revised portions of the draft are being resubmitted due to substantive changes in the text.*

ANSI/VITA 19.2-1998, Busnet Link Layer Control (LLC) Specification

*Provids a common and unique method for use by two or more devices (participants or peers) for network communication across a backplane. This draft standard defines the link layer control.*

ANSI/VITA 20-2005, Conduction Cooled PCI Mezzanine Card (CCPMC)

*This standard defines the methodology and implementation details to allow the creation of conduction cooled PMC modules to ensure electrical and physical compatibility with various host card modules onto which conduction cooled PMCs are mounted. A revision is proposed that will reduce the possibility of connector fretting.*

ANSI/VITA 23-1998 (R2004), VME64 Extensions for Physics and Other Applications

*This document provides implementation rules, recommendations, and guidelines that enhance the use of the VMEbus standard for physics and other application areas with similar requirements.*

ANSI/VITA 25-1997, VISION

*Specifies a standard way to move data among entities connected by a bus, and possibly across a network. VISION stands for Versatile I/o Software Interface for Open-bus Networks.*

ANSI/VITA 26-1998 (R2003), Myrinet-on-VME

*Describes a packet network protocol called Myrinet for communications between VME modules using interconnects either on a front panel or on a backplane. Networks may be module to module, subrack to subrack, and/or chassis to chassis.*

ANSI/VITA 29-2001, PC-MIP Specification

*Specifies a small electronic printed circuit board with a PCI interface that may be mounted on a carrier board to provide modular functionality. This standard was listed for public review in the 10/8/1999 issue of Standards Action. It is being resubmitted due to substantive changes to the text.*

ANSI/VITA 3-1995 (R2002), Board Level Live Insertion for VMEbus

*Advances in technology allow smaller board sizes to perform the functionality that a few years ago required a larger board. Alternatively, these advances allow increased functionality on the same sized boards. Thus, VMEbus boards and system designs are greatly increasing in capability. Where once a radio room had six separate chassis containing one radio each, that radio room today has one chassis housing six radios. This size reduction has created the demand for highly reliable and easily maintainable systems. The Telecommunications and Defense applications require a more fault tolerant, live insertable VMEbus. Currently, live insertion and extraction is not supported by the IEEE 1014 VMEbus standard. The VMEbus and Futurebus+ Extended Architectures International Trade Association (VITA) has responded by forming the Recommended Practices Guide to Board*

ANSI/VITA 30-2000 (R2005), 2mm Connector Practice for Euroboard Systems

*This standard defines an equipment practice based on a combination of 2 mm connectors, per IEC 61076-4-101, and subracks, racks and printed boards based on the Euroboard form factors.*

ANSI/VITA 30.1-2002, 2mm Equipment Practice for Conduction Cooled Eurocard

*Describes the mechanical interoperability requirements for conduction cooled Eurocards that use 2mm connectors.*

ANSI/VITA 31.1-2003, Gigabit Ethernet on VME64x

*This proposed standard defines a pinout and interconnection methodology for implementing a 10/100/1000BASE-T Ethernet switched network on a VME64x backplane.*

ANSI/VITA 32-2003, Processor PMC

*This standard incorporates a set of extensions to the IEEE 1386.1 PMC ("PCI Mezzanine Card") standard which creates a new class of CPU based PMC cards referred to in this standard as Processor PMC cards. The standard retains electrical signaling compatibility with existing PMC cards.*

ANSI/VITA 35-2000 (R2005), PMC-P4 Pin Out Mapping to VME-P0 and VME64x-P2

*This standard provides pin mapping assignments between a PCI mezzanine Card (PMC) module's user IO connector (P4) and the VME host's user IO connector. Four mappings are provided.*

ANSI/VITA 38-2003, System Management for VME

*Describes a methodology for using IPMI for System Management of VME systems.*

ANSI/VITA 39-2003, PCI-X Auxiliary Standard for PMCs and Processor PMCs

*This proposed standard provides details for implementing PCI-X on PMCs and Processor PMCs modules.*

ANSI/VITA 4-1995 (R2002), IP Modules

*This standard defines the mechnical and electrical specifications for a mezzanine module that can be used to add functionality to a base level printed circuit board.*

ANSI/VITA 4.1-1996 (R2003), IP I/O Mapping to VME64x

*This standard defines the mapping of the 50 user defined I/O pins from the IP (ANSI/VITA 4-199x) I/O connectors to VME64x board's rear I/O connectors*

ANSI/VITA 40-2003, Service Indicators Standard

*Defines consistent meanings for colors and behaviors of service indicators used on boards, subsystems, and enclosures.*

ANSI/VITA 41.0-2006, VXS

*The VXS propsed standard defines physical features that enable high-speed communication in a VME compatible system. These features include: addition of a high speed connector to the VME64x board in the P0/J0 position, a 6U by 160mm by 6HP Eurocard format board with many high speed connectors which may act as a switch, and the backplane/chassis infrastructure needed to support these features.*

ANSI/VITA 41.1-2006, VXS 4X InfiniBand Protocol

*This proposed standard builds upon the VXS proposed standard by describing how VXS boards may communicate in a compatible way using the InfiniBand protocol. Pinouts for both the payload and switch boards are given, as well as the value of the VXS key which indicates this protocol.*

ANSI/VITA 41.2-2006, VXS 4X Serial Rapid IO Layer Protocol Standard

*This proposed standard builds upon the VXS proposed standard by describing how VXS boards may communicate in a standard way using the Serial RapidIO protocol. Pinouts for both the payload and switch boards are given, as well as the value of the VXS key which indicates this protocol.*

ANSI/VITA 42.1-2006, XMC Switched Mezzanine Card: Parallel RapidIO 8/16 LP-LVDS Protocol Layer Standard

*This specification defines an open standard for supporting Parallel RapidIO switched interconnect protocol on the XMC form factor.*

ANSI/VITA 42.2-2006, XMC Serial RapidIO Protocol Layer Standard

*This proposed standard defines a method for implementing the Serial RapidIO switched interconnect protocol on the XMC form factor.*

ANSI/VITA 42.3-2006, XMC PCI Express Protocol Layer Standard

*Maps signals to pins for the PCI-X protocol on the XMC mezzanine card.*

ANSI/VITA 47-2005, Environments, Design and Construction, Safety, and Quality for Plug-In Units Standard

*This standard defines environmental, design and construction, safety, and quality requirements for commercial-off-the-shelf (COTS) plug-in units (cards, modules, etc) intended for mobile applications.*

ANSI/VITA 47-2005, Environments, Design and Construction, Safety, and Quality for Plug-In Units Standard

*This standard defines environmental, design and construction, safety, and quality requirements for commercial-off-the-shelf (COTS) plug-in units (cards, modules, etc) intended for mobile applications.*

ANSI/VITA 5.1-1999 (R2004), RACEway Interlink

*This standard provides a specification of the data link protocol and physical interface of a high performance extension to the VMEbus standard.*

ANSI/VITA 6-1994 (R2002), Signal Computing System Architecture (SCSA)

*This standard defines the electrical and protocol specifications for a VMEbus subbus on the user defined P2 connector pins. This subbus is structured to support telephony applications.*

ANSI/VITA 6.1-1996 (R2003), Extensions to ANSI/VITA 6-1994 Signal Computing System Architecture

*This document contains extensions to ANSI/VITA 6, SCSA. The extensions provide various forward and backward compatible options that provide both added bearer capacity and higher availability.*

## WCMA (Window Covering Manufacturers Association)

ANSI/WCMA A100.1-2002, Standard for Safety of Corded Window Covering Products

*The objective of this Standard is to provide requirements for cellular shades, horizontal blinds, pleated shades, roll-up shades, roman shades, traverse rods and vertical blinds, that reduce the possibility of injury, including strangulation, to young children from the bead chain, cord, or any type of flexible loop device used to operate the product.*

## WDMA (Window and Door Manufacturers Association )

ANSI/WDMA I.S. 1A-2004, Industry Specification for Architectural Wood Flush Doors

*This document provides architects, building owners and contators with exact terminology, grades and performance duty levels, general information, and tests that will ensure the overall level of quality of Archetectural wood flush doors.*

ANSI/WDMA I.S.6A-2001, Industry Standard for Architectural Wood Stile and Rail Doors

*Provides architects, building owners and contractors with concise standaard for the components, joinery methods and overall level of quality of True Architectural Wood Stile and Rail Doors. The components of True Architectural Wood Stile and Rail Doors include individual stiles, rails, mullions, veneers, cores, panels, and/or glazing.*

## WMMA (Wood Machinery Manufacturers of America)

ANSI O1.1-2004, Woodworking Machinery – Safety Requirements

*This standard covers the safety requirements for the design, installation, care and use of woodworking machinery and accessory equipment, used in industrial and commercial applications, having a total connected power of 5 hp (3.7kw) or greater, or having 3-phase wiring.*