

NORSOK STANDARD

CAD SYMBOL LIBRARIES

Z-004
Rev. 1, July 1998

This NORSOK standard is developed by NTS with broad industry participation. Please note that whilst every effort has been made to ensure the accuracy of this standard, neither OLF nor TBL or any of their members will assume liability for any use thereof. NTS is responsible for the administration and publication of this standard.

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FOREWORD

NORSOK (The competitive standing of the Norwegian offshore sector) is the industry initiative to add value, reduce cost and lead time and eliminate unnecessary activities in offshore field developments and operations.

The NORSOK standards are developed by the Norwegian petroleum industry as a part of the NORSOK initiative and supported by OLF (The Norwegian Oil Industry Association) and TBL (Federation of Norwegian Engineering Industries). NORSOK standards are administered and issued by NTS (Norwegian Technology Standards Institution).

The purpose of NORSOK standards is to contribute to meet the NORSOK goals, e.g. by replacing individual oil company specifications and other industry guidelines and documents for use in existing and future petroleum industry developments.

The NORSOK standards make extensive references to international standards. Where relevant, the contents of a NORSOK standard will be used to provide input to the international standardisation process. Subject to implementation into international standards, the NORSOK standard will be withdrawn.

Annexes are normative.

INTRODUCTION

The various CAD environments in the petroleum industry are evolving rapidly and have often been using different CAD symbol libraries. Considerable cost reductions have been identified by standardization of CAD symbol libraries. NORSOK organized a work group to recommend a standard for CAD symbol libraries, thus making it more efficient to read, edit and manage drawings for all involved parties trough the lifespan of a drawing.

The symbols in this standard are intended to be in compliance with ISO and other standards where possible, with additions of symbols that are unique to the offshore industry. This symbol library may not be optimal for all working environments but aims at the main goal of creating one common standard that is aimed at being suitable for the majority of needs.

In addition to setting a standard, the fact that the symbols are available as digital files for downloading from NTS/NORSOK Internet site <http://www.nts.no/norsok>, ready for use in CAD drawing production, saves the users the work of making their own symbols and digital files.

1 SCOPE

The purpose of this standard is to define and provide drawing symbol libraries for offshore engineering disciplines that utilise CAD in drawing production.

2 NORMATIVE REFERENCES

The following standards include provisions which, through reference in this text, constitute provisions of this NORSOK standard. Latest issue of the references shall be used unless otherwise agreed. Other recognized standards may be used provided it can be shown that they meet or exceed the requirements of the standards referenced below.

NORSOK Z-DP-002 Coding System (will be renumbered Z-002)
NORSOK Z-005 2D-CAD drawing standard

3 DEFINITIONS AND ABBREVIATIONS

CAD	Computer aided design
DGN	MicroStation file format designation (Intergraph IGDS)
DWG	AutoCad file format designation
DXF	AutoDesk Data eXchange file format designation
HTML	HyperText Markup Language
NEK	Norsk Elektrisk Komite (the national Norwegian committee working with IEC)
IEC	International Electrotechnical Commission
ISO	International Standardization Organization
NS	Norsk Standard

4 SYMBOL ORGANIZATION AND DOCUMENTATION

4.1 Organisation

Symbol libraries are organized per discipline. For each discipline there is an Annex in this standard with a graphic representation and a description of all the symbols provided.

4.2 Digital files

NTS/NORSOK provides digital files available for downloading from Internet (<http://www.nts.no/norsok>) with all the symbols in this standard.

For MicroStation users each discipline is stored in a cell library named after this convention:
NORSOK standard number_discipline code (according to NORSOK standard Z-DP-002)

Example: Z004_A.cel

The symbol names contain 6 characters.

Example: L V 0 0 5 A

				-----	revision number
				-----	sequence number
				-----	subgroup
				-----	discipline code (ref. NORSOK Z-DP-002)

For AutoCad users there is a drawing file for each symbol. Example: LV005A.dwg

4.3 Symbol design

For symbols containing text the MicroStation 'enter-Datafield' is used to fill in wanted text string. For AutoCad symbols containing text 'attribute fields' is used to fill in wanted text string.

All schematic symbols are drawn on grid with a resolution of one millimeter. Origo and connection point are on grid. For filled areas, commando 'area-fill' is used, not hatching. Nested symbols are not used.

Symbols for Structural drawings are in scale 1:1, and all sections of beams are drawn in correct scale, ref. NORSOK Z-005 section 5.2.

4.4 Layer usage

All graphic and text for the separate symbols are placed on one layer. Layers 24 - 28 are used, depending on symbol type. Ref. NORSOK Z-005 Annex C.

5 SPECIAL LINES

Special lines covered in Annex J, are stored in resource MicroStation file 'Z004_LS.RSC' and AutoCad file 'Z004_LS.LIN'. These special lines are in accordance with International Standards that are representative for the disciplines.

All line types shall be drawn in accordance with NORSOK standard Z-005.

6 SYMBOLS

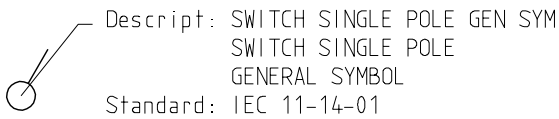
Symbols shall be drawn as found in Annex A-I and special lines as found in Annex J.

7 INFORMATIVE REFERENCES

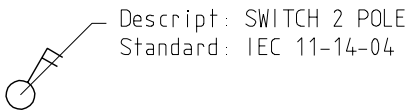
The NORSOK standard CAD symbol libraries have attempted to make use of national and international standards as far as practical and conforming with current industry practise. The following standards have been references:

NS 1422	Fluid power systems and components. Graphic symbols
NS 1710	Drawing symbols for piping systems.
NS 1421	Welds Symbolic representation on drawing
IEC	International Electrotechnical Commission

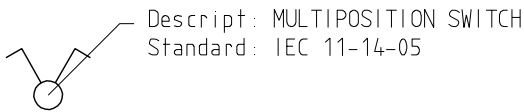
ANNEX A ELECTRICAL (NORMATIVE)



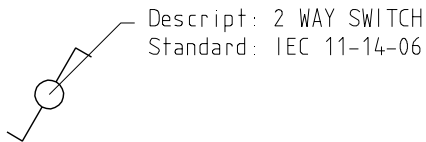
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SWITCH SINGLE POLE GEN SYM



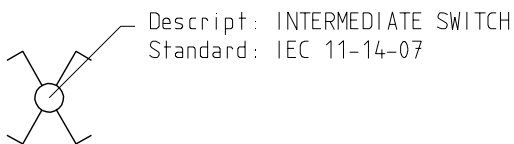
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SWITCH 2 POLE



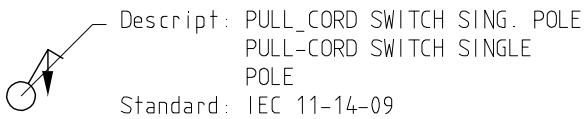
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MULTIPOSITION SWITCH



EI004A
2 WAY SWITCH



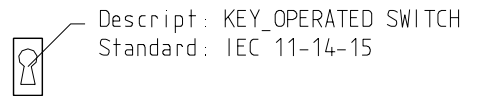
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INTERMEDIATE SWITCH



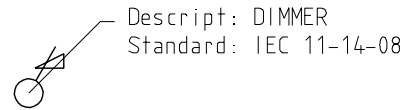
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PULL_CORD SWITCH SING. POLE



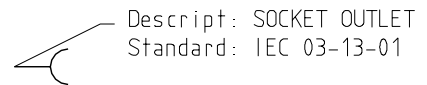
EI007A
PUSH_BUTTON



EI008A
KEY_OPERATED SWITCH



EI009A
DIMMER



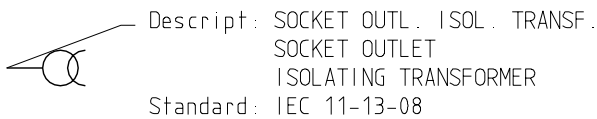
EI010A
SOCKET OUTLET



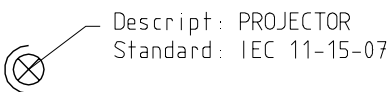
EI011A
SOCKET OUTLET W EARTH



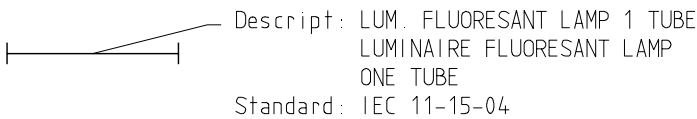
EI012A
SOCKET OUTL. SING. SWITCH



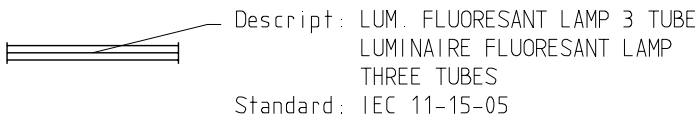
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SOCKET OUTL. ISOL. TRANSF.



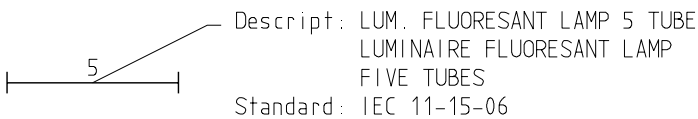
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PROJECTOR



EI015A
LUM. FLUORESBANT LAMP 1 TUBE



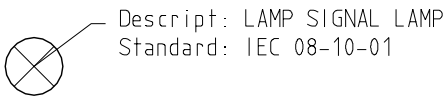
EI016A
LUM. FLUORESBANT LAMP 3 TUBE



EI017A
LUM. FLUORESBANT LAMP 5 TUBE



EI018A
MAINS BATTERY EMERGENCY



EI019A
LAMP SIGNAL LAMP



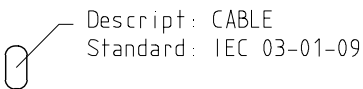
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JUNCTION\$ CONN. OR BRANCH



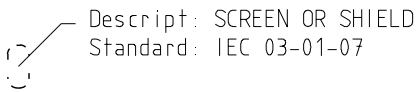
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EARTH



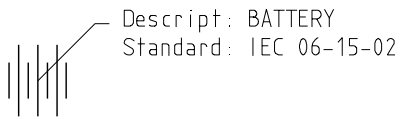
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FRAME OR CHASSIS



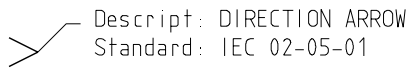
EI023A
CABLE



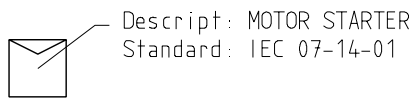
EI024A
SCREEN OR SHIELD



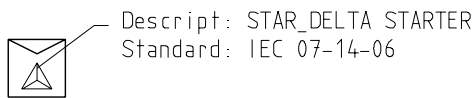
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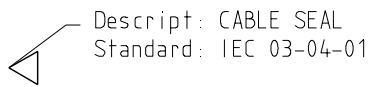
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DIRECTION ARROW



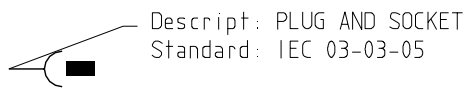
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MOTOR STARTER



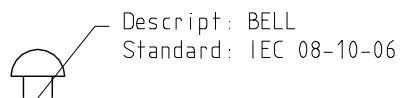
EI028A
STAR_DELTA STARTER



EI029A
CABLE SEAL



EI030A
PLUG AND SOCKET



EI031A
BELL

 Descript: MANUALLY OP. CONTROL
MAUALLY OPERATED CONTROL
Standard: NEK 144 25302 63
IEC 02-13-01

ES001A
MANUALLY OP. CONTROL

 Descript: OPERATED BY PULLING
Standard: NEK 144 25303 63
IEC 02-13-03

ES002A
OPERATED BY PULLING

 Descript: OPERATED BY PUSHING
Standard: NEK 144 25304 63
IEC 02-13-05

ES003A
OPERATED BY PUSHING

 Descript: OPERATED BY TURNING
Standard: NEK 144 25305 63
IEC 02-13-04

ES004A
OPERATED BY TURNING

 Descript: MANUALLY OPERATED
CONTROL WITH
RESTRICTED ACCESS
Standard: NEK 144 25306
IEC 02-13-02

ES005A
MAN. OPERATED CONTROL

 Descript: EMERGENCY OPERATION
Standard: NEK 144 25307
IEC 02-13-08

ES006A
EMERGENCY OPERATION

 Descript: OPERATED BY HANDWHEEL
Standard: NEK 144 25308
IEC 02-13-09

ES007A
OPERATED BY HANDWHEEL

 Descript: OPERATED BY PEDAL
Standard: NEK 144 25309
IEC 02-13-10

ES008A
OPERATED BY PEDAL

 Descript: OPERATED BY LEVEL
Standard: NEK 144 25310
IEC 02-13-11

ES009A
OPERATED BY LEVEL

 Descript: OPERATED BY CRANK
Standard: NEK 144 25311
IEC 02-13-14

ES010A
OPERATED BY CRANK

 Descript: OPERATED BY
REMOVABLE
HANDLE
Standard: NEK 144 25312
IEC 02-13-12

ES011A
OPERATED BY REM. HANDLE

 Descript: OPERATED BY KEY
Standard: NEK 144 25313
IEC 02-13-13

ES012A
OPERATED BY KEY



Descript: OPERATED BY LIN. VELIORITY
OPERATED BY LINEAR
VELIORITY (FLOW SPEED)
Standard: NEK 144 25413 26

ES013A
OPERATED BY LIN. VELIORITY



Descript: OPERATED BY ROT. FREQ.
OPERATED BY ROTATIONAL
FREQUENCY (SPEED)
Standard: NEK 144 25408 26

ES014A
OPERATED BY ROT. FREQ.



Descript: OPERATED BY PRESSURE
Standard: NEK 144 26119

ES015A
OPERATED BY PRESSURE



Descript: OPERATED BY TEMPERATURE
Standard: NEK 144 25403 26

ES016A
OPERATED BY TEMPERATURE



Descript: OPERATED BY FLUID LEVEL
Standard: NEK 144 25409

ES017A
OPERATED BY FLUID LEVEL



Descript: OP. BY HYDR. OR PNEU ACTU.
OPERATED BY HYRAULIC OR
PNEUMATIC ACTUATOR
Standard: NEK 144 25502

ES018A
OPERATED BY NUM. OF EVEN.



Descript: OPERATED BY LIGHT
Standard: NEK 144 25404 27

ES019A
OPERATED BY LIGHT



Descript: OPERATED BY EL. MOTOR
OPERATED BY ELECTRICAL
MOTOR
Standard: NEK 144 25504
IEC 02-13-26

ES020A
OPERATED BY EL. MOTOR



Descript: OPERATED BY CAM
OPERATED BY CAM
Standard: NEK 144 25506
IEC 02-13-16

ES021A
OPERATED BY CAM



Descript: OPERATED BY THERM. ACT.
OPERATED BY THERMAL
ACTUATOR
Standard: NEK 144 25505
IEC 02-13-25

ES022A
OPERATED BY THERM. ACT.



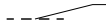
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GENERAL SYMBOL AND
USERS CHOICE
Standard: NEK 144 25402
IEC 02-01-01

ES023A
GEN. SYMB USERS CHOICE



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POSITION INDICATOR
(2 POSITIONS)
Standard: NEK 144 633114

ES024A
POSITION INDICATOR 2 POS

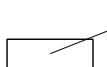


Descript: ORD. LINK FOR ACT MAKE CON
ORDINARY LINK FOR ACTUATOR/
MAKE CONTACT COMBINATIONS
Standard: NEK 144 22001
IEC 02-12-01

ES025A
ORD. LINK FOR ACT MAKE CON

 Descript: LINK W NON.AUT RETURN
LINK W/NON-AUTOMATIC RETURN
(DETENT) FOR ACTUATOR/MAKE
CONTACT COMBINATION
Standard: NEK 144 25102
IEC 02-12-08

ES026A
LINK W NON.AUT RETURN

 Descript: RESTISTOR
Standard: IEC 04-01-01

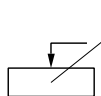
ES027A
RESTISTOR

 Descript: HEATING ELEMENT
Standard: IEC 04-01-12

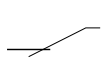
ES028A
HEATING ELEMENT

 Descript: VARIABLE RESISTOR
Standard: IEC 04-01-03

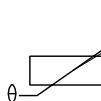
ES029A
VARIABLE RESISTOR

 Descript: POTENTIOMETER
Standard: IEC 04-01-07

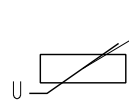
ES030A
POTENTIOMETER

 Descript: CAPACITOR
Standard: IEC 04-02-01

ES031A
CAPACITOR

 Descript: THERMISTOR

ES032A
THERMISTOR

 Descript: VARISTOR
Standard: IEC 04-01-04

ES033A
VARISTOR

 Descript: DIODE
Standard: IEC 05-03-01

ES034A
DIODE

 Descript: THYRISTOR
Standard: IEC 05-04-04

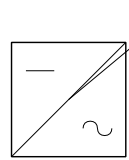
ES035A
THYRISTOR

 Descript: PNP TRANSISTOR
Standard: IEC 05-05-01

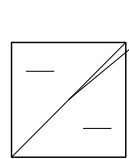
ES036A
PNP TRANSISTOR

 Descript: NPN TRANSISTOR
Standard: IEC 05-05-02

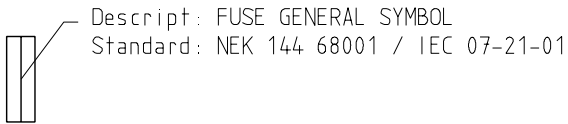
ES037A
NPN TRANSISTOR

 Descript: INVERTER
Standard: IEC 06-14-05

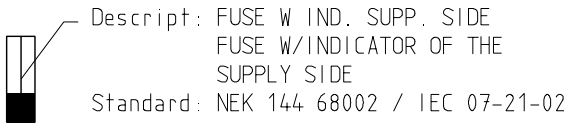
ES039A
INVERTER

 Descript: DC CONVERTER
Standard: IEC 06-14-02

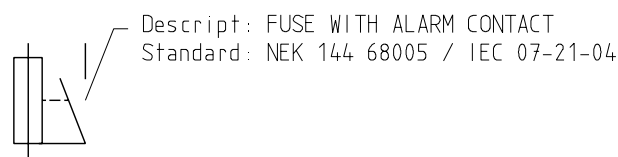
ES040A
DC CONVERTER



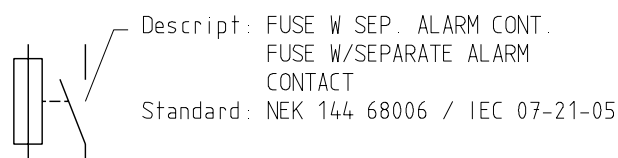
ES041A
FUSE GENERAL SYMBOL



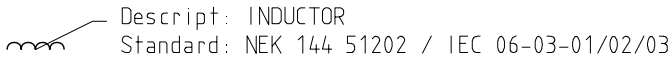
ES042A
FUSE W IND. SUPP. SIDE



ES043A
FUSE WITH ALARM CONTACT



ES044A
FUSE W SEP. ALARM CONT.



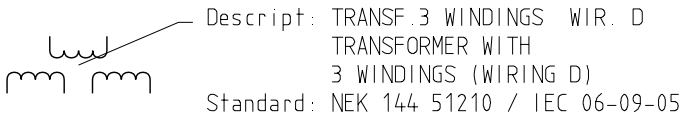
ES045A
INDUCTOR



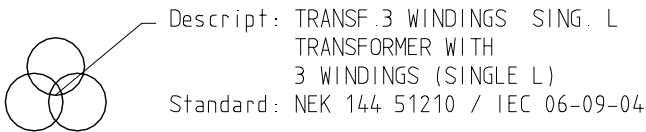
ES046A
TRANSF.2 WINDINGS WIR. D



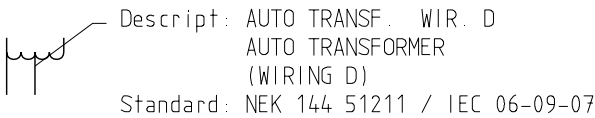
ES047A
TRANSF.2 WINDINGS SING. L



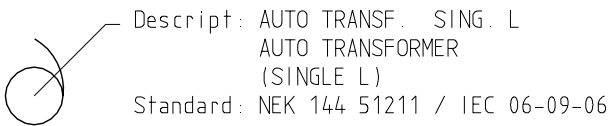
ES048A
TRANSF.3 WINDINGS WIR. D



ES049A
TRANSF.3 WINDINGS SING. L



ES050A
AUTO TRANSF. WIR. D



ES051A
AUTO TRANSF. SING. L



Descript: 3 PHASE TRANSF. STAR_DEL.
3 PHASE TRANSFORMER
STAR-DELTA
Standard: NEK 144 51301 / IEC 06-10-08

ES052A
3 PHASE TRANSF. STAR_DEL.



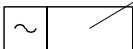
Descript: GENERATOR GEN. SYMBOL
GENERATOR GENERAL SYMBOL
Standard: NEK 144 52101 52 / IEC 06-04-01

ES053A
GENERATOR GEN. SYMBOL



Descript: GENERAL RELAY COIL
Standard: NEK 144 64201 / IEC 07-15-01

ES054A
GENERAL RELAY COIL



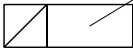
Descript: RELAY COIL AC RELAY
RELAY COIL OF AN AC RELAY
Standard: NEK 144 64208 / IEC 07-15-12

ES055A
RELAY COIL AC RELAY



Descript: RELAY COIL UNAFF. BY AC
RELAY COIL OF AN A RELAY
UNAFFECTED BY A.C.
Standard: NEK 144 64209 / IEC 07-15-11

ES056A
RELAY COIL UNAFF. BY AC



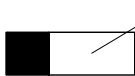
Descript: RELAY COIL REMAN. RELAY 1
RELAY COIL OF A
REMANENT RELAY 1
Standard: NEK 144 64210 / IEC 07-15-19

ES057A
RELAY COIL REMAN. RELAY 1



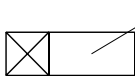
Descript: RELAY COIL POLAR. RELAY
RELAY COIL OF A POLARIZED
RELAY
Standard: NEK 144 64212 / IEC 07-15-15

ES058A
RELAY COIL POLAR. RELAY



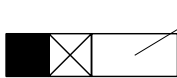
Descript: RELAY COIL SLOW_RELEASE.
RELAY COIL OF A POLARIZED
SLOW-RELEASING RELAY
Standard: NEK 144 64402 / IEC 07-15-07

ES059A
RELAY COIL CLOW_RELEASE.



Descript: RELAY COIL SLOW_OPERATING
RELAY COIL OF A
SLOW-OPERATED RELAY
Standard: NEK 144 64403 / IEC 07-15-08

ES060A
RELAY COIL SLOW_OPERATING



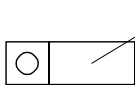
Descript: RELAY COIL SL_OP SL_REL.
RELAY COIL OF A
SLOW-OPERATING AND
SLOW-RELEASING RELAY
Standard: NEK 144 64404 / IEC 07-15-09

ES061A
RELAY COIL SL_OP SL_REL.



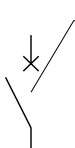
Descript: RELAY COIL HIGH_SPEED
RELAY COIL OF A
HIGH-SPEED RELAY
Standard: NEK 144 64405 / IEC 07-15-10

ES062A
RELAY COIL HIGH_SPEED



Descript: PULSE METER
Standard: NEK 144 65002 / IEC 08-05-02

ES063A
PULSE METER



Descript: CIRCUIT
BREAKER
Standard: IEC 07-13-05

ES071A
CIRCUIT BREAKER



Descript: SWITCH AND MAKE CONTACT
Standard: IEC 07-02-01

ES066A
SWITCH AND MAKE CONTACT



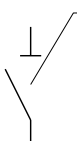
Descript: BREAKE
CONTACT
Standard: IEC 07-02-03

ES072A
BREAKE CONTACT



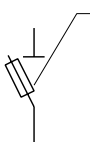
Descript: FUSE SWITCH
Standard: IEC 07-21-07

ES067A
FUSE SWITCH



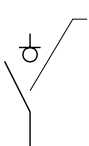
Descript: DISCONNECTOR
Standard: IEC 07-13-04

ES068A
DISCONNECTOR



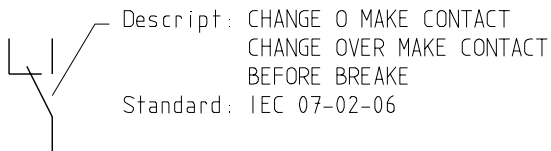
Descript: FUSE DISCONNECTOR
Standard: IEC 07-14-08

ES069A
FUSE DISCONNECTOR

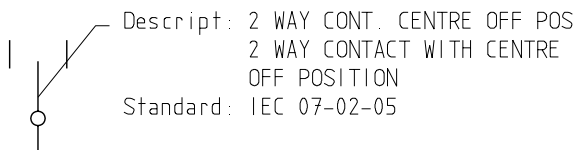


Descript: SWITCH DISCONNECTOR
Standard: IEC 07-13-08

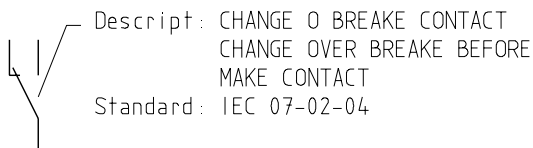
ES070A
SWITCH DISCONNECTOR



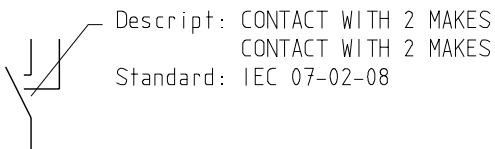
ES073A
CHANGE O MAKE CONTACT



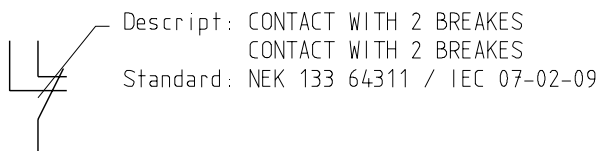
ES074A
2 WAY CONT. CENTRE OFF POS



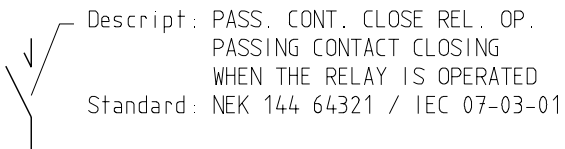
ES075A
CHANGE O BREAK CONTACT



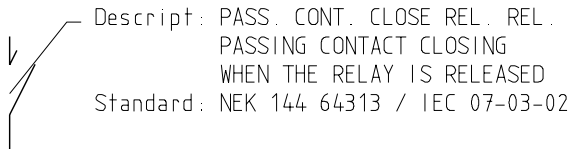
ES076A
CONTACT WITH 2 MAKES



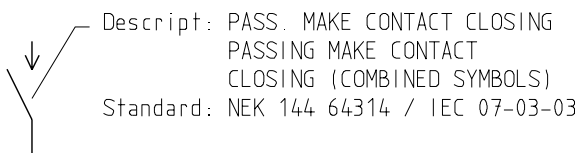
ES077A
CONTACT WITH 2 BREAKS



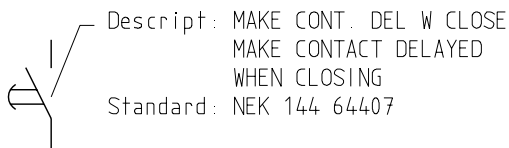
ES078A
PASS. CONT. CLOSE REL. OP.



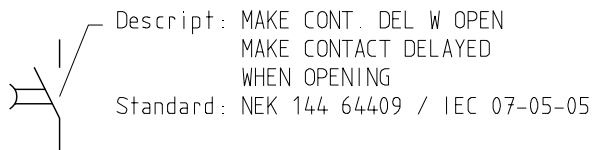
ES079A
PASS. CONT. CLOSE REL. REL.



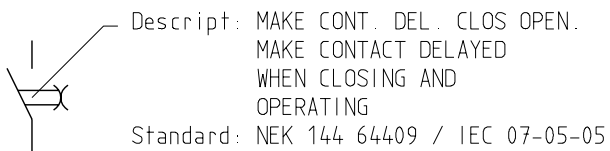
ES080A
PASS. MAKE CONTACT CLOSING



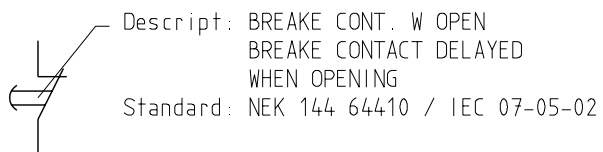
ES081A
MAKE CONT. DEL W CLOSE



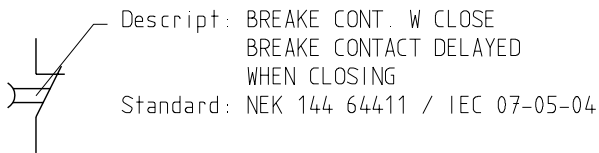
ES082A
MAKE CONT. DEL W OPEN



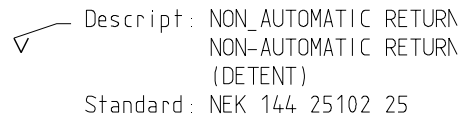
ES083A
MAKE CONT. DEL. CLOS OPEN.



ES084A
BREAKE CONT. W OPEN



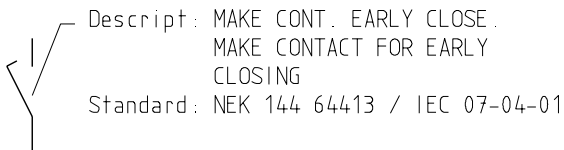
Descript: BREAKER CONT. W CLOSE
BREAKER CONTACT DELAYED
WHEN CLOSING
Standard: NEK 144 64411 / IEC 07-05-04



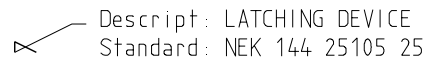
Descript: NON_AUTOMATIC RETURN
NON-AUTOMATIC RETURN
(DETENT)
Standard: NEK 144 25102 25

ES085A
BREAKER CONT. W CLOSE

ES091A
NON_AUTOMATIC RETURN



Descript: MAKE CONTACT EARLY CLOSE.
MAKE CONTACT FOR EARLY
CLOSING
Standard: NEK 144 64413 / IEC 07-04-01



Descript: LATCHING DEVICE
Standard: NEK 144 25105 25

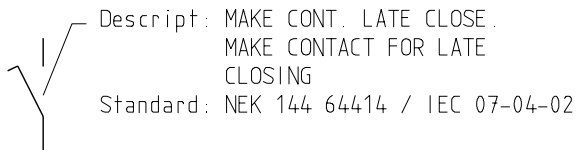
ES092A
LATCHING DEVICE

ES086A
MAKE CONTACT EARLY CLOSE.



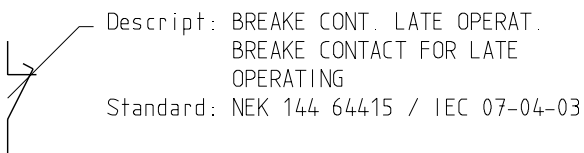
Descript: MECHANICAL INTERLOCK
Standard: NEK 144 25108

ES093A
MECHANICAL INTERLOCK



Descript: MAKE CONTACT LATE CLOSE.
MAKE CONTACT FOR LATE
CLOSING
Standard: NEK 144 64414 / IEC 07-04-02

ES087A
MAKE CONTACT LATE CLOSE.



Descript: BREAKER CONT. LATE OPERAT.
BREAKER CONTACT FOR LATE
OPERATING
Standard: NEK 144 64415 / IEC 07-04-03

ES088A
BREAKER CONT. LATE OPERAT.



Descript: BREAKER CONT. EARLY OPEN.
BREAKER CONTACT FOR EARLY
OPENING
Standard: NEK 144 64416 / IEC 07-04-04

ES089A
BREAKER CONT. EARLY OPEN.



Descript: AUTOMATIC RETURN
Standard: NEK 144 25101

ES090A
AUTOMATIC RETURN

 Descript: MECHANICAL COUPLING ENG.
MECHANICAL COUPLING
(CLUTCH ENGAGED POS)
Standard: NEK 144 25109

ES094A
MECHANICAL COUPLING ENG.

 Descript: MECHANICAL COUPLING DISENG.
MECHANICAL COUPLING
(CLUTCH DISENGAGED POS)
Standard: NEK 144 25109

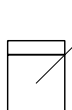
ES095A
MECHANICAL COUPLING DISENG.

 Descript: INDICATING INSTR. GEN SYMB
INDICATOR INSTRUMENT
GENERAL SYMBOL
Standard: NEK 144 81003 / IEC 08-01-01

ES096A
INDICATING INSTR. GEN SYMB

 Descript: RECORDING INSTR. GEN SYMB
RECORDING INSTRUMENT
GENERAL SYMBOL
Standard: NEK 144 81004 / IEC 08-01-02

ES097A
RECORDING INSTR. GEN SYMB

 Descript: INTERGRATING INSTR. GEN SYM
INTERGRATING INSTRUMENT
GENERAL SYMBOL
Standard: NEK 144 81005 / IEC 08-01-03

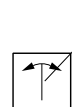
ES098A
INTERGRATING INSTR. GEN SYM

 Descript: THERMOMETER PYROMETER
THERMOMETER PYROMETER
Standard: NEK 144 81012

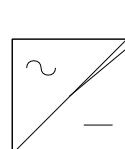
ES099A
THERMOMETER PYROMETER

 Descript: SYNCHRONOSCOPE
Standard: NEK 144 81017

ES100A
SYNCHRONOSCOPE

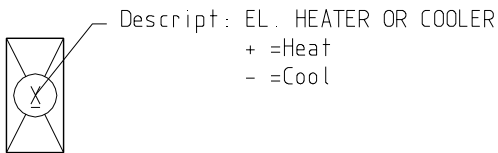
 Descript: SYNCHRONIZIER
Standard: NEK 144 81001

ES101A
SYNCHRONIZIER

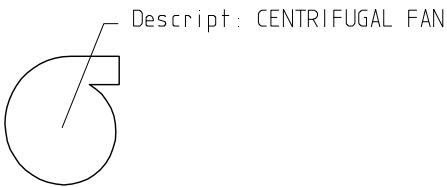
 Descript: RECTIFIER
Standard: IEC 06-14-03

ES102A
RECTIFIER

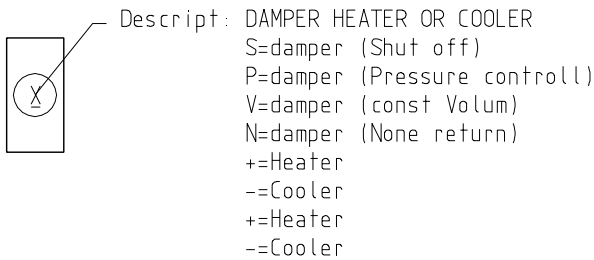
ANNEX B HVAC (NORMATIVE)



HE001A
EL. HEATER OR COOLER



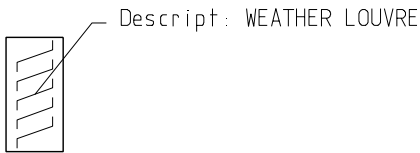
HM001A
CENTRIFUGAL FAN



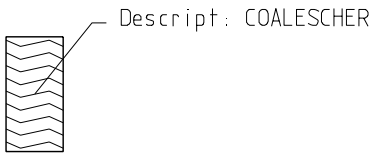
HE002A
DAMPER HEATER OR COOLER



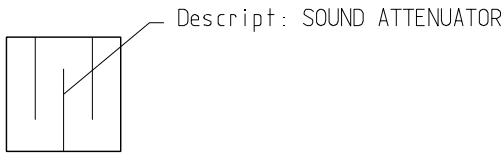
HE003A
AIR FILTER



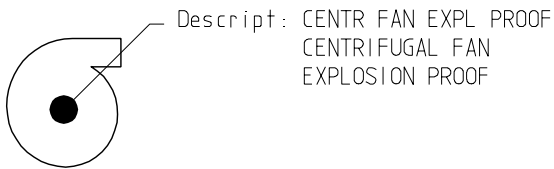
HE004A
WEATHER LOUVRE



HE005A
COALESCHER



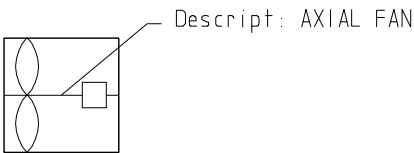
HE006A
SOUND ATTENUATOR



HM002A
CENTR FAN EXPL PROOF



HP005A
AIR OUTLET



HM003A
AXIAL FAN



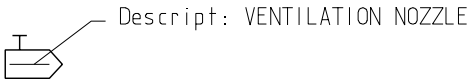
HM004A
AXIAL FAN EXPL PROF



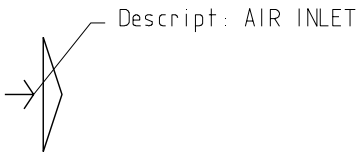
HP001A
FLEXIBLE CONECTION



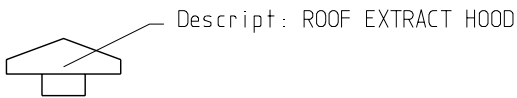
HP002A
FLEXIBLE DUCTWORK



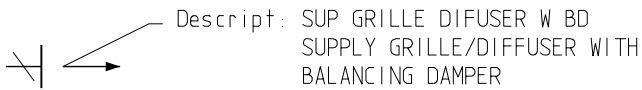
HP003A
VENTILATION NOZZLE



HP004A
AIR INLET



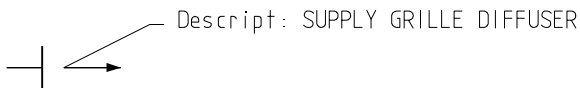
HP006A
ROOF EXTRACT HOOD



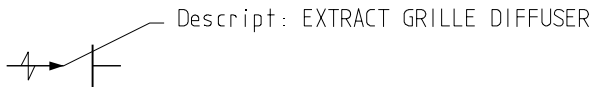
HP007A
SUP GRILLE DIFUSER W BD



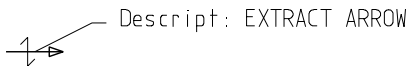
HP008A
EXT GRILLE DIFUSER W BD



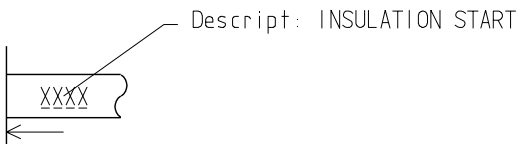
HP009A
SUPPLY GRILLE DIFFUSER



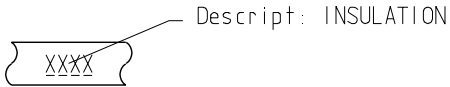
HP010A
EXTRACT GRILLE DIFFUSER



HP011A
EXTRACT ARROW



HP012A
INSULATION START



HP013A
INSULATION



HP014A
INSULATION STOP



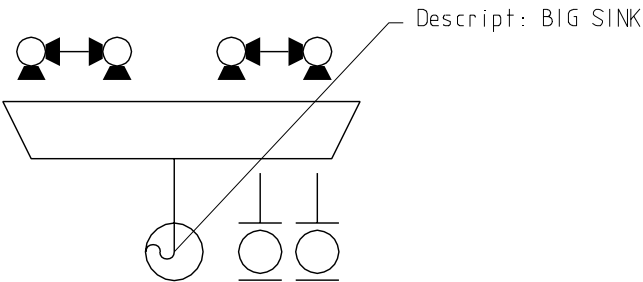
HP015A
DUCT PENETRATION



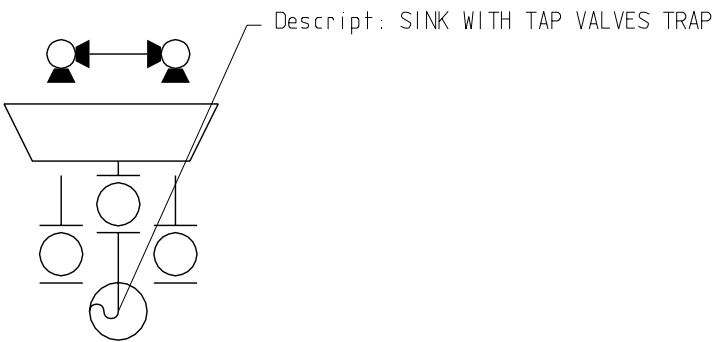
HP016A
DUCT NUMBER



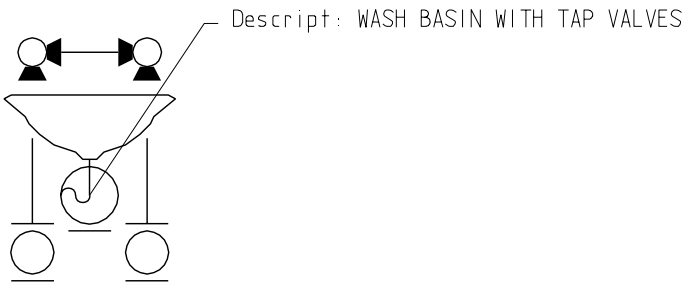
HP017A
DIR TRANSFER GRILL



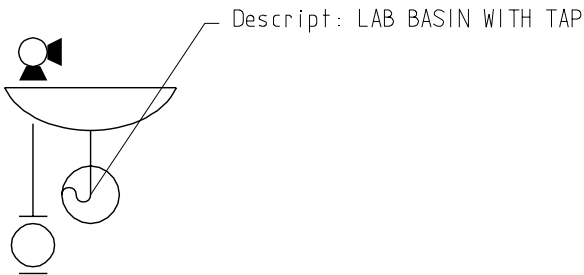
HV001A
BIG SINK



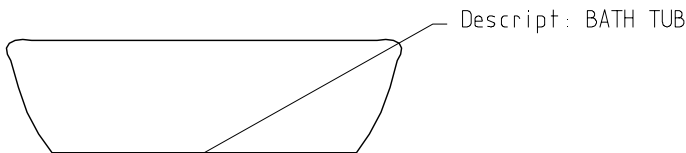
HV002A
SINK WITH TAP VALVES TRAP



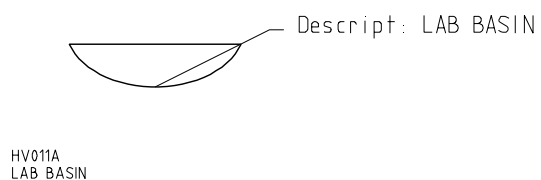
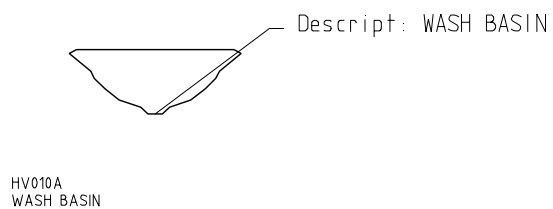
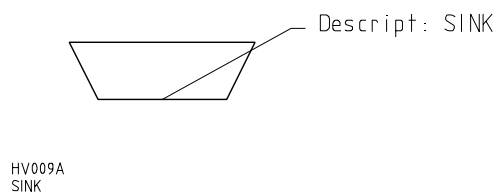
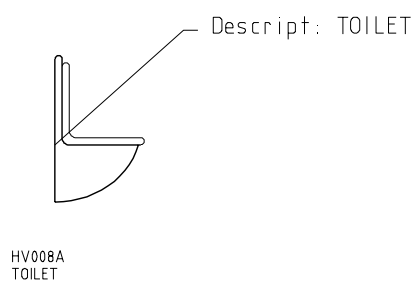
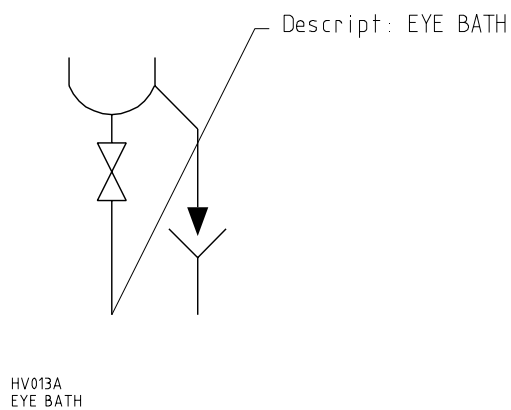
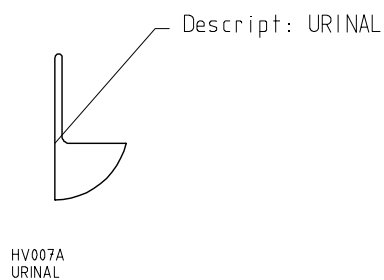
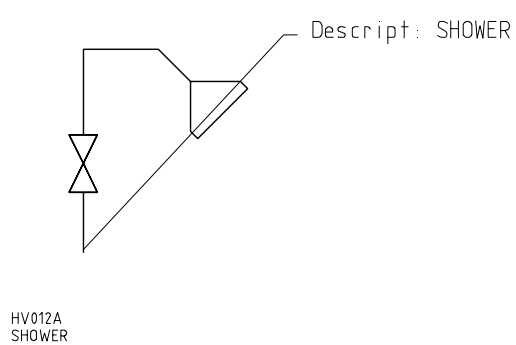
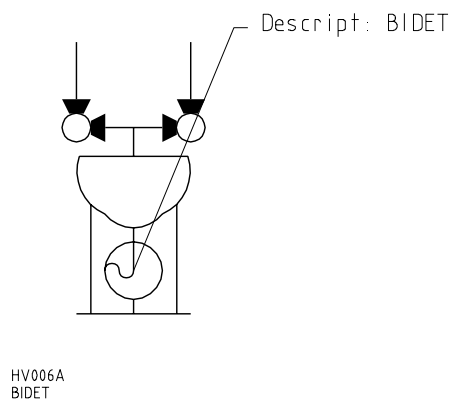
HV003A
WASH BASIN WITH TAP VALVES

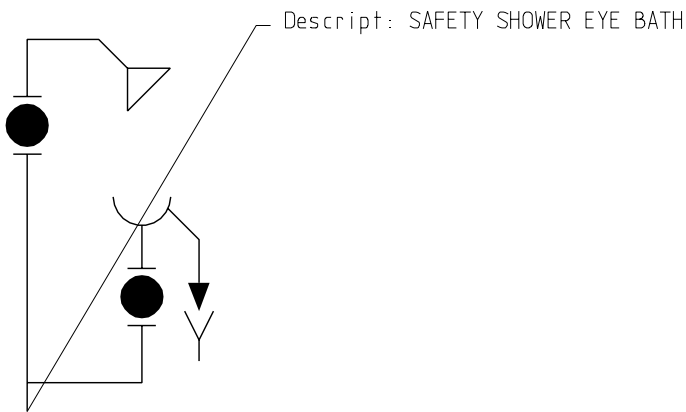


HV004A
LAB BASIN WITH TAP

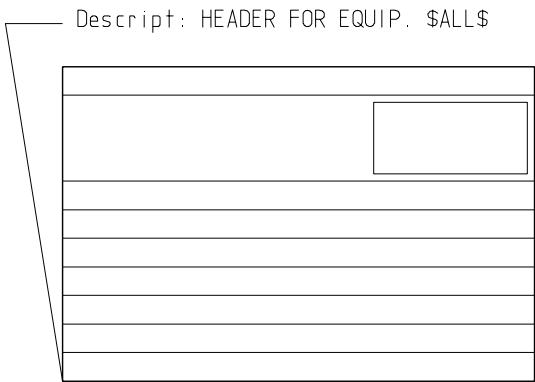


HV005A
BATH TUB

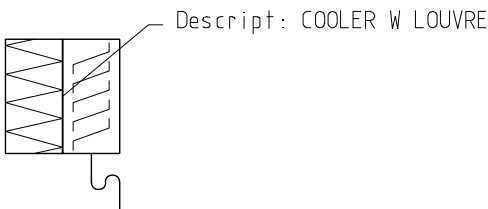




HV014A
SAFETY SHOWER EYE BATH



HZ001A
HEADER FOR EQUIP. \$ALL\$

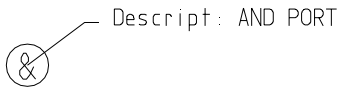


HZ002A
COOLER W LOUVRE

ANNEX C INSTRUMENT (NORMATIVE)



IF001A
AMPLIFIER



IF002A
AND PORT



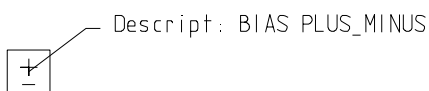
IF003A
AVERAGING



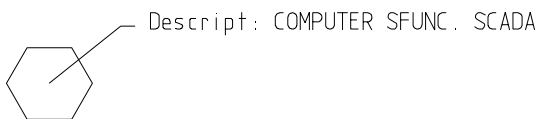
IF004A
BIAS MINUS



IF005A
BIAS PLUS



IF006A
BIAS PLUS_MINUS



IF007A
COMPUTER SFUNC. SCADA



IF008A
CURRENT TO PNEUMATIC



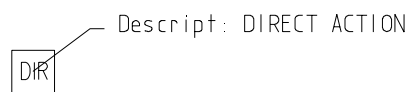
IF009A
DERIVATIVE



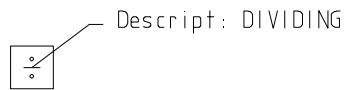
IF010A
DIFFERENCE RELAY



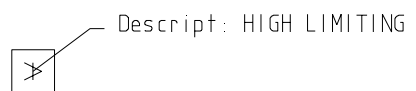
IF011A
DIGITAL TO DIGITAL



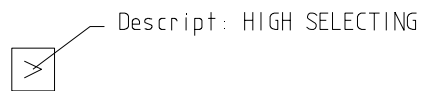
IF012A
DIRECT ACTION



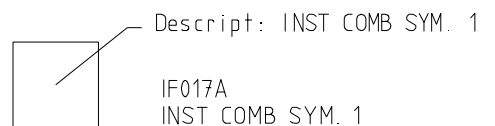
IF013A
DIVIDING



IF014A
HIGH LIMITING



IF015A
HIGH SELECTING



NORSOK STANDARD Z-004 CAD SYMBOL LIBRARY
ANNEX C - INSTRUMENT

REV. 1 JULY 98

PAGE 1 OF 9



Descript: INTEGRAL

IF019A
INTEGRAL



Descript: INVERSE DERIVATE

IF020A
INVERSE DERIVATE



Descript: INVERTER

IF021A
INVERTER



Descript: LOG. OR SEQ. CONTR. SCADA

IF022A
LOG. OR SEQ. CONTR. SCADA



Descript: LOW LIMITING

IF023A
LOW LIMITING



Descript: LOW SELECTING

IF024A
LOW SELECTING



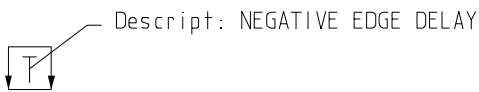
Descript: MONITORING

IF025A
MONITORING

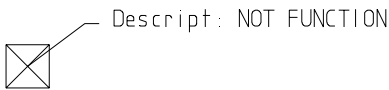


Descript: MULTIPLYING

IF026A
MULTIPLYING



IF027A
NEGATIVE EDGE DELAY



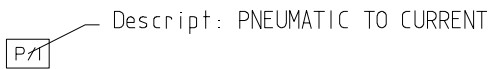
IF028A
NOT FUNCTION



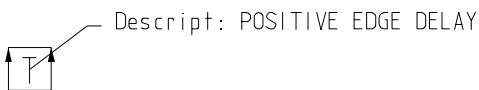
IF029A
ON OFF



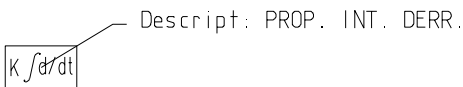
IF030A
OR PORT



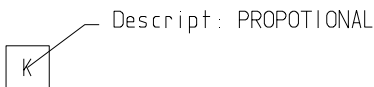
IF031A
PNEUMATIC TO CURRENT



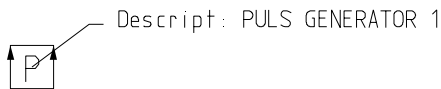
IF032A
POSITIVE EDGE DELAY



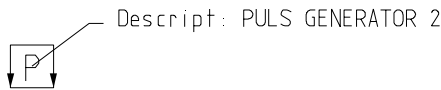
IF033A
PROP. INT. DERR.



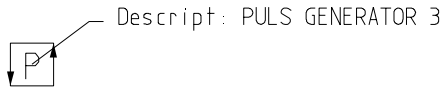
IF034A
PROPOTIONAL



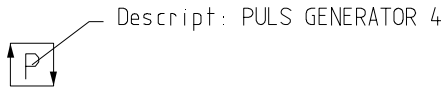
IF035A
PULS GENERATOR 1



IF036A
PULS GENERATOR 2



IF037A
PULS GENERATOR 3



IF038A
PULS GENERATOR 4



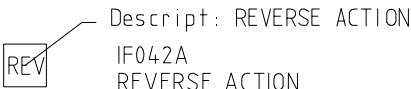
IF039A
RAISE TO POWER



IF040A
RESISTANCE TO CURRENT



IF041A
RESITANCE TO PNEUMATIC



IF042A
REVERSE ACTION



Descript: REVERSE PROPORTIONAL

IF043A
REVERSE PROPORTIONAL



Descript: TIMER UP

IF052A
TIMER UP



Descript: ROOT EXTRACT

IF044A
ROOT EXTRACT



Descript: VEL LIMITER

IF053A
VEL LIMITER



Descript: SPLITT PORT

IF046A
SPLITT PORT



Descript: VOLTAGE TO CURRENT

IF054A
VOLTAGE TO CURRENT



Descript: SQUARE ROOT

IF047A
SQUARE ROOT



Descript: VOLTAGE TO PNEUMATIC

IF055A
VOLTAGE TO PNEUMATIC



Descript: SUBTRACTING

IF048A
SUBTRACTING



Descript: SUMMING

IF049A
SUMMING



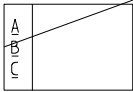
Descript: TIME

IF050A
TIME



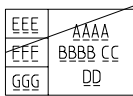
Descript: TIMER DOWN

IF051A
TIMER DOWN



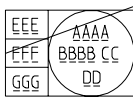
Descript: COBINATED SYMBOL
 COMBINE SYMBOL FOR INDICATION
 OF FUNCTION IN
 DEDICATED COMPUTER SYSTEM
 A
 B
 C
 B
 C

IM001A
COBINATED SYMBOL



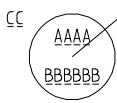
Descript: CONTROL ELEMENT
 AAAA
 BBBB
 CC
 DD
 EEE
 FFF
 EEE
 FFF
 GGG

IM003A
CONTROL ELEMENT



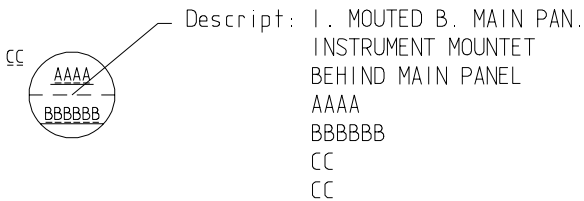
Descript: CONTROL ELEMENT
 AAAA
 BBBB
 CC
 DD
 EEE
 FFF
 EEE
 FFF
 GGG

IM004A
CONTROL ELEMENT

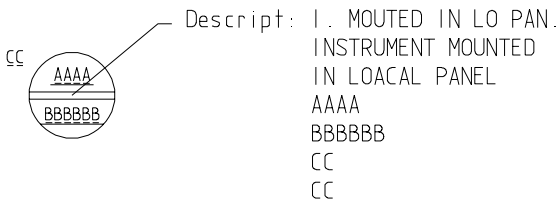


Descript: FIELD M INSTR OR TAG BALOON
 AAAA
 BBBB
 CC

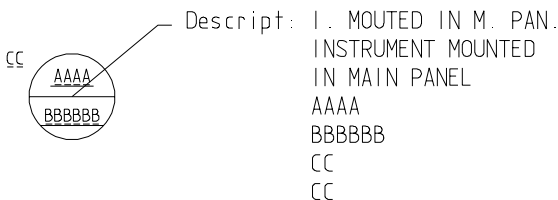
IM005A
FIELD M INSTR OR TAG BALOON



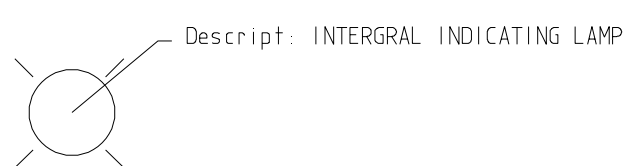
IM006A
I. MOUTED B. MAIN PAN.



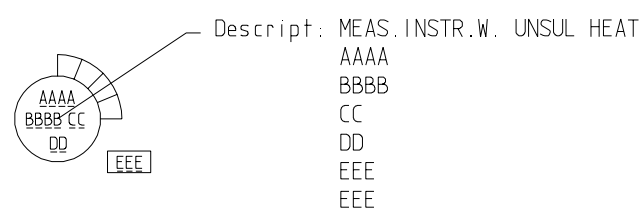
IM007A
I. MOUTED IN LO PAN.



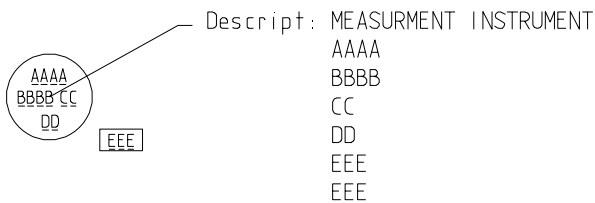
IM008A
I. MOUTED IN M. PAN.



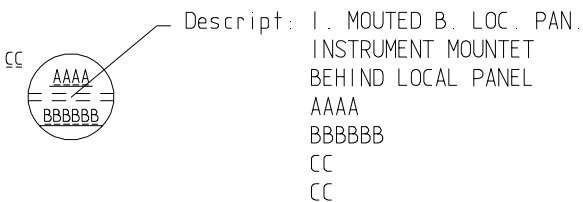
IM009A
INTERGRAL INDICATING LAMP



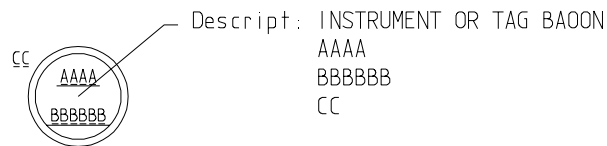
IM010A
MEAS.INSTR.W. UNSUL HEAT



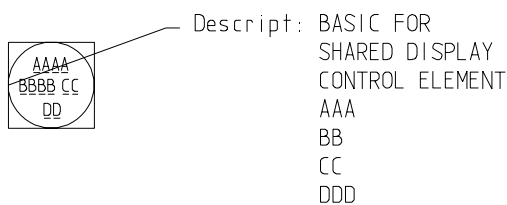
IM011A
MEASURMENT INSTRUMENT



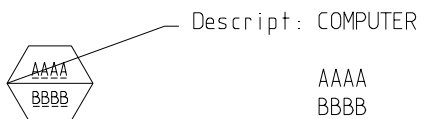
IM012A
I. MOUTED B. LOC. PAN.



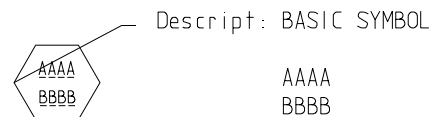
IM013A
INSTRUMENT OR TAG BAOON



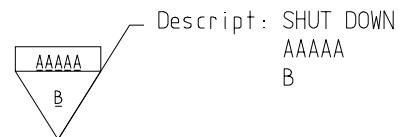
IM014A
SHARED DISPL. CONTROL ELEM.



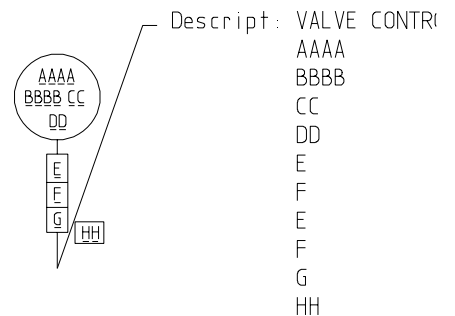
IM015A
COMPUTER BASED OPERATER



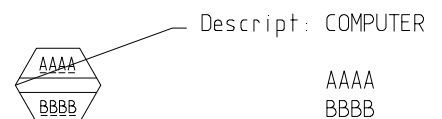
IM016A
BASIC COMPUTER BASED



IM017A
SHUT DOWN



IM018A
VALVE CONTROL



IM019A
COMPUTER CONTROL ROOM



IV001A
FLANGES

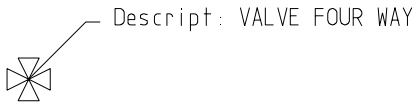


IV002A
BLIND FLANGE



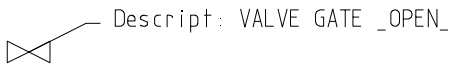
Descript: VALVE TREE WAY

IV003A
VALVE TREE WAY



Descript: VALVE FOUR WAY

IV004A
VALVE FOUR WAY



Descript: VALVE GATE _OPEN_

IV005A
VALVE GATE _OPEN_



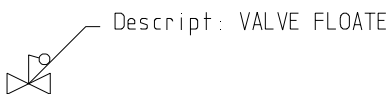
Descript: VALVE GATE _CLOSED_

IV006A
VALVE GATE _CLOSED_



Descript: VALVE GLOBE

IV007A
VALVE GLOBE



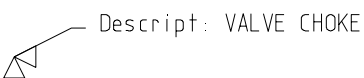
Descript: VALVE FLOATE

IV008A
VALVE FLOATE



Descript: VALVE MIN FLOW AND CHECK

IV009A
VALVE MIN FLOW AND CHECK



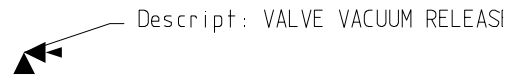
Descript: VALVE CHOKE

IV010A
VALVE CHOKE



Descript: VALVE PSV

IV011A
VALVE PSV



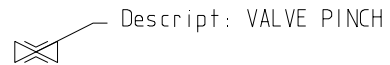
Descript: VALVE VACUUM RELEASE

IV012A
VALVE VACUUM RELEASE



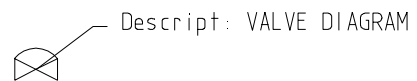
Descript: VALVE CHECK

IV013A
VALVE CHECK



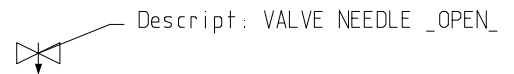
Descript: VALVE PINCH

IV014A
VALVE PINCH



Descript: VALVE DIAGRAM

IV015A
VALVE DIAGRAM



Descript: VALVE NEEDLE _OPEN_

IV016A
VALVE NEEDLE _OPEN_



Descript: VALVE NEEDLE _CLOSED_

IV017A
VALVE NEEDLE _CLOSED_

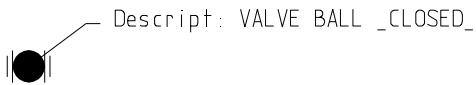


Descript: VALVE BUTTERFLY

IV018A
VALVE BUTTERFLY



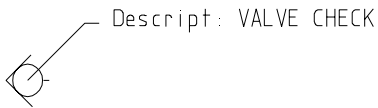
IV019A
VALVE BALL _OPEN_



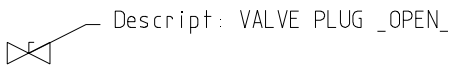
IV020A
VALVE BALL _CLOSED_



IV021A
VALVE BLOCK\$BLEND _INSTR_



IV022A
VALVE CHECK

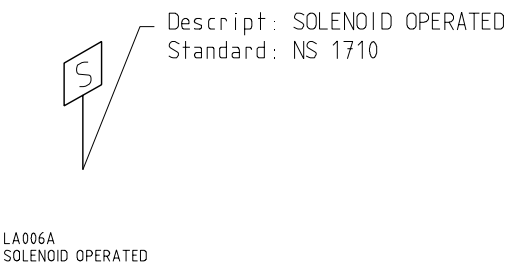
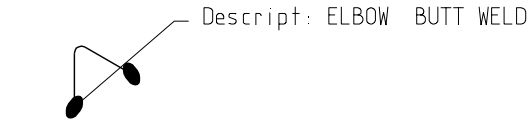
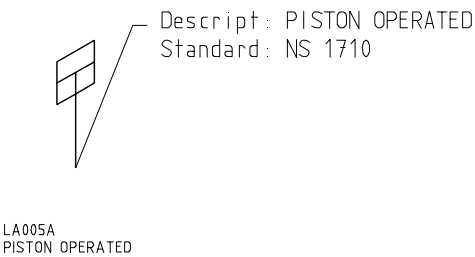
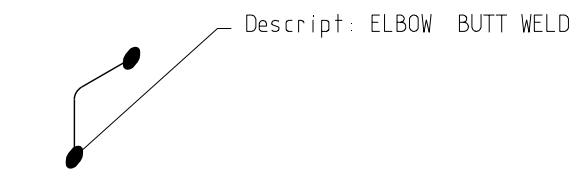
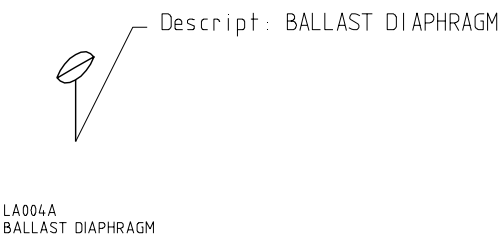
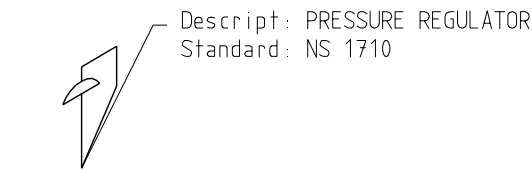
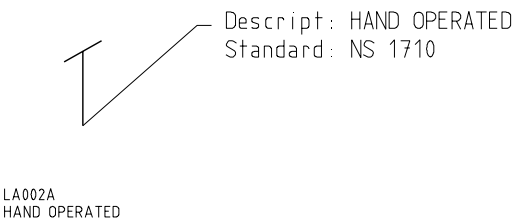
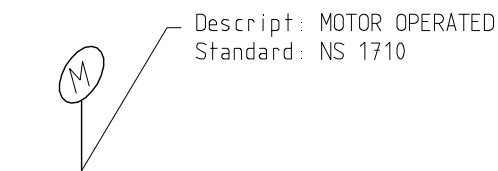
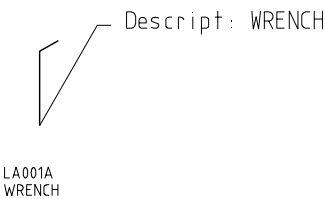


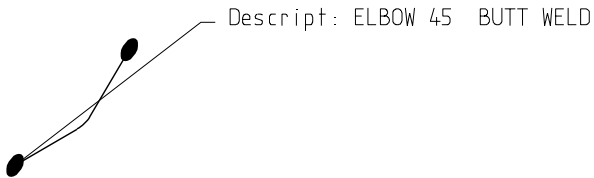
IV023A
VALVE PLUG _OPEN_



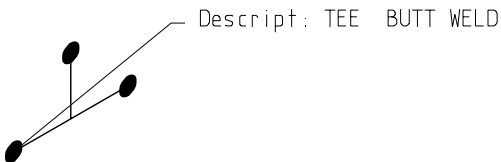
IV024A
VALVE PLUG _CLOSED_

ANNEX D PIPING ISOMETRIC (NORMATIVE)

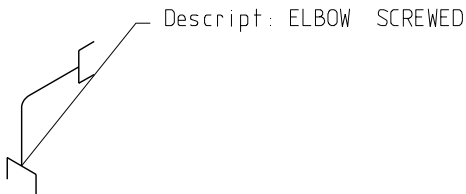




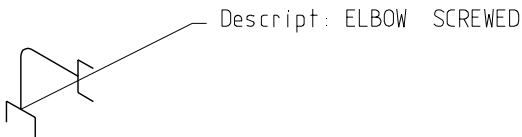
LB003A
ELBOW 45 BUTT WELD



LB004A
TEE BUTT WELD



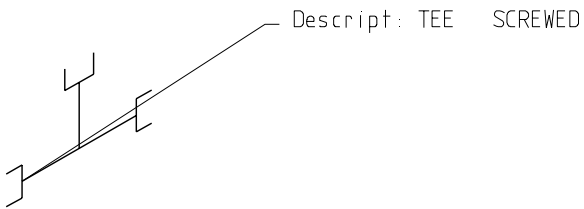
LB005A
ELBOW SCREWED



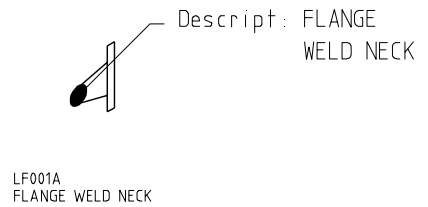
LB006A
ELBOW SCREWED



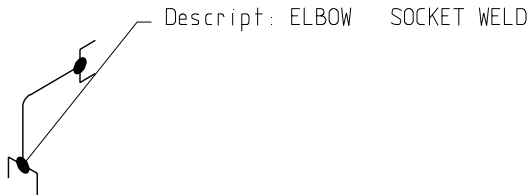
LB007A
ELBOW 45 SCREWED



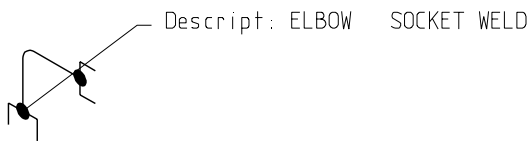
LB008A
TEE SCREWED



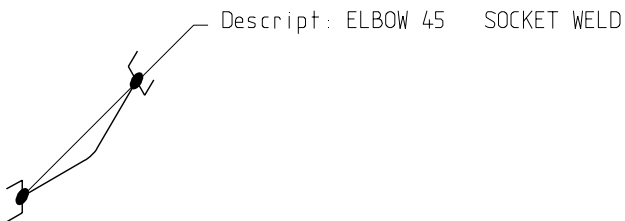
LF001A
FLANGE WELD NECK



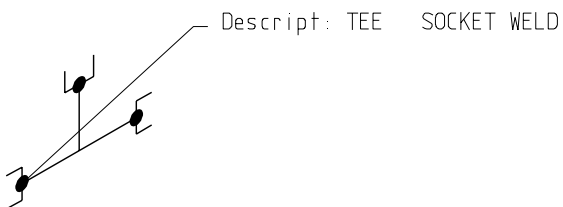
LB009A
ELBOW SOCKET WELD



LB010A
ELBOW SOCKET WELD



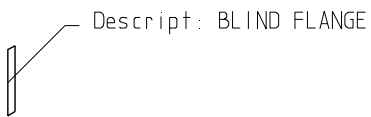
LB011A
ELBOW 45 SOCKET WELD



LB012A
TEE SOCKET WELD



LF002A
FLANGES WELD NECK



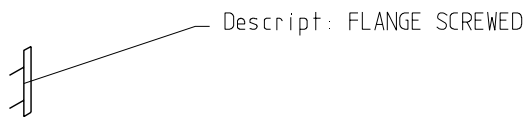
LF003A
BLIND FLANGE



LF004A
FLANGE SLIP ON



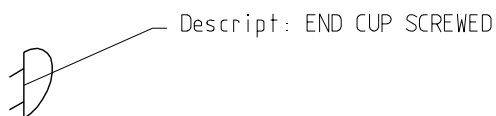
LF005A
FLANGE SOCKET WELD



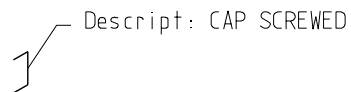
LF006A
FLANGE SCREWED



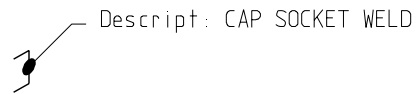
LF007A
END CUP WELD



LF008A
END CUP SCREWED



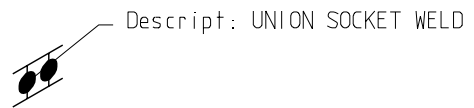
LF009A
CAP SCREWED



LF010A
CAP SOCKET WELD



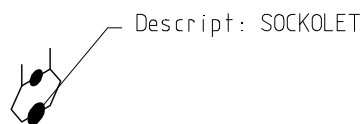
LF011A
UNION SCREWED



LF012A
UNION SOCKET WELD



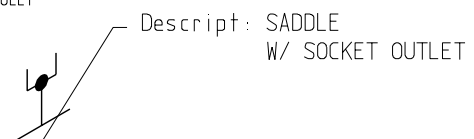
L0001A
WELDOLET



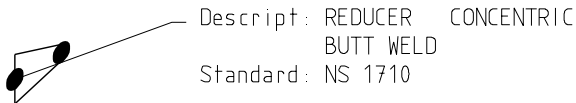
L0002A
SOCKOLET



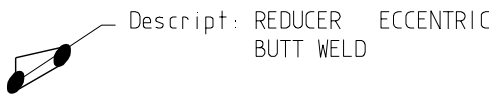
L0003A
THREDOLET



L0004A
SADDLE



LR001A
REDUCER CONCENTRIC



LR002A
REDUCER ECCENTRIC



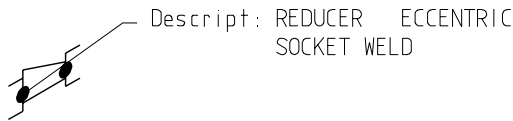
LR003A
REDUCER CONCENTRIC



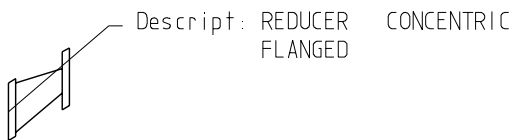
LR004A
REDUCER ECCENTRIC



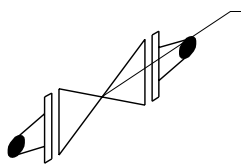
LR005A
REDUCER CONCENTRIC



LR006A
REDUCER ECCENTRIC

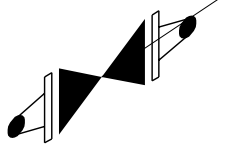


LR007A
REDUCER CONCENTRIC



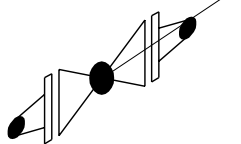
Descript: GATE VALVE OPEN
WITH WELD NECK FLANGES

LS001A
GATE VALVE OPEN



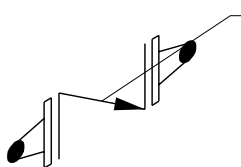
Descript: GATE VALVE CLOSED
WITH WELD NECK FLANGES

LS002A
GATE VALVE CLOSED



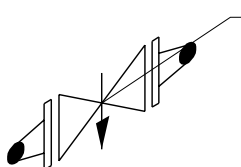
Descript: GLOBE VALVE
WITH WELD NECK FLANGES

LS003A
GLOBE VALVE



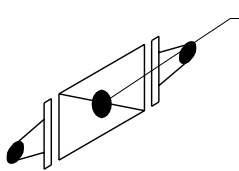
Descript: CHECK VALVE
WITH WELD NECK FLANGES

LS004A
CHECK VALVE



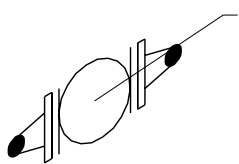
Descript: NEEDLE VALVE OPEN
WITH WELD NECK FLANGES

LS005A
NEEDLE VALVE OPEN



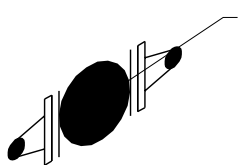
Descript: BUTTERFLY VALVE
WITH WELD NECK FLANGES

LS006A
BUTTERFLY VALVE



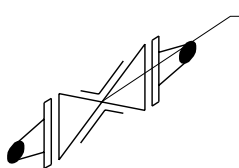
Descript: BALL VALVE OPEN
WITH WELD NECK FLANGES

LS007A
BALL VALVE OPEN



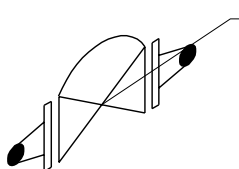
Descript: BALL VALVE CLOSED
WITH WELD NECK FLANGES

LS008A
BALL VALVE CLOSED



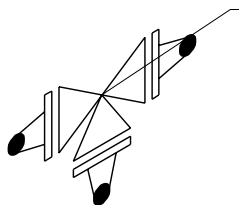
Descript: PINCH VALVE
WITH WELD NECK FLANGES

LS009A
PINCH VALVE



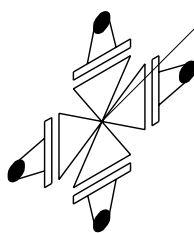
Descript: DIAPHRAGM VALVE
WITH WELD NECK FLANGES

LS010A
DIAPHRAGM VALVE



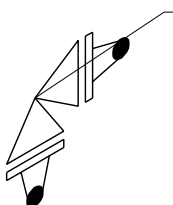
Descript: THREE WAY VALVE
WITH WELD NECK FLANGES

LS011A
THREE\$WAY VALVE



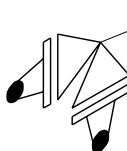
Descript: FOUR WAY VALVE
WITH WELD NECK FLANGES

LS012A
FOUR\$WAY VALVE



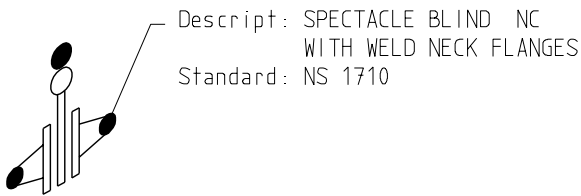
Descript: PSV VALVE
WITH WELD NECK FLANGES

LS014A
PSV VALVE



Descript: PSV VALVE
WITH WELD NECK FLANGES

LS015A
PSV VALVE



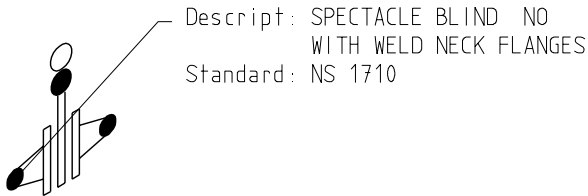
Descript: SPECTACLE BLIND NC
WITH WELD NECK FLANGES
Standard: NS 1710

LS016A
SPECTACLE BLIND \$NC\$



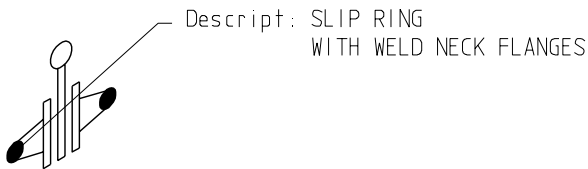
Descript: FLANGES
SOCKET WELD

LS022A
FLANGES



Descript: SPECTACLE BLIND NO
WITH WELD NECK FLANGES
Standard: NS 1710

LS017A
SPECTACLE BLIND \$NO\$



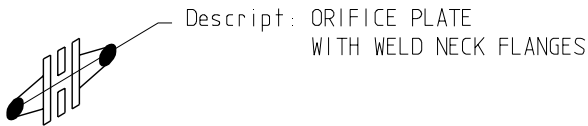
Descript: SLIP RING
WITH WELD NECK FLANGES

LS018A
SLIP RING



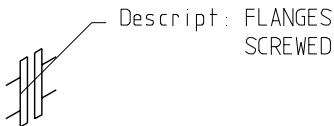
Descript: SLIP RING
WITH WELD NECK FLANGES

LS019A
SLIP RING



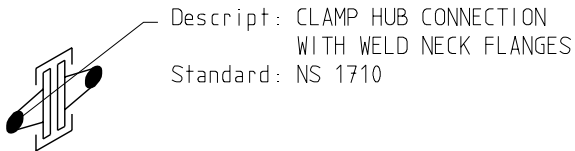
Descript: ORIFICE PLATE
WITH WELD NECK FLANGES

LS020A
ORIFICE PLATE



Descript: FLANGES
SCREWED

LS021A
FLANGES



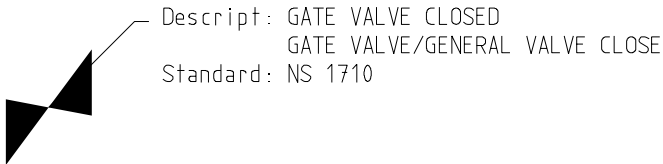
Descript: CLAMP HUB CONNECTION
WITH WELD NECK FLANGES
Standard: NS 1710

LS023A
CLAMP HUB CONNECTION



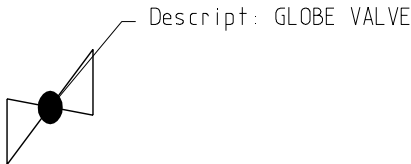
Descript: VALVE GATEGENERAL OPEN
GATE VALVE/GENERAL VALVE OPEN
Standard: NS 1710

LV001A
VALVE GATEGENERAL OPEN



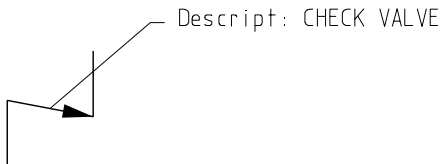
Descript: GATE VALVE CLOSED
GATE VALVE/GENERAL VALVE CLOSE
Standard: NS 1710

LV002A
GATE VALVE CLOSED



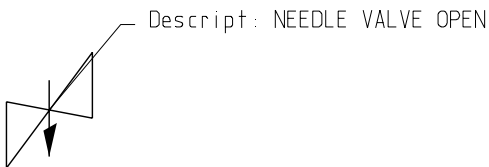
Descript: GLOBE VALVE

LV003A
GLOBE VALVE



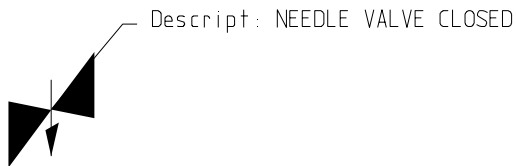
Descript: CHECK VALVE

LV004A
CHECK VALVE

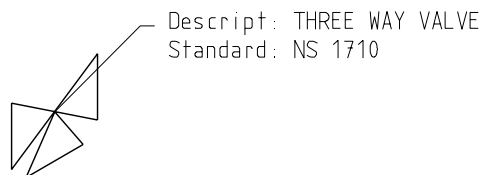


Descript: NEEDLE VALVE OPEN

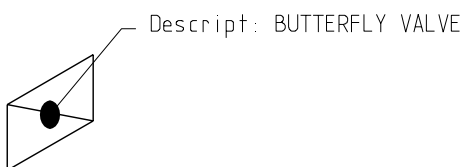
LV005A
NEEDLE VALVE OPEN



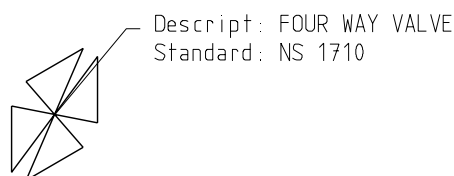
LV006A
NEEDLE VALVE CLOSED



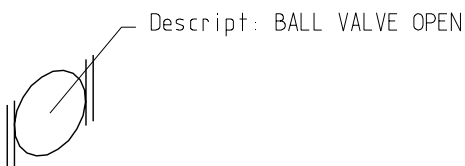
LV012A
THREEWAY VALVE



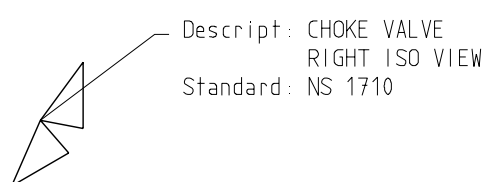
LV007A
BUTTERFLY VALVE



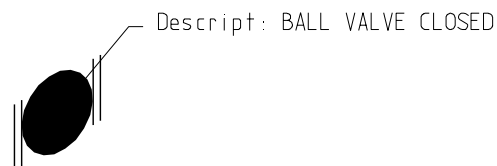
LV013A
FOURWAY VALVE



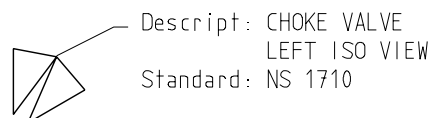
LV008A
BALL VALVE OPEN



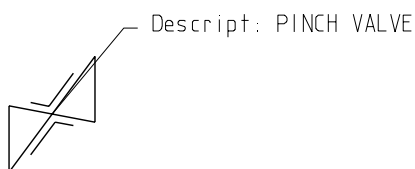
LV014A
CHOKE VALVE



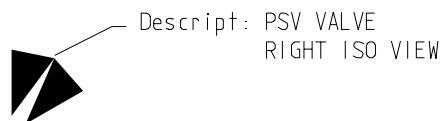
LV009A
BALL VALVE CLOSED



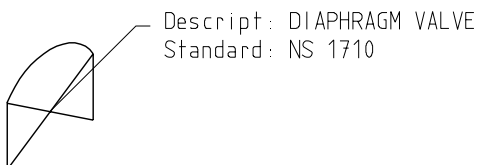
LV015A
CHOKE VALVE



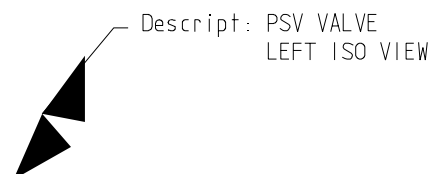
LV010A
PINCH VALVE



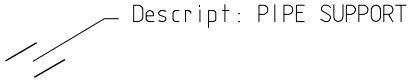
LV016A
PSV VALVE



LV011A
DIAPHRAGM VALVE



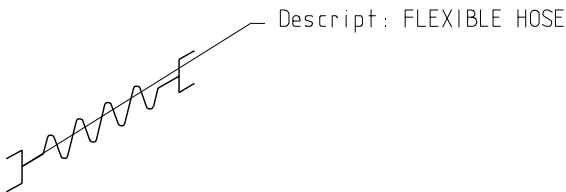
LV017A
PSV VALVE



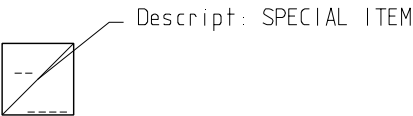
LZ001A
PIPE SUPPORT



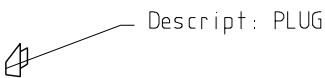
LZ008A
TERMINATOR



LZ002A
FLEXIBLE HOSE



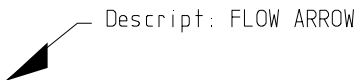
LZ009A
SPECIAL ITEM



LZ003A
PLUG



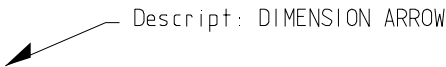
LZ010A
DECK AND WALL



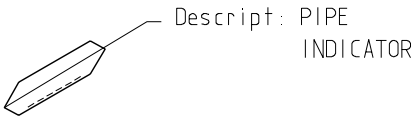
LZ004A
FLOW ARROW



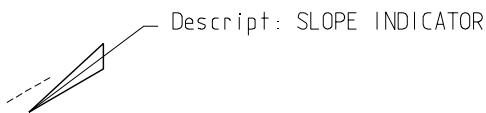
LZ011A
ITEM



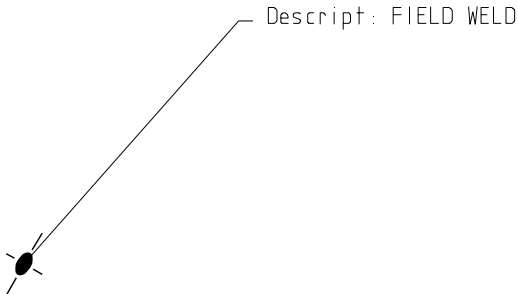
LZ005A
DIMENSION ARROW



LZ012A
PIPE INDICATOR



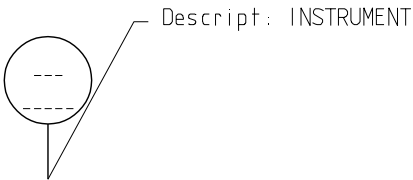
LZ006A
SLOPE INDICATOR



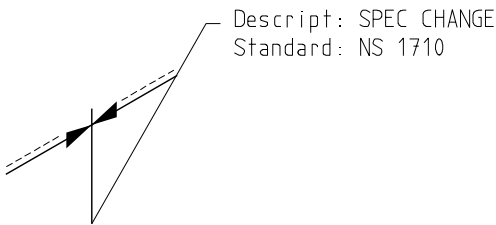
LZ007A
FIELD WELD



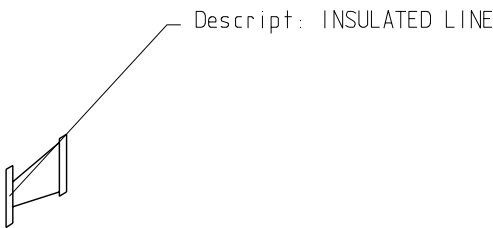
LZ013A
PLATFORM GRID REFERENCE



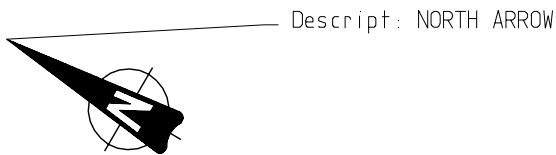
LZ014A
INSTRUMENT



LZ015A
SPEC CHANGE

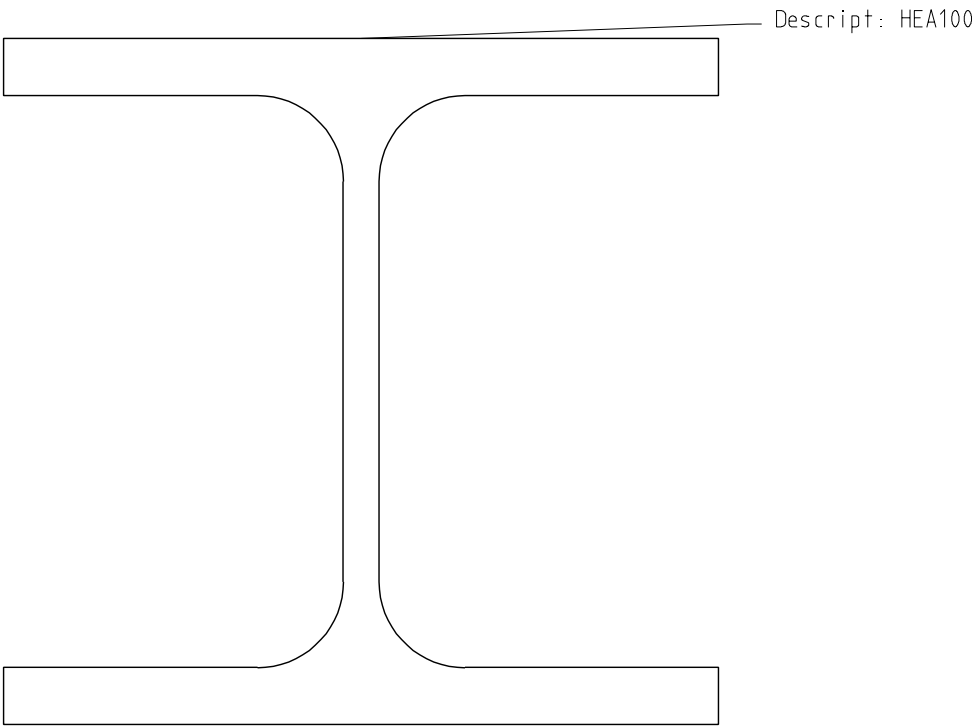


LZ016A
INSULATED LINE

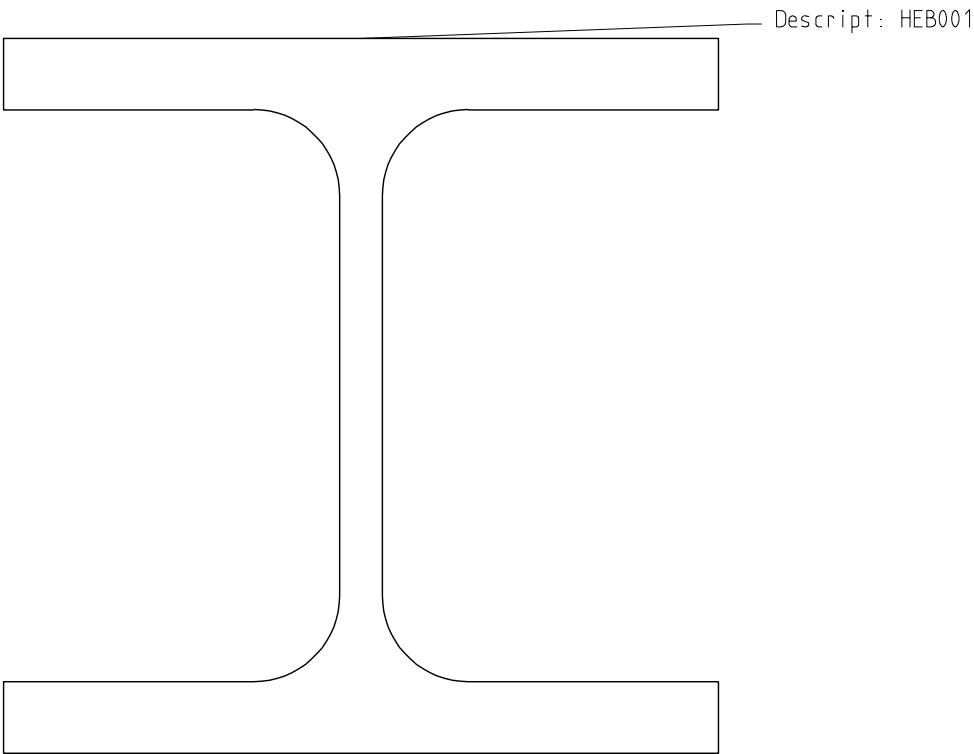


LZ017A
NORTH ARROW

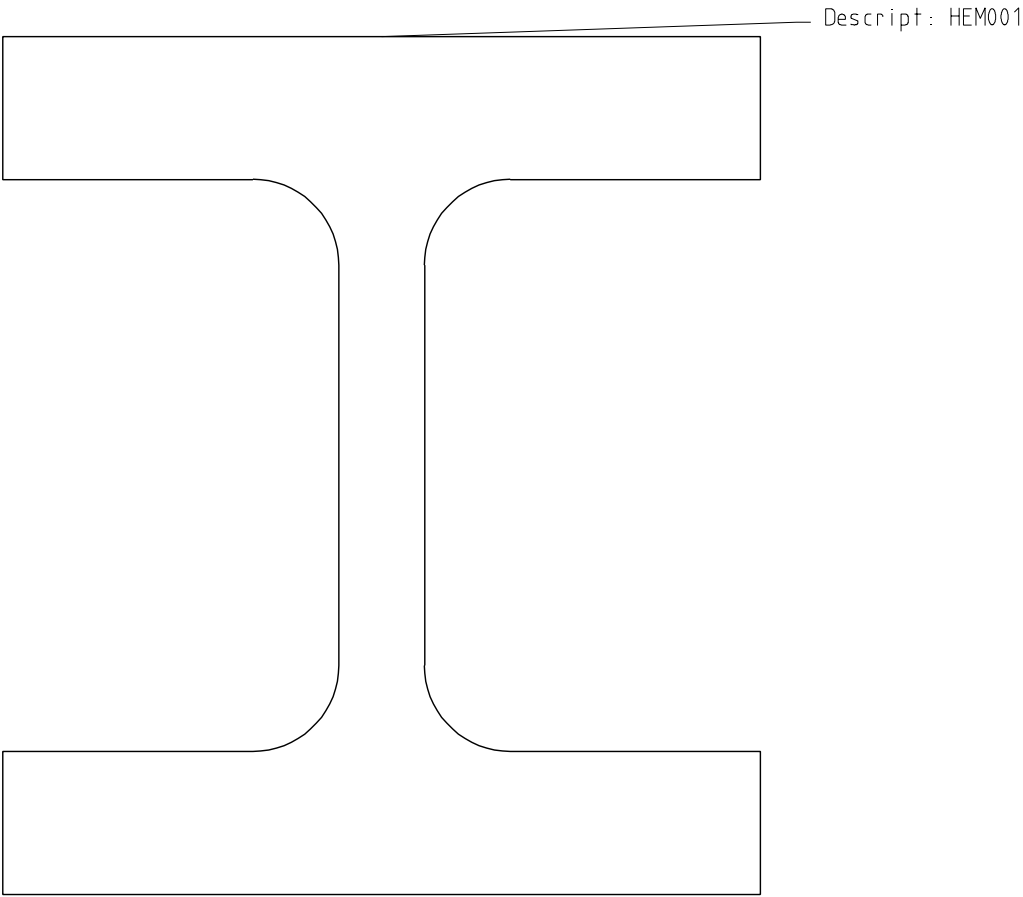
ANNEX E STRUCTURAL (NORMATIVE)



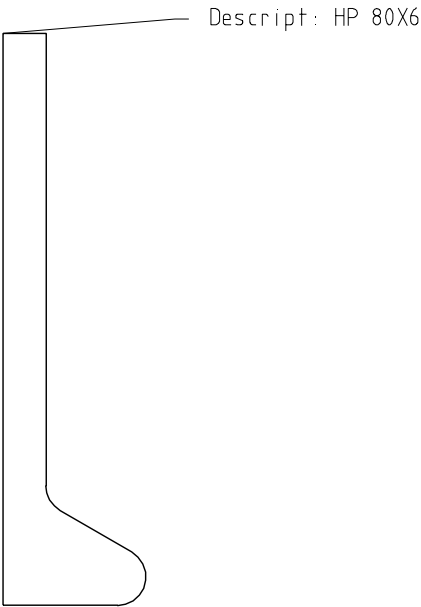
HEA100
HEA100



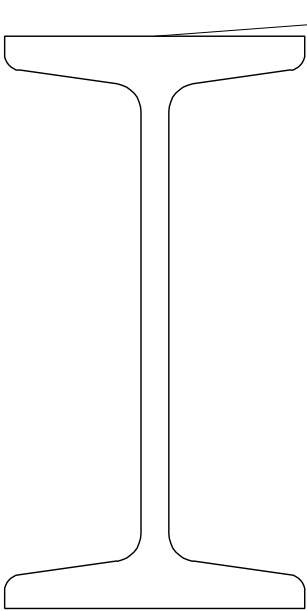
HEB001
HEB001



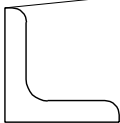
HEM001
HEM001



HP001
HP 80X6



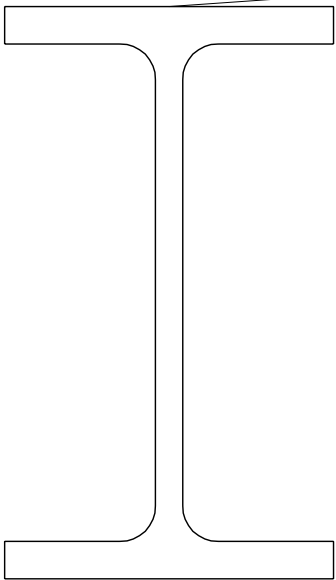
Descript: INP 80



Descript: L 16X3

L001
L 16X3

INP80
INP80



Descript: IPE 80

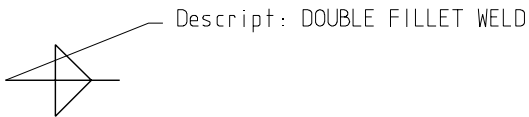
IPE80
IPE80



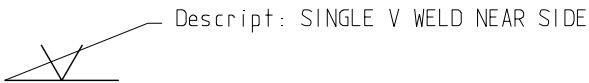
NW001A
FILLET WELD NEAR SIDE



NW002A
FILLET WELD FAR SIDE



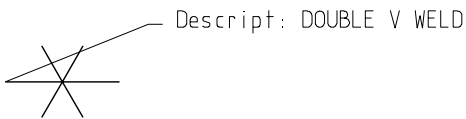
NW003A
DOUBLE FILLET WELD



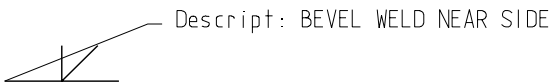
NW004A
SINGLE V WELD NEAR SIDE



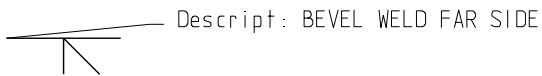
NW005A
SINGLE V WELD FAR SIDE



NW006X
DOUBLE V WELD

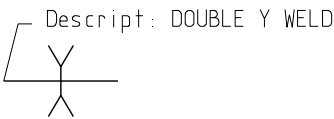


NW007X
BEVEL WELD NEAR SIDE



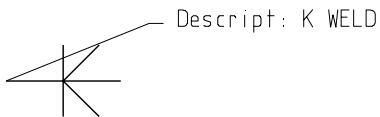
Descript: BEVEL WELD FAR SIDE

NW008X
BEVEL WELD FAR SIDE



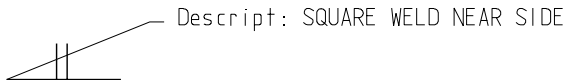
Descript: DOUBLE Y WELD

NW015A
DOUBLE Y WELD



Descript: K WELD

NW009A
K WELD



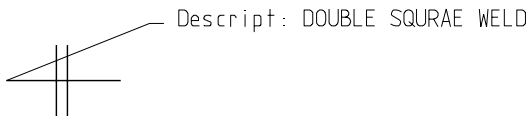
Descript: SQUARE WELD NEAR SIDE

NW010A
SQUARE WELD NEAR SIDE



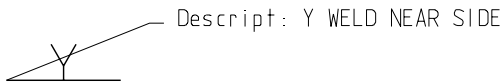
Descript: SQUARE WELD FAR SIDE

NW011A
SQUARE WELD FAR SIDE



Descript: DOUBLE SQUARE WELD

NW012A
DOUBLE SQUARE WELD



Descript: Y WELD NEAR SIDE

NW013A
Y WELD NEAR SIDE



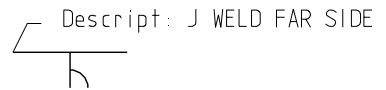
Descript: Y WELD FAR SIDE

NW014A
Y WELD FAR SIDE



Descript: FLARE BEVEL WELD NEAR

NW016A
FLARE BEVEL WELD NEAR



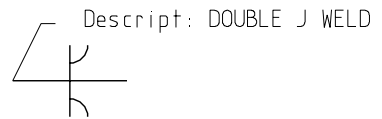
Descript: J WELD FAR SIDE

NW023A
J WELD FAR SIDE



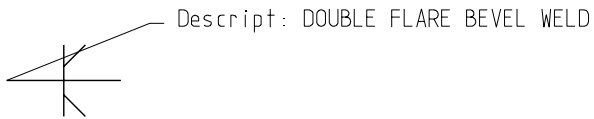
Descript: FLARE BEVEL WELD FAR

NW017A
FLARE BEVEL WELD FAR



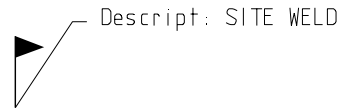
Descript: DOUBLE J WELD

NW024A
DOUBLE J WELD



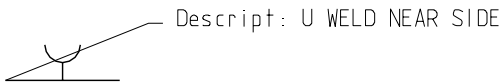
Descript: DOUBLE FLARE BEVEL WELD

NW018A
DOUBLE FLARE BEVEL WELD



Descript: SITE WELD

NW025A
SITE WELD



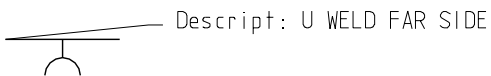
Descript: U WELD NEAR SIDE

NW019A
U WELD NEAR SIDE



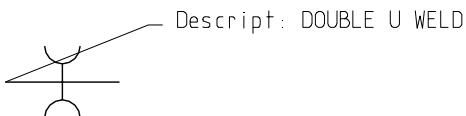
Descript: CIRCULAR WELD

NW026A
CIRCULAR WELD



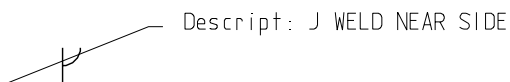
Descript: U WELD FAR SIDE

NW020A
U WELD FAR SIDE



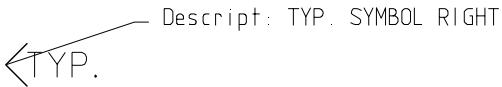
Descript: DOUBLE U WELD

NW021A
DOUBLE U WELD

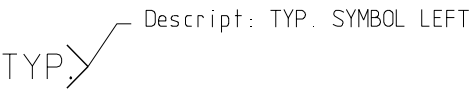


Descript: J WELD NEAR SIDE

NW022A
J WELD NEAR SIDE



NW027A
TYP. SYMBOL RIGHT



NW028A
TYP. SYMBOL LEFT



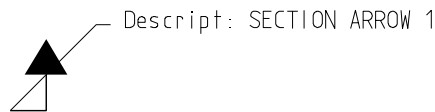
NW029A
GRIND SYMBOL



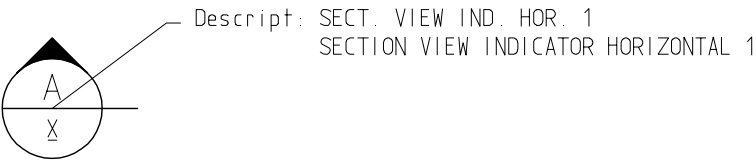
NW030A
GRIND SYMBOL



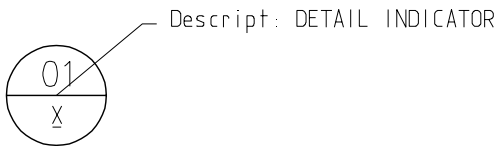
NW031A
GRIND SYMBOL



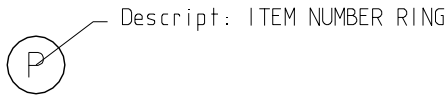
NZ001A
SECTION ARROW 1



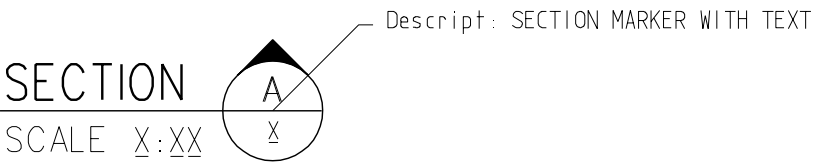
NZ002A
SECT. VIEW IND. HOR. 1



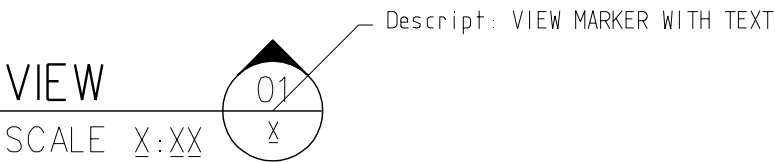
NZ003A
DETAIL INDICATOR



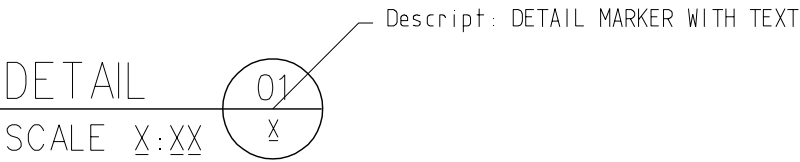
NZ004A
ITEM NUMBER RING



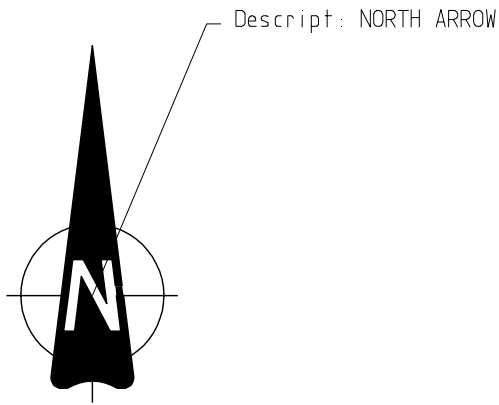
NZ005A
SECTION MARKER WITH TEXT



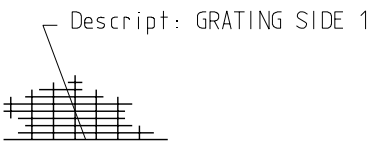
NZ006A
VIEW MARKER WITH TEXT



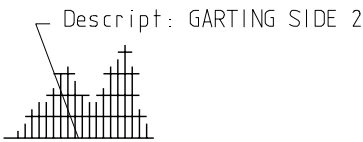
NZ007A
DETAIL MARKER WITH TEXT



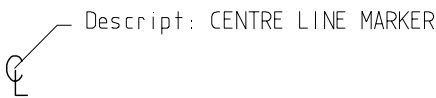
NZ008A
NORTH ARROW



NZ014A
GRATING SIDE 1



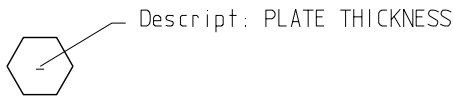
NZ015A
GARTING SIDE 2



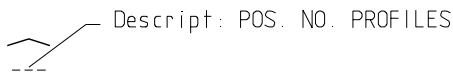
NZ009A
CENTRE LINE MARKER



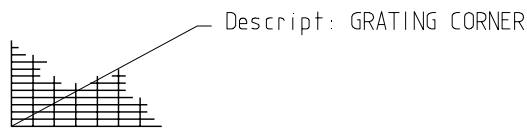
NZ010A
GIRDER REFERENCE



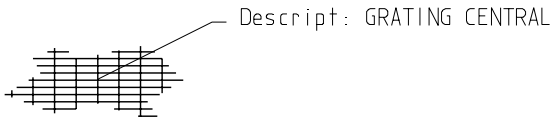
NZ011A
PLATE THICKNESS



NZ012A
POS. NO. PROFILES



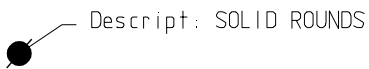
NZ013A
GRATING CORNER



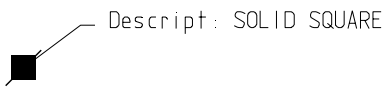
NZ016A
GRATING CENTRAL



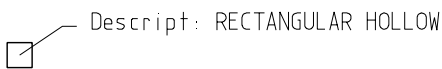
NZ017A
DIAMETER TUBULARS



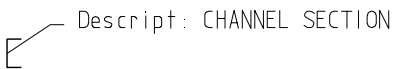
NZ018A
SOLID ROUNDS



NZ019A
SOLID SQUARE



NZ020A
RECTANGULAR HOLLOW



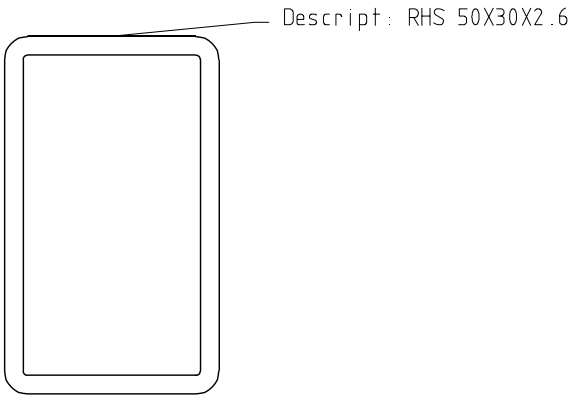
NZ021A
CHANNEL SECTION



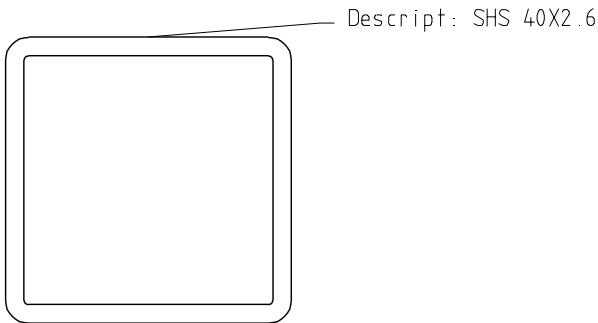
NZ022A
TERMINATOR



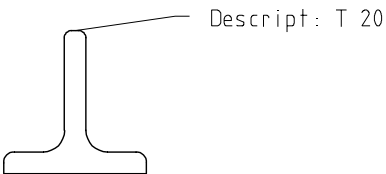
NZ023A
TERMINATOR



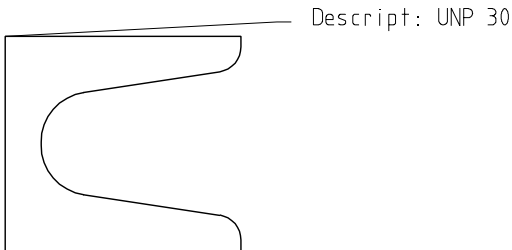
RHS001
RHS 50X30X2.6



SHS001
SHS 40X2.6



T001
T 20



UNP30
UNP30

ANNEX F PROCESS (NORMATIVE)



Descript: ACTUATOR TYPE E H M
ACTUATOR
E/H=ELECTRICAL / HYDROULIC
M =MOTOR

PA001A
ACTUATOR TYPE E H M



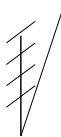
Descript: ACTUATOR TYPE W P D S
W=WEIGHT
P=PILOT
D=DIGITAL
S=SOLENOID

PA002A
ACTUATOR TYPE W P D S



Descript: MANUAL ACTUATOR

PA003A
MANUAL ACTUATOR



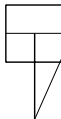
Descript: SPRING RETURN ACTUATOR

PA004A
SPRING RETURN ACTUATOR



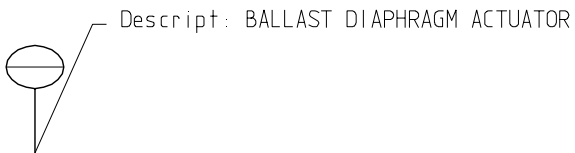
Descript: DUAL SOLENOID ACTUATOR

PA005A
DUAL SOLENOID ACTUATOR



Descript: PISTON

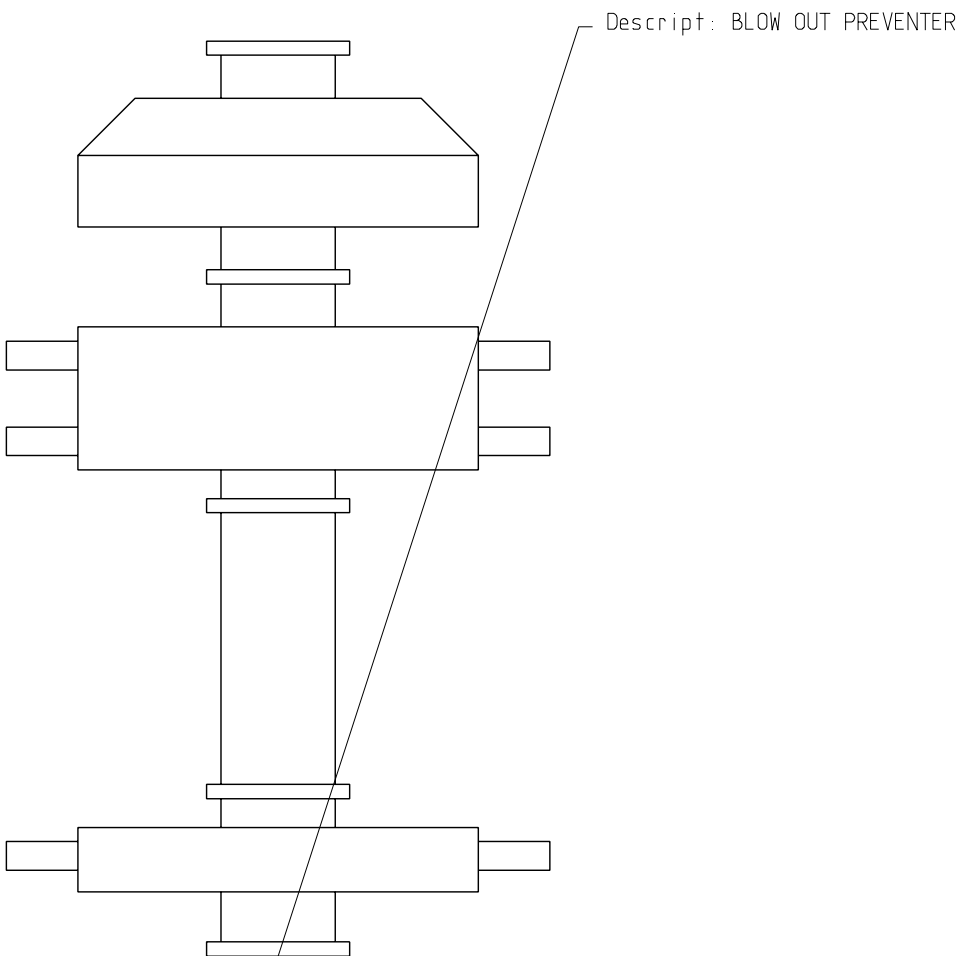
PA006A
PISTON



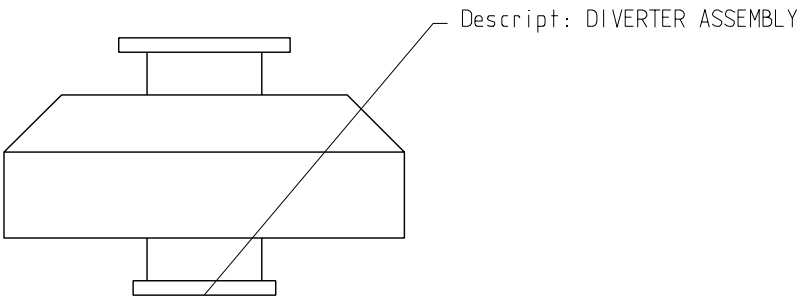
PA007A
BALLAST DIAPHRAGM ACTUATOR



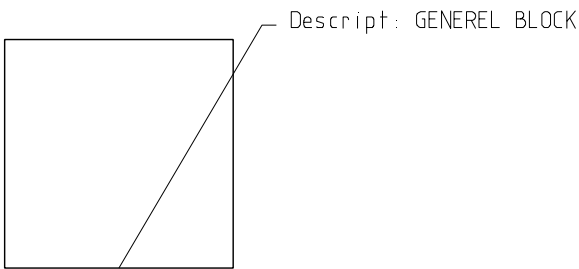
PA008A
DIAPHRAGM ACTUATOR



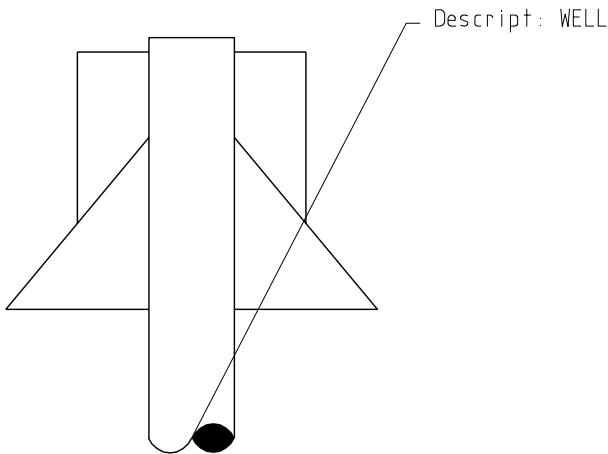
PD001A
BLOW OUT PREVENTER



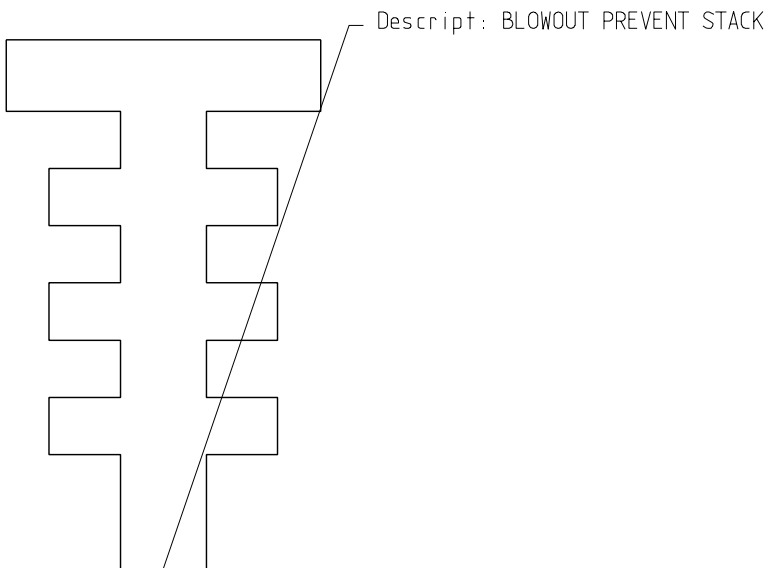
PD002A
DIVERTER ASSEMBLY



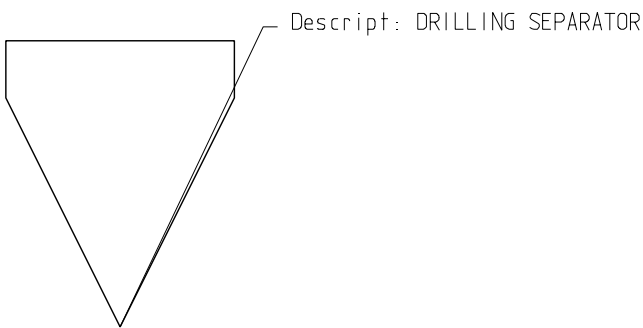
PD003A
GENEREL BLOCK



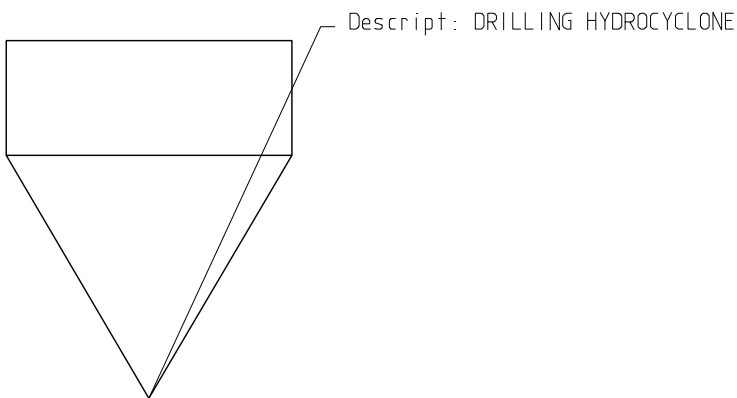
PD004A
WELL



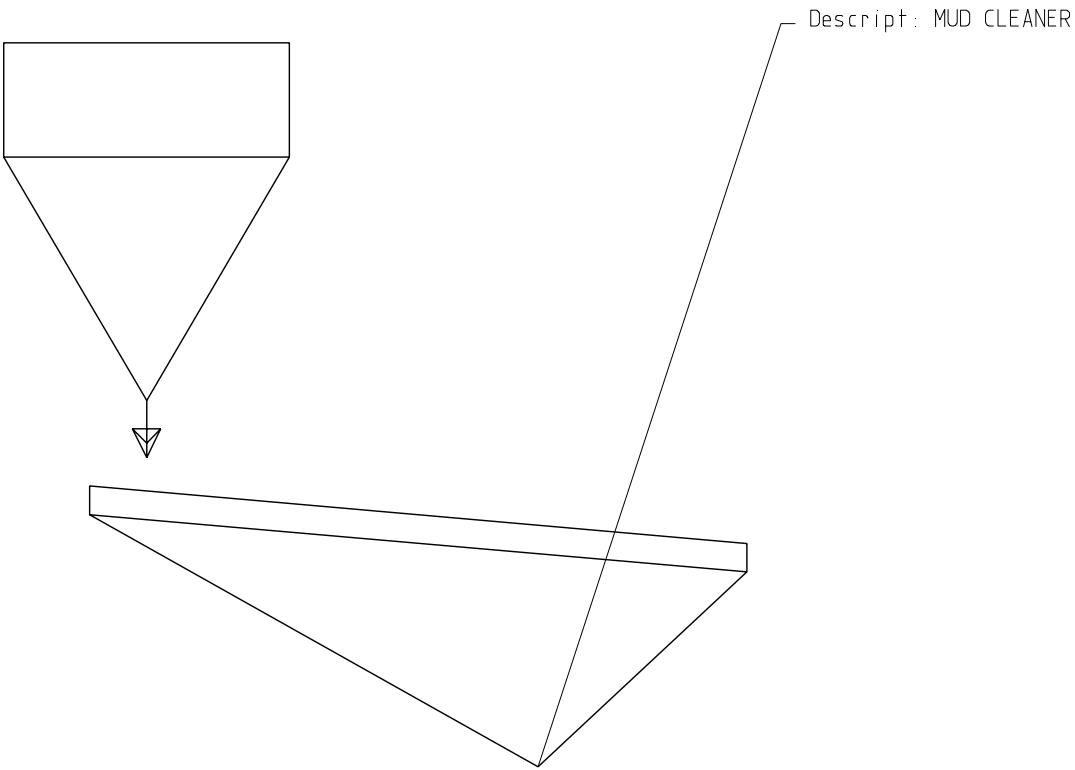
PD005A
BLOWOUT PREVENT STACK



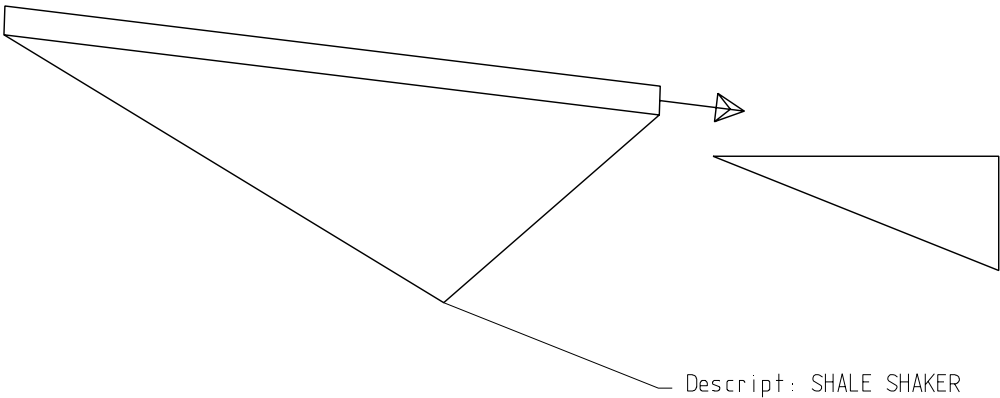
PD006A
DRILLING SEPARATOR



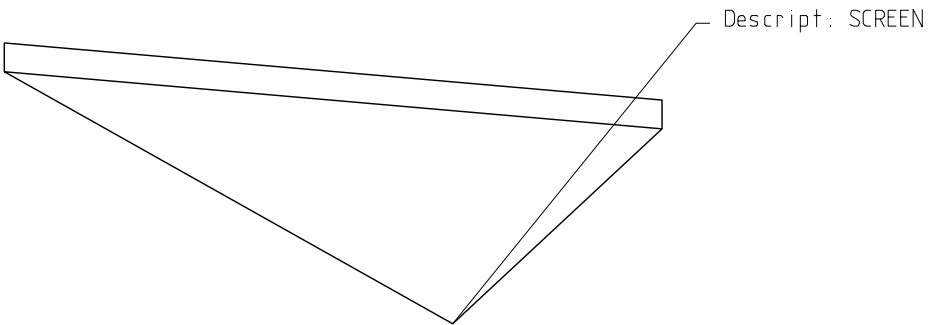
PD007A
DRILLING HYDROCYCLONE



PD008A
MUD CLEANER



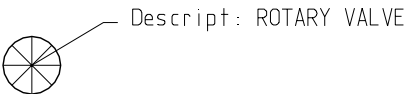
PD009A
SHALE SHAKER



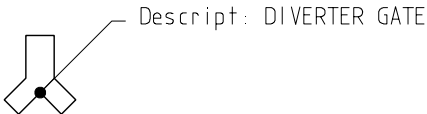
PD010A
SCREEN



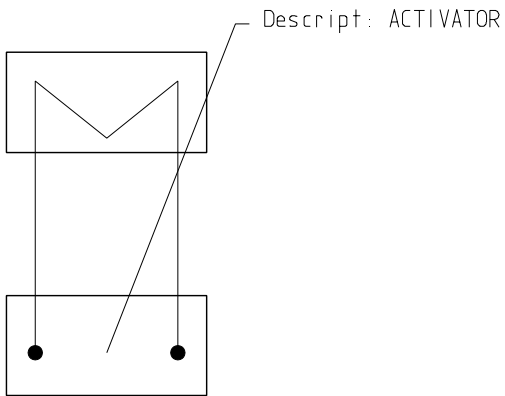
PD011A
SLIDE GATE



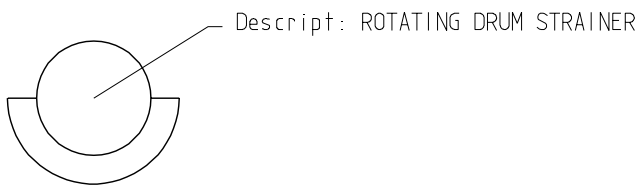
PD012A
ROTARY VALVE



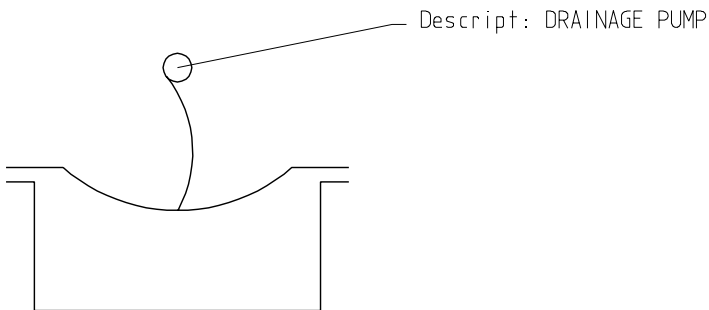
PD013A
DIVERTER GATE



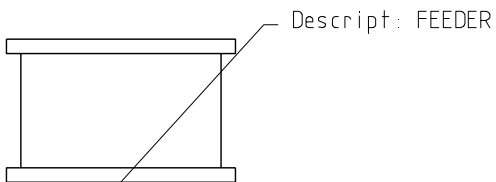
PD014A
ACTIVATOR



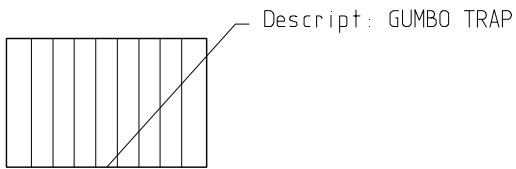
PD015A
ROTATING DRUM STRAINER



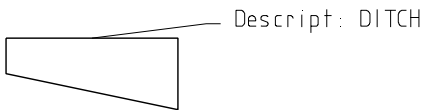
PD016A
DRAINAGE PUMP



PD017A
FEEDER



PD018A
GUMBO TRAP



PD019A
DITCH



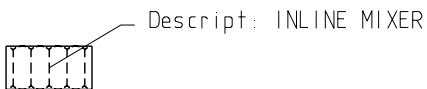
PD020A
MUD GUN



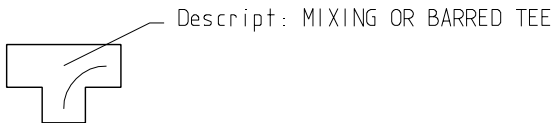
PE001A
CONCENTRIC REDUCER



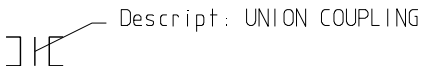
PE002A
ECCENTRIC REDUCER



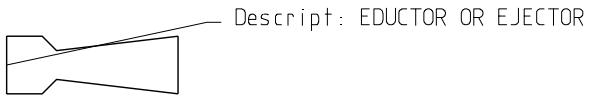
PE003A
INLINE MIXER



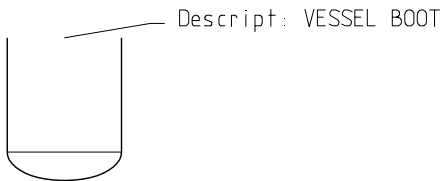
PE004A
MIXING OR BARRED TEE



PE005A
UNION COUPLING



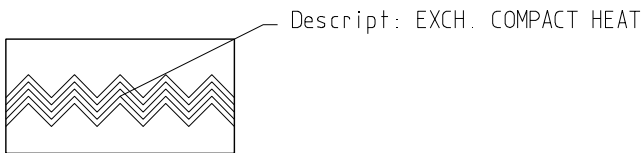
PE006A
EDUCTOR OR EJECTOR



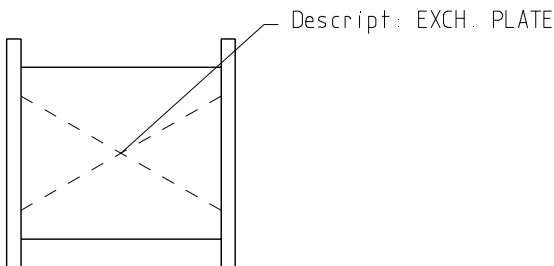
PE007A
VESSEL BOOT



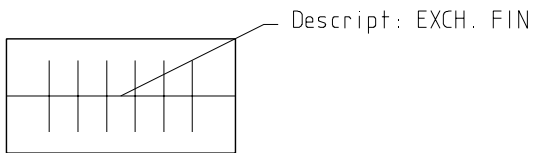
PE008A
HEATER INTERNAL COIL



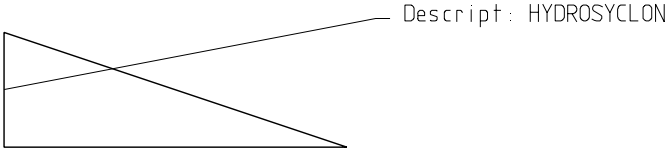
PE009A
EXCH. COMPACT HEAT



PE010A
EXCH. PLATE



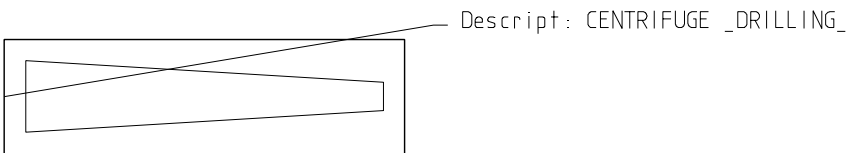
PE011A
EXCH. FIN



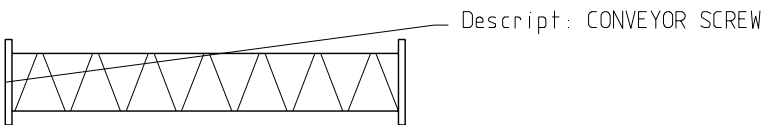
PE012A
HYDROSYCLON



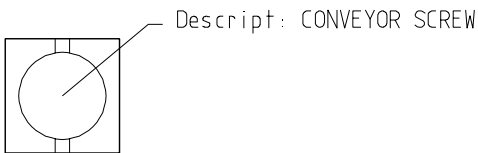
PE013A
VENT OR FLARE TIP



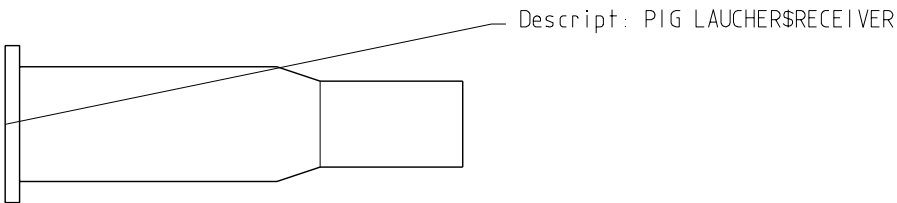
PE014A
CENTRIFUGE _DRILLING_



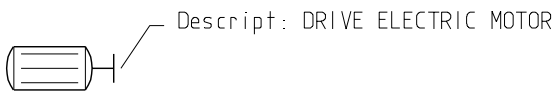
PE015A
CONVEYOR SCREW



PE016A
CONVEYOR SCREW



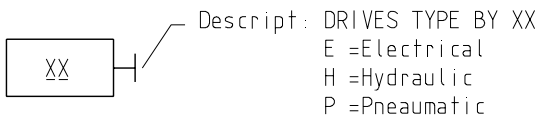
PE017A
PIG LAUCHER\$RECEIVER



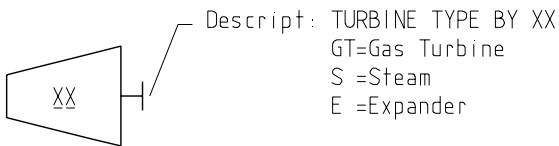
PE018A
DRIVE ELECTRIC MOTOR



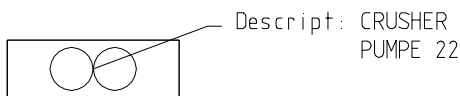
PE019A
WEIGH FEEDER



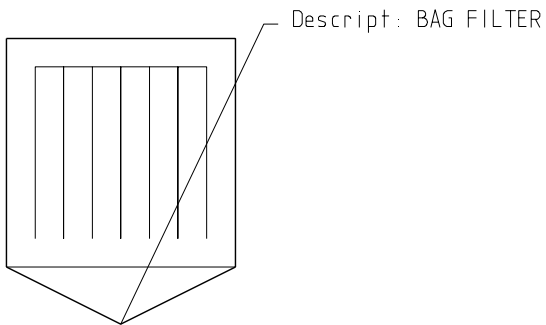
PE020A
DRIVES TYPE BY XX



PE021A
TURBINE TYPE BY XX



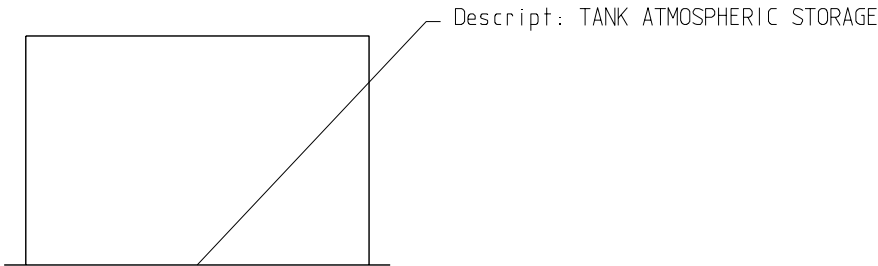
PE022A
CRUSHER



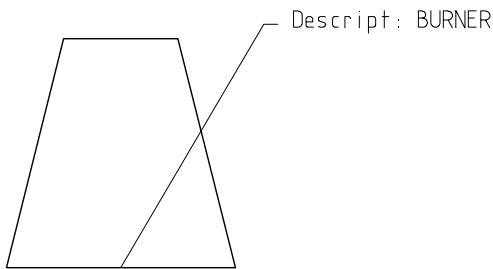
PE023A
BAG FILTER



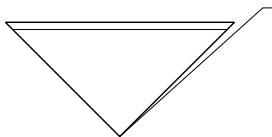
PE024A
TRAY DRIP



PE025A
TANK ATMOSPHERIC STORAGE

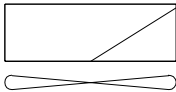


PE026A
BURNER



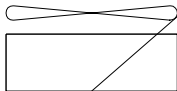
Descript: GUTTER

PE027A
GUTTER



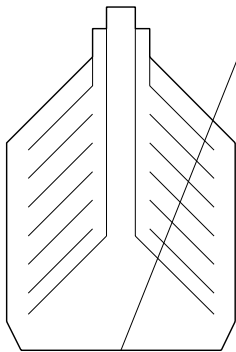
Descript: EXCH. AIR COOLED FORCED

PE028A
EXCH. AIR COOLED FORCED



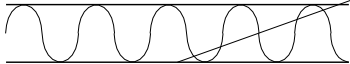
Descript: EXCH. AIR COOLED INDUCED

PE029A
EXCH. AIR COOLED INDUCED



Descript: CENTRIFUGE

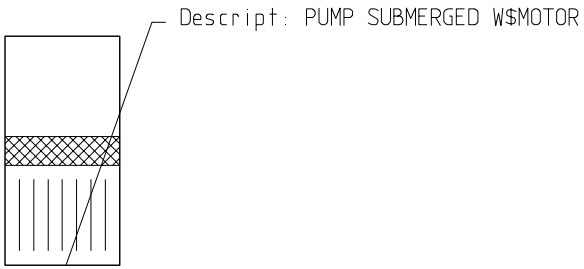
PE030A
CENTRIFUGE



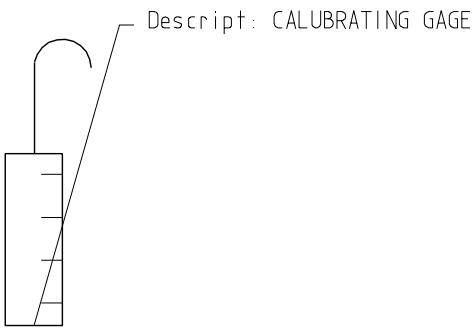
Descript: CONVEYOR MECH.

PE031A
CONVEYOR MECH.

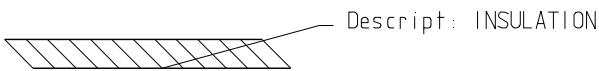
REBOILER



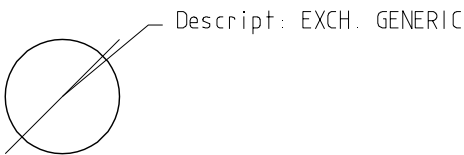
PE032A
PUMP SUBMERGED W\$MOTOR



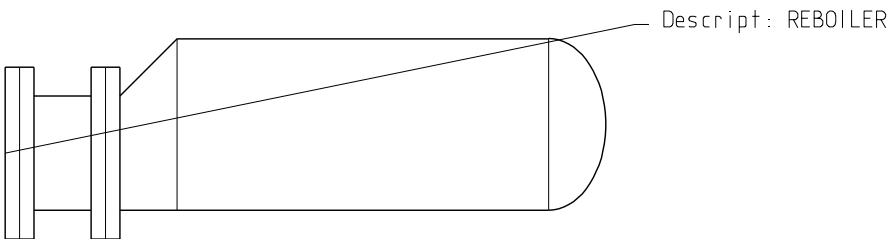
PE033A
CALUBRATING GAGE



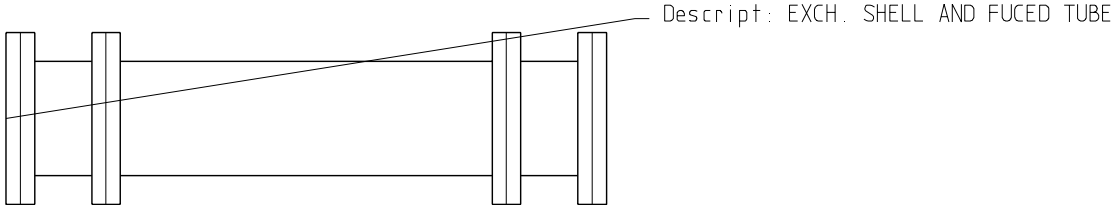
PE034A
INSULATION



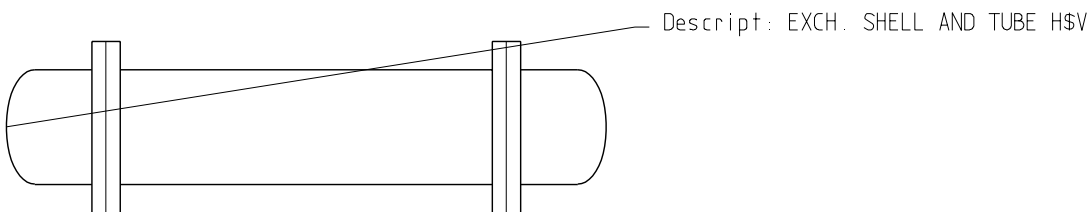
PE035A
EXCH. GENERIC



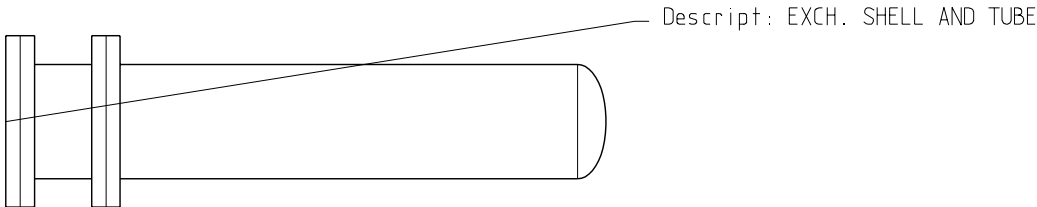
PE036A



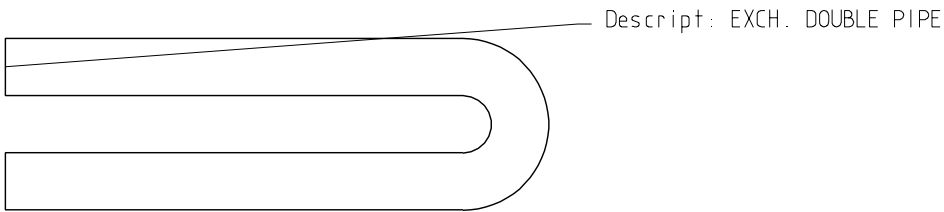
PE037A
EXCH. SHELL AND FUCED TUBE



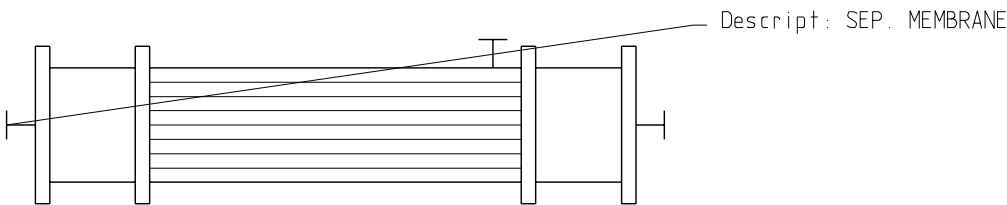
PE038A
EXCH. SHELL AND TUBE H\$V



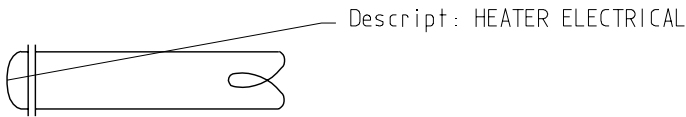
PE039A
EXCH. SHELL AND TUBE



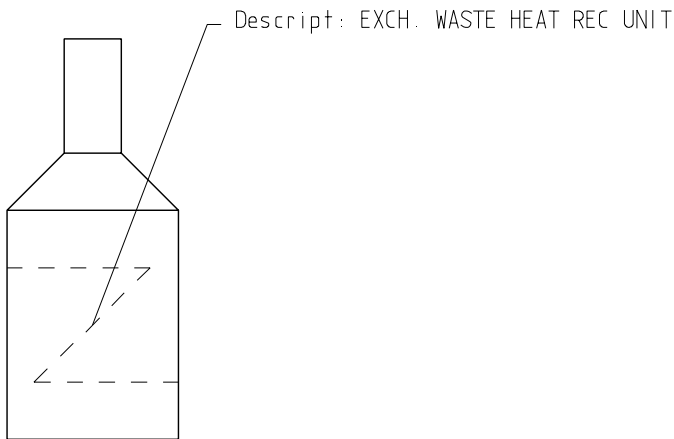
PE040A
EXCH. DOUBLE PIPE



PE041A
SEP. MEMBRANE



PE042A
HEATER ELECTRICAL



PE043A
EXCH. WASTE HEAT REC UNIT



Descript: FLOW T. POSITIV DISP.

PF001A
FLOW T. POSITIV DISP.



Descript: FLOW T. TURBINE

PF002A
FLOW T. TURBINE



Descript: FLOW T. VORTEX

PF003A
FLOW T. VORTEX



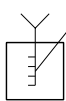
Descript: FLOW T. MAGNETIC

PF004A
FLOW T. MAGNETIC



Descript: FLOW T. SONIC

PF005A
FLOW T. SONIC



Descript: FLOW T. AVERAGING PITOT

PF006A
FLOW T. AVERAGING PITOT



Descript: FLOW T. ELEMENT

PF007A
FLOW T. ELEMENT

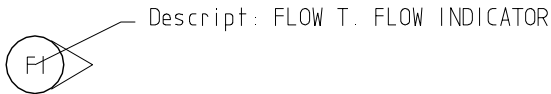


Descript: FLOW T. ELECTROMAGNETIC

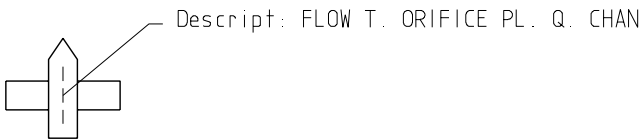
PF008A
FLOW T. ELECTROMAGNETIC



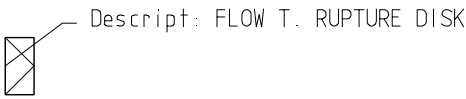
PF009A
FLOW T. FLOW GLAS



PF010A
FLOW T. FLOW INDICATOR



PF011A
FLOW T. ORIFICE PL. Q. CHAN



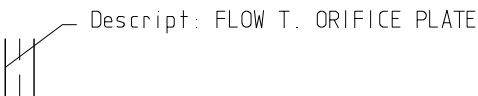
PF012A
FLOW T. RUPTURE DISK



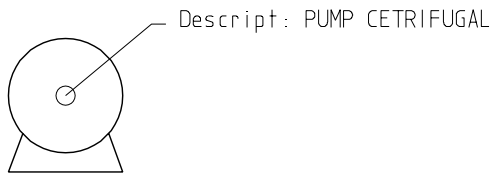
PF013A
FLOW T. FLOW NOZLE



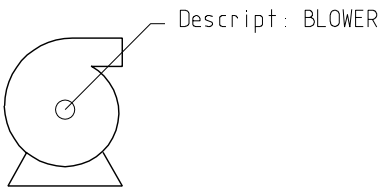
PF014A
FLOW T. VENTURI



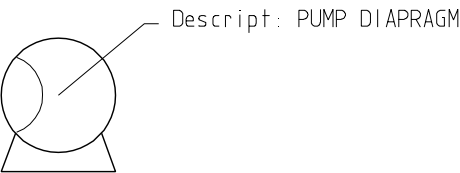
PF015A
FLOW T. ORIFICE PLATE



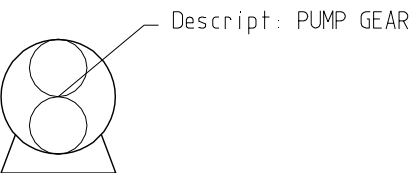
PP001A
PUMP CETRIFUGAL



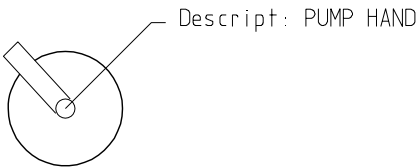
PP007A
BLOWER



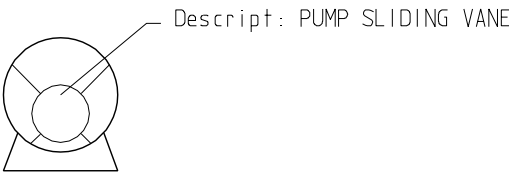
PP002A
PUMP DIAPRAGM



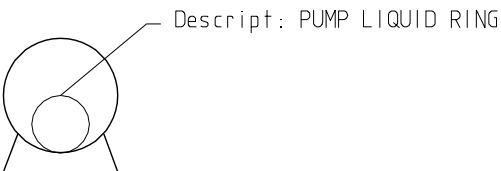
PP003A
PUMP GEAR



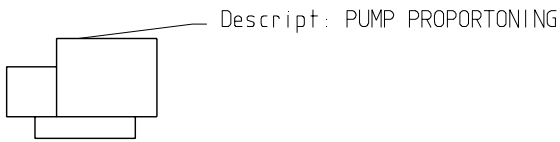
PP004A
PUMP HAND



PP005A
PUMP SLIDING VANE



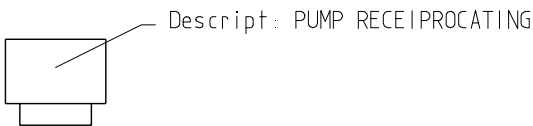
PP006A
PUMP LIQUID RING



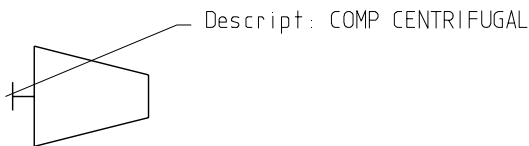
PP008A
PUMP PROPORTONING



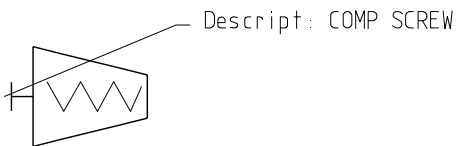
PP009A
PUMP TRIPLEX



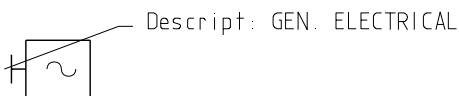
PP010A
PUMP RECEIPROCATING



PP011A
COMP CENTRIFUGAL



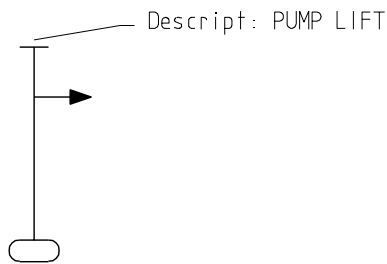
PP012A
COMP SCREW



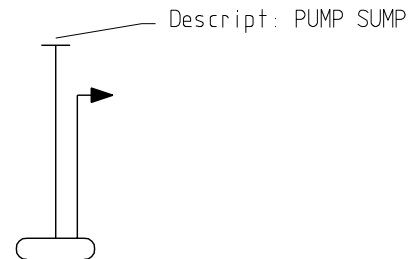
PP013A
GEN. ELECTRICAL



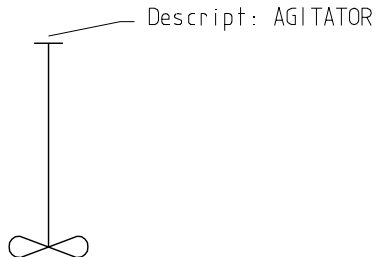
PP014A
PUMP SCREW



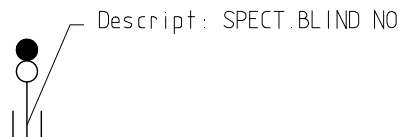
PP015A
PUMP LIFT



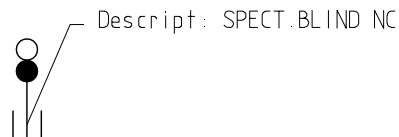
PP016A
PUMP SUMP



PP017A
AGITATOR



PS001A
SPECT.BLIND NO



PS002A
SPECT.BLIND NC



PS003A
SPADE



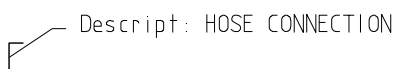
PS004A
SPACER



PS005A
WELDED CAP



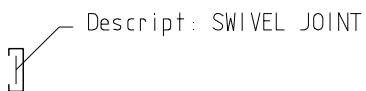
PS006A
SCREWED CAP



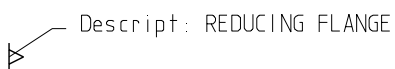
PS007A
HOSE CONNECTION



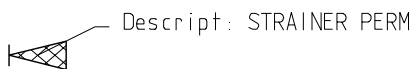
PS008A
GREYLOCK



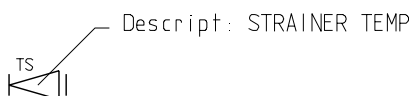
PS009A
SWIVEL JOINT



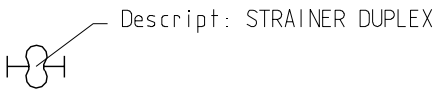
PS010A
REDUCING FLANGE



PS011A
STRAINER PERM



PS012A
STRAINER TEMP



PS013A
STRAINER DUPLEX



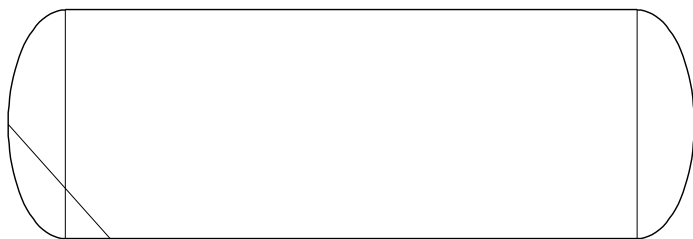
PS014A
STRAINER



PS015A
STRAINER Y TYPE

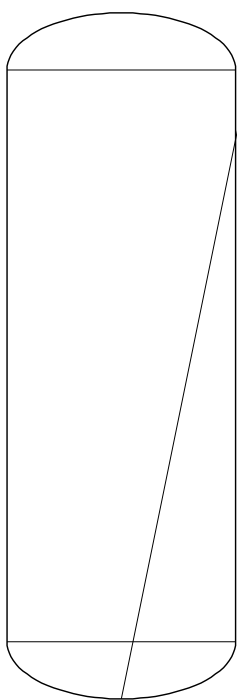


PS016A
STRAINER T TYPE



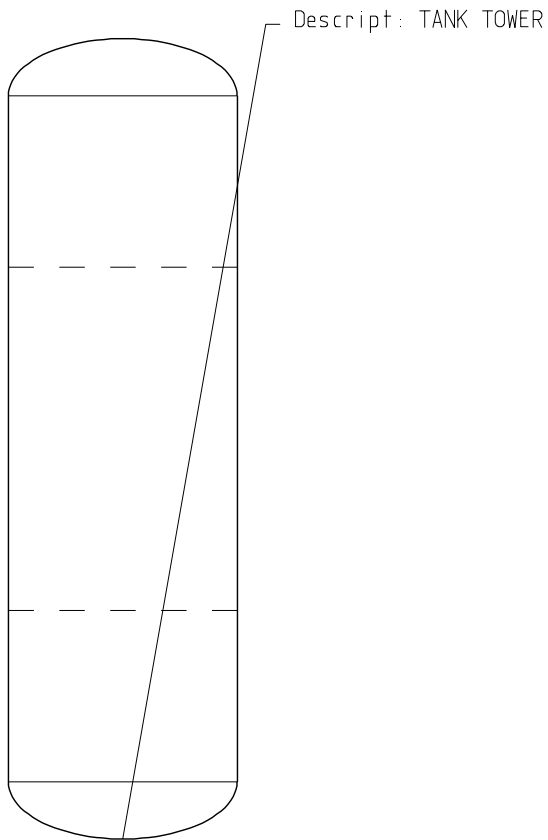
Descript: TANK PRES. VES. HORIZ.

PT001A
TANK PRES. VES. HORIZ.



Descript: TANK PRES. VES. VERT.

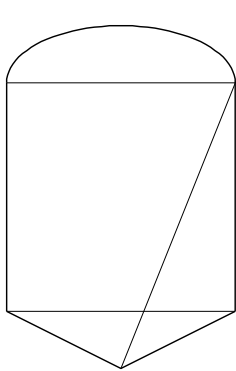
PT002A
TANK PRES. VES. VERT.



PT003A
TANK TOWER

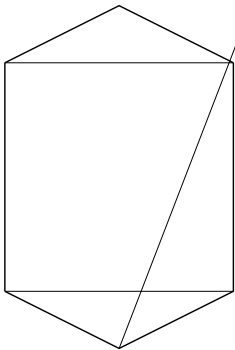


PT004A
TANK PRES W\$ QUICK OPEN LID



Descript: TANK DOME ROOF

PT005A
TANK DOME ROOF



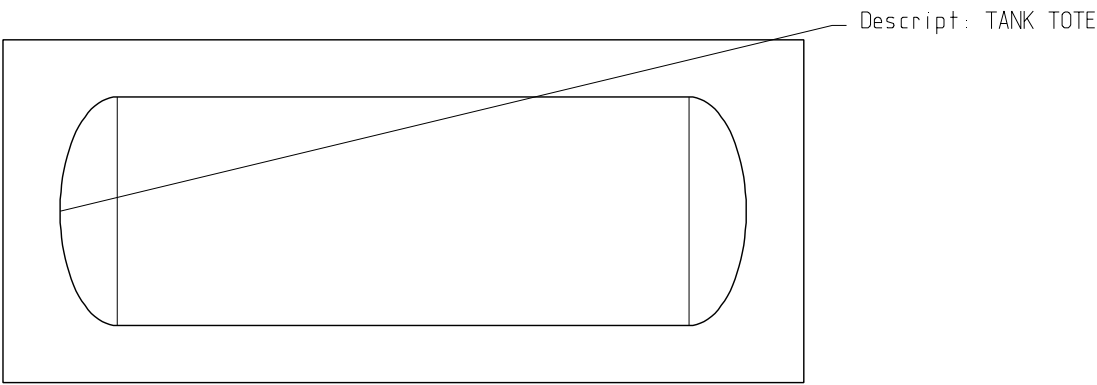
Descript: TANK CONE ROOF SILO

PT006A
TANK CONE ROOF SILO

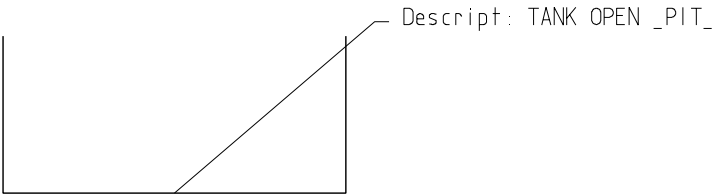


Descript: TANK GAS BOTTLE

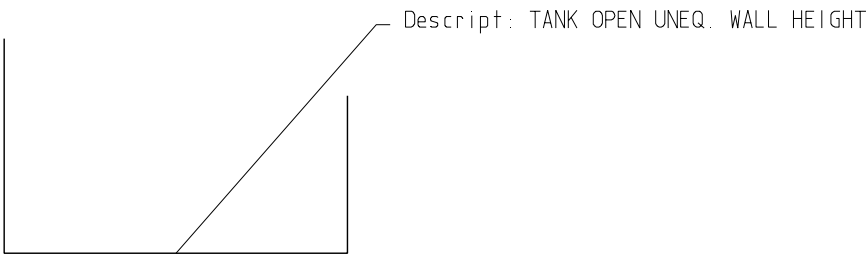
PT007A
TANK GAS BOTTLE



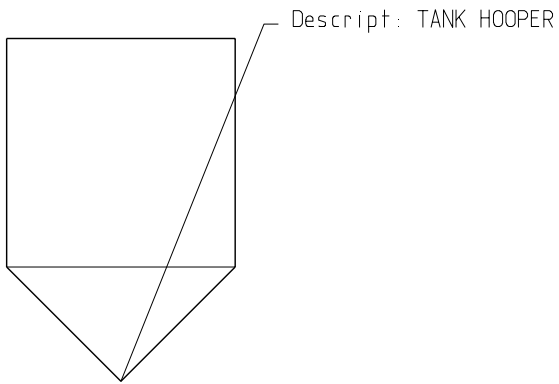
PT008A
TANK TOTE



PT009A
TANK OPEN _PIT_



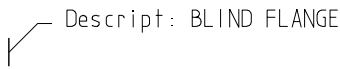
PT010A
TANK OPEN UNEQ. WALL HEIGHT



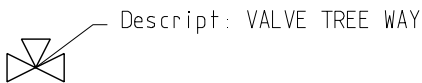
PT011A
TANK HOOPER



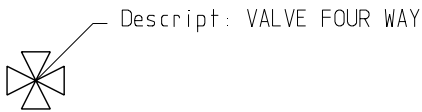
PV001A
FLANGES



PV002A
BLIND FLANGE



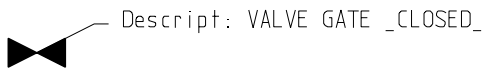
PV003A
VALVE TREE WAY



PV004A
VALVE FOUR WAY



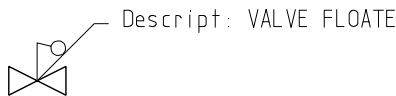
PV005A
VALVE GATE _OPEN_



PV006A
VALVE GATE _CLOSED_



PV007A
VALVE GLOBE



PV008A
VALVE FLOATE



Descript: VALVE MIN FLOW AND CHECK

PV009A
VALVE MIN FLOW AND CHECK



Descript: VALVE BUTTERFLY

PV018A
VALVE BUTTERFLY



Descript: VALVE CHOKE

PV010A
VALVE CHOKE



Descript: VALVE BALL _OPEN_

PV019A
VALVE BALL _OPEN_



Descript: VALVE PSV

PV011A
VALVE PSV



Descript: VALVE BALL _CLOSED_

PV020A
VALVE BALL _CLOSED_



Descript: VALVE VACUUM RELEASE

PV012A
VALVE VACUUM RELEASE



Descript: VALVE CHECK

PV013A
VALVE CHECK



Descript: VALVE PINCH

PV014A
VALVE PINCH



Descript: VALVE DIAGRAM

PV015A
VALVE DIAGRAM



Descript: VALVE NEEDLE _OPEN_

PV016A
VALVE NEEDLE _OPEN_



Descript: VALVE NEEDLE _CLOSED_

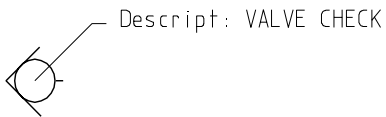
PV017A
VALVE NEEDLE _CLOSED_



PV021A
VALVE BLOCK\$BLEND _INSTR_



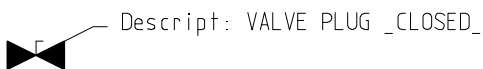
PZ005A
DIRECT HEATING



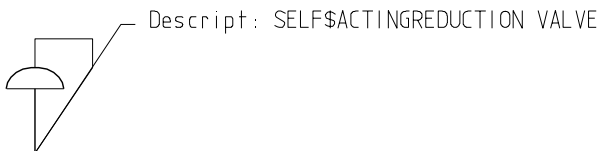
PV022A
VALVE CHECK



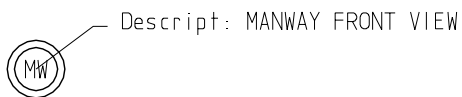
PV023A
VALVE PLUG _OPEN_



PV024A
VALVE PLUG _CLOSED_



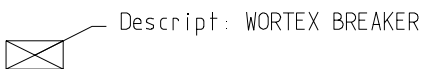
PZ001A
SELF\$ACTINGREDUCTION VALVE



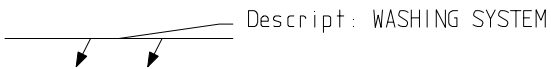
PZ002A
MANWAY FRONT VIEW



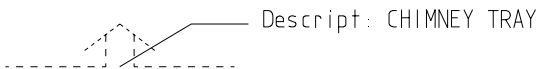
PZ003A
VESSEL INTERNALS



PZ004A
WORTOX BREAKER



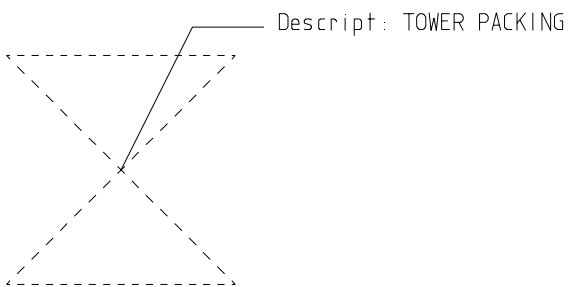
PZ006A
WASHING SYSTEM



PZ007A
CHIMNEY TRAY



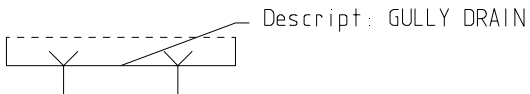
PZ008A
INTERNAL SPRAY NOZZLE



PZ009A
TOWER PACKING



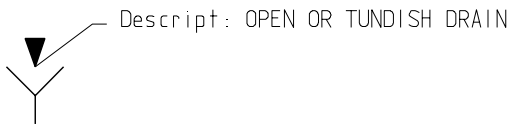
PZ010A
TOWER TRAY WITH NUMBER



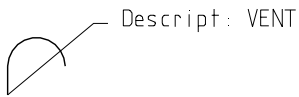
PZ011A
GULLY DRAIN



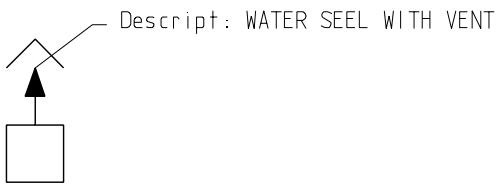
PZ012A
DRAIN BOX



PZ013A
OPEN OR TUNDISH DRAIN



PZ014A
VENT



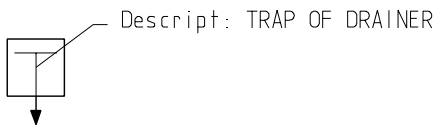
PZ015A
WATER SEAL WITH VENT



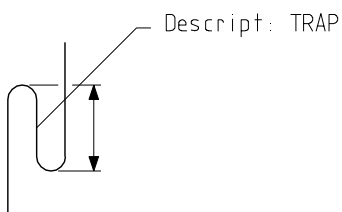
PZ016A
FLAME ARRESTOR



PZ017A
AIR RELEASE TRAP



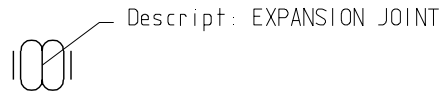
PZ018A
TRAP OF DRAINER



PZ019A
TRAP



PZ020A
FLEXIBLE HOSE



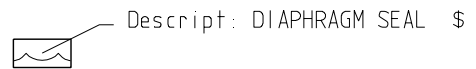
PZ021A
EXPANSION JOINT



PZ022A
FLOW STRAIGHT VANES



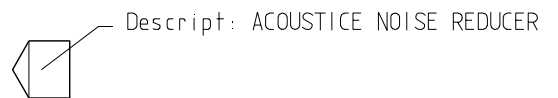
PZ023A
SILENCER



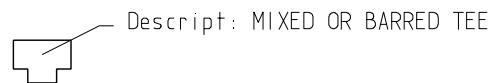
PZ024A
DIAPHRAGM SEAL \$



PZ025A
DIFFUSER

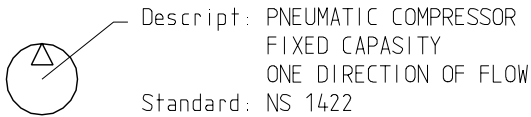


PZ026A
ACOUSTICE NOISE REDUCER

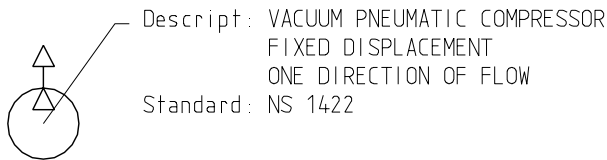


PZ027A
MIXED OR BARRED TEE

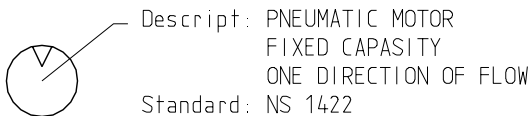
ANNEX G MECHANICAL (NORMATIVE)



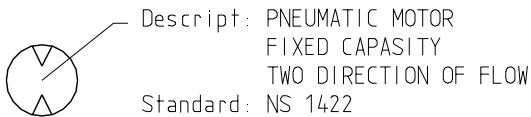
RC001A
PNEUMATIC COMPRESSOR



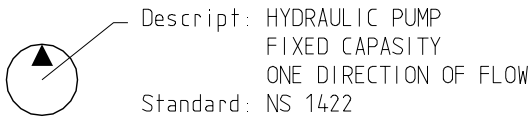
RC002A
VACUUM PNEUMATIC COMPRESSOR



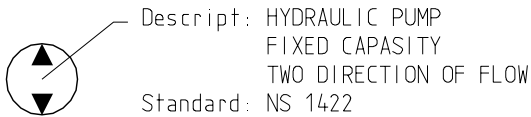
RC003A
PNEUMATIC MOTOR



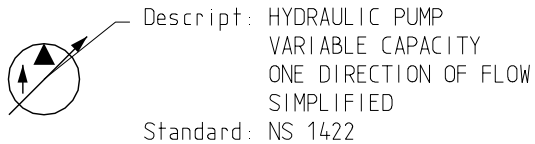
RC004A
PNEUMATIC MOTOR



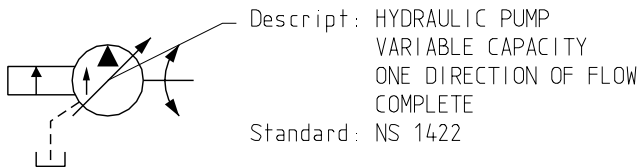
RC005A
HYDRAULIC PUMP



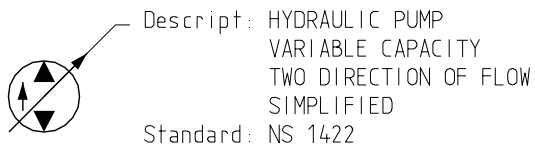
RC006A
HYDRAULIC PUMP



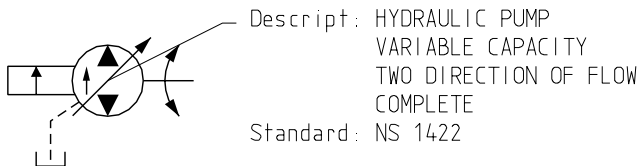
RC007A
HYDRAULIC PUMP



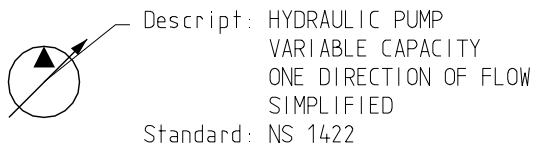
RC008A
HYDRAULIC PUMP



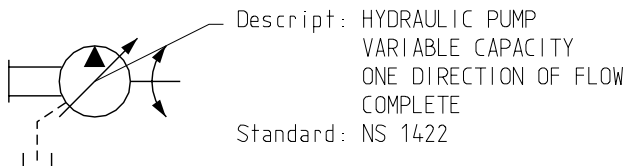
RC009A
HYDRAULIC PUMP



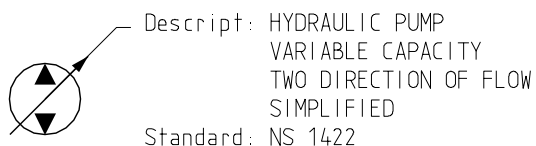
RC010A
HYDRAULIC PUMP



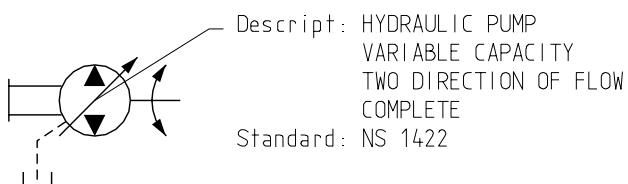
RC011A
HYDRAULIC PUMP



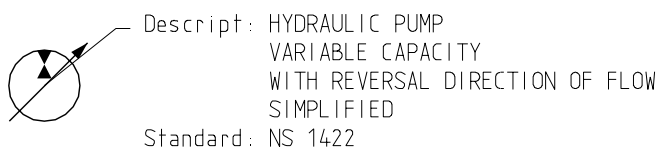
RC012A
HYDRAULIC PUMP



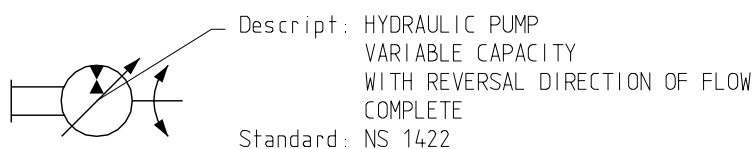
RC013A
HYDRAULIC PUMP



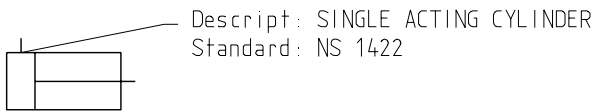
RC014A
HYDRAULIC PUMP



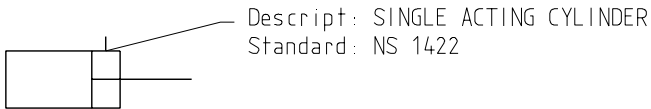
RC015A
HYDRAULIC PUMP



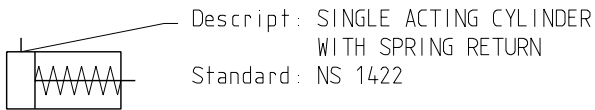
RC016A
HYDRAULIC PUMP



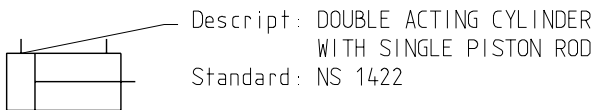
RC022A
SINGLE ACTING CYLINDER



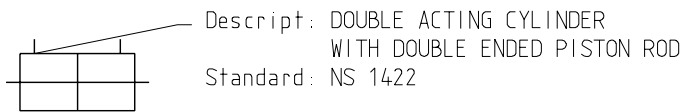
RC023A
SINGLE ACTING CYLINDER



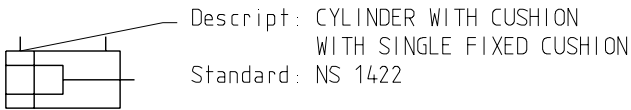
RC024A
SINGLE ACTING CYLINDER



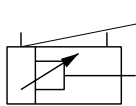
RC025A
DOUBLE ACTING CYLINDER



RC026A
DOUBLE ACTING CYLINDER

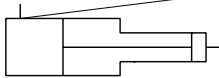


RC027A
CYLINDER WITH CUSHION



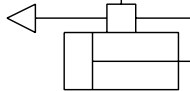
Descript: CYLINDER WITH CUSHION
WITH SINGLE ADJUSTABLE CUSHION
Standard: NS 1422

RC028A
CYLINDER WITH CUSHION



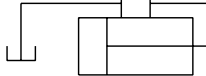
Descript: PRESSURE INTENSIFIER

RC029A
PRESSURE INTENSIFIER



Descript: SERVO POSITIONER PNEUMATIC

RC030A
SERVO POSITIONER PNEUMATIC



Descript: SERVO POSITIONER HYDRAULIC

RC031A
SERVO POSITIONER HYDRAULIC



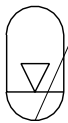
Descript: ACCUMULATORS
Standard: NS 1422

RF001A
ACCUMULATORS



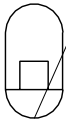
Descript: ACCUMULATORS SPRING LOADED
Standard: NS 1422

RF002A
ACCUMULATORS SPRING LOADED



Descript: ACCUMULATORS GAS CHARGED
Standard: NS 1422

RF003A
ACCUMULATORS GAS CHARGED



Descript: ACCUMULATORS WEIGHTED
Standard: NS 1422

RF004A
ACCUMULATORS WEIGHTED



Descript: FILTER OR STRAINER
Standard: NS 1422

RF005A
FILTER OR STRAINER



Descript: WATER TRAP MANUAL CONTROL
Standard: NS 1422

RF006A
WATER TRAP MANUAL CONTROL



Descript: WATER TRAP AUTOMATIC DRAIN
Standard: NS 1422

RF007A
WATER TRAP AUTOMATIC DRAIN



Descript: FILTER WITH WATER TRAP
MANUAL CONTROL
Standard: NS 1422

RF008A
FILTER WITH WATER TRAP



Descript: FILTER WITH WATER TRAP
AUTOMATIC CONTROL
Standard: NS 1422

RF009A
FILTER WITH WATER TRAP



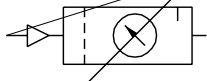
Descript: AIR DRYER
Standard: NS 1422

RF010A
AIR DRYER



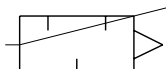
Descript: LUBRICATOR
Standard: NS 1422

RF011A
LUBRICATOR



Descript: CONDITIONING UNIT SIMPLIFIE
Standard: NS 1422

RF012A
CONDITIONING UNIT SIMPLIFIE



Descript: SILENCER
Standard: NS 1422

RF013A
SILENCER



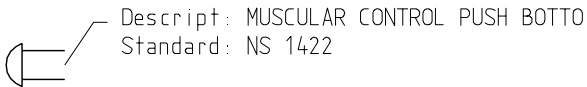
Descript: SPRING CONTROL
Standard: NS 1422

RM001A
SPRING CONTROL



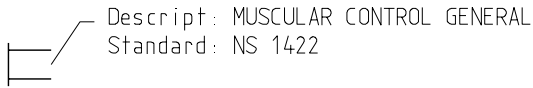
Descript: SPRING CONTROL ADJUSTABLE
Standard: NS 1422

RM002A
SPRING CONTROL ADJUSTABLE



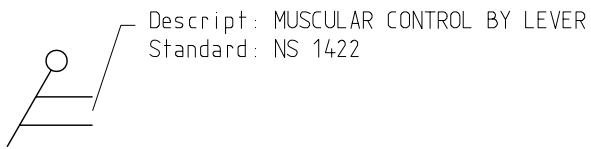
Descript: MUSCULAR CONTROL PUSH BOTTO
Standard: NS 1422

RM003A
MUSCULAR CONTROL PUSH BOTTO



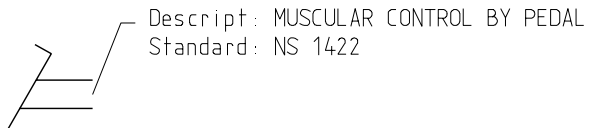
Descript: MUSCULAR CONTROL GENERAL
Standard: NS 1422

RM004A
MUSCULAR CONTROL GENERAL



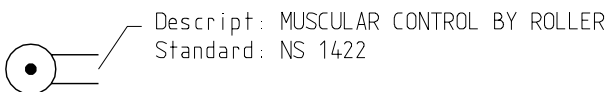
Descript: MUSCULAR CONTROL BY LEVER
Standard: NS 1422

RM005A
MUSCULAR CONTROL BY LEVER



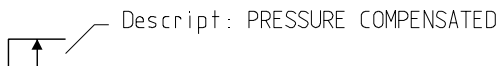
Descript: MUSCULAR CONTROL BY PEDAL
Standard: NS 1422

RM006A
MUSCULAR CONTROL BY PEDAL



Descript: MUSCULAR CONTROL BY ROLLER
Standard: NS 1422

RM007A
MUSCULAR CONTROL BY ROLLER



Descript: PRESSURE COMPENSATED

RM008A
PRESSURE COMPENSATED

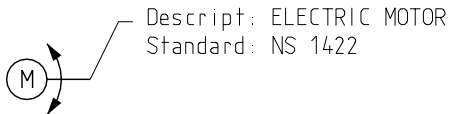


Descript: ELECTRICAL CONTROL SOLENOID
SINGLE WINDING
Standard: NS 1422

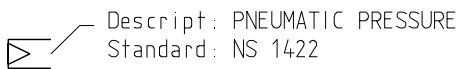
RM009A
ELECTRICAL CONTROL SOLENOID



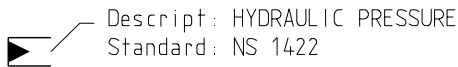
RM010A
ELECTRICAL CONTROL SOLENOID



RM011A
ELECTRIC MOTOR



RM012A
PNEUMATIC PRESSURE



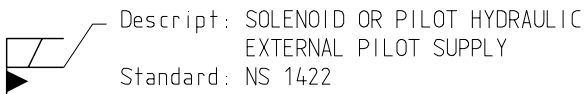
RM013A
HYDRAULIC PRESSURE



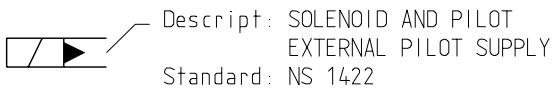
RM014A
PNEUMATIC PRESSURE RELEASE



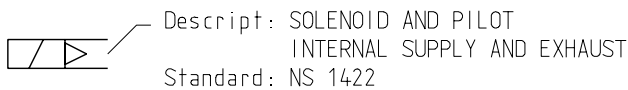
RM015A
SOLENOID OR PILOT INTERNAL



RM016A
SOLENOID OR PILOT HYDRAULIC



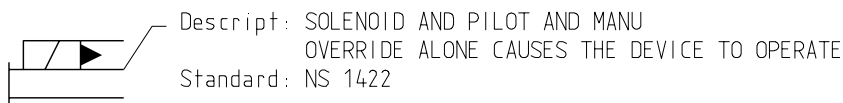
RM017A
SOLENOID AND PILOT



RM018A
SOLENOID AND PILOT



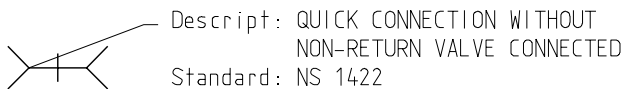
RM019A
THERMAL LOCAL SENSING



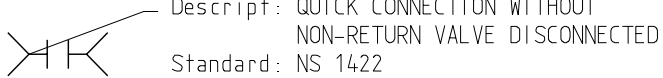
RM020A
SOLENOID AND PILOT AND MANU



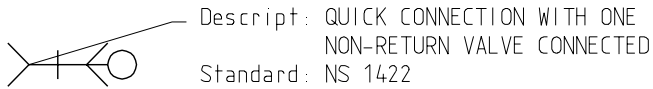
RT001A
FLEXIBLE LINE



RT002A
QUICK CONNECTION WITHOUT



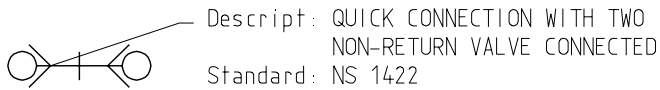
RT003A
QUICK CONNECTION WITHOUT



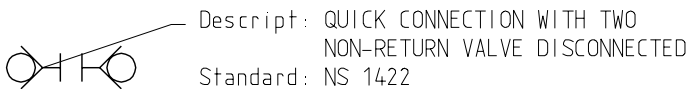
RT004A
QUICK CONNECTION WITH ONE



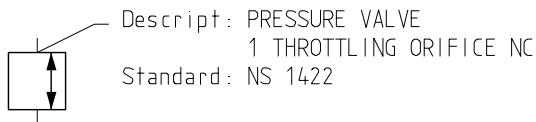
RT005A
QUICK CONNECTION WITH ONE



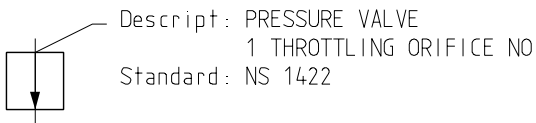
RT006A
QUICK CONNECTION WITH TWO



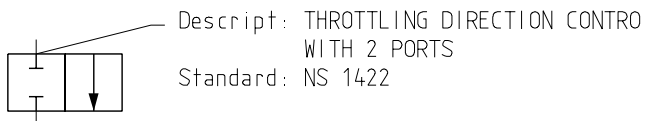
RT007A
QUICK CONNECTION WITH TWO



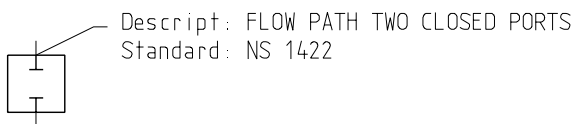
RV001A
PRESSURE VALVE



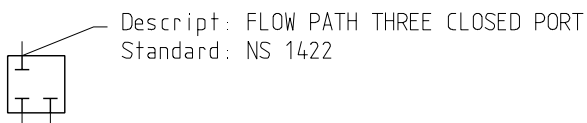
RV002A
PRESSURE VALVE



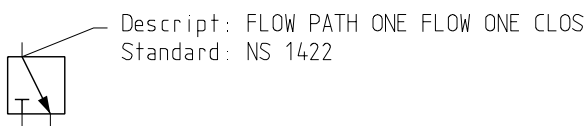
RV003A
THROTTLING DIRECTION CONTRO



RV004A
FLOW PATH TWO CLOSED PORTS



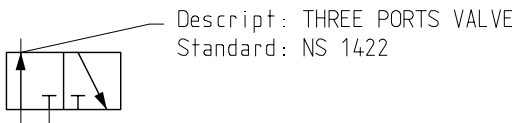
RV005A
FLOW PATH THREE CLOSED PORT



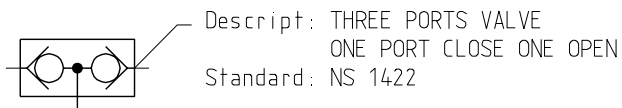
RV006A
FLOW PATH ONE FLOW ONE CLOS



RV007A
FLOW PATH ONE FLOW ONE CLOS



RV008A
THREE PORTS VALVE



RV009A
THREE PORTS VALVE



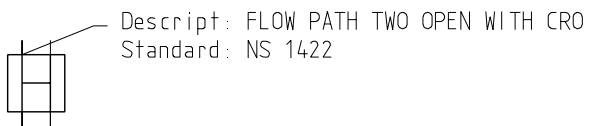
RV010A
FLOW PATH FOUR CLOSED PORTS



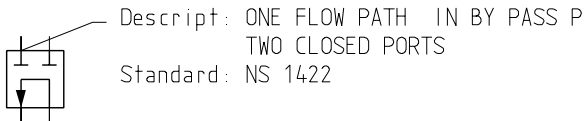
RV011A
FLOW PATH TWO OPEN PORTS



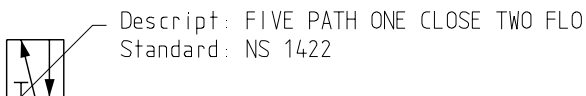
RV012A
FLOW PATH TWO OPEN PORTS



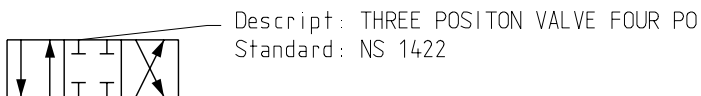
RV013A
FLOW PATH TWO OPEN WITH CRO



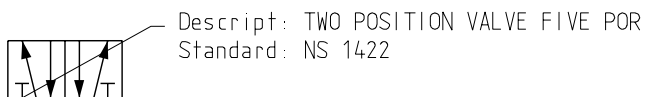
RV014A
ONE FLOW PATH IN BY-PASS P



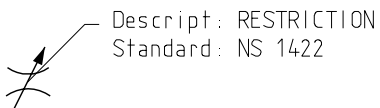
RV015A
FIVE PATH ONE CLOSE TWO FLO



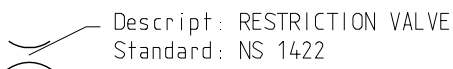
RV016A
THREE POSITON VALVE FOUR PO



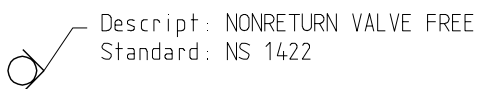
RV017A
TWO POSITION VALVE FIVE POR



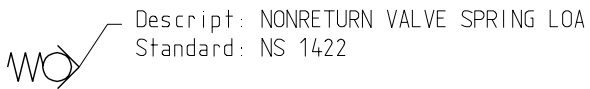
RV020A
RESTRICTION



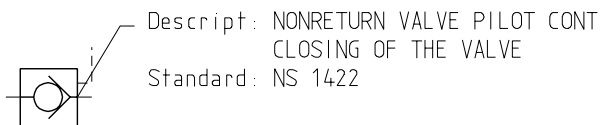
RV021A
RESTRICTION VALVE



RV022A
NON-RETURN VALVE FREE



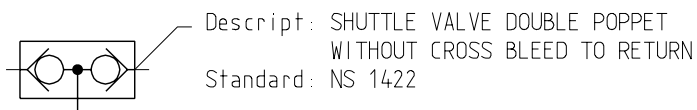
RV023A
NON-RETURN VALVE SPRING LOA



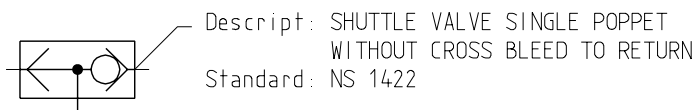
RV024A
NON-RETURN VALVE PILOT CONT



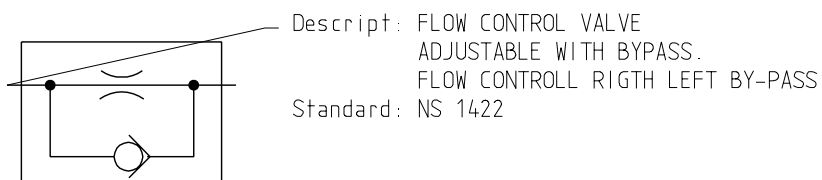
RV025A
NON-RETURN VALVE PILOT CONT



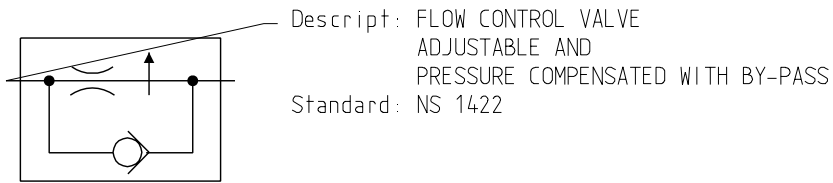
RV026A
SHUTTLE VALVE DOUBLE POPPET



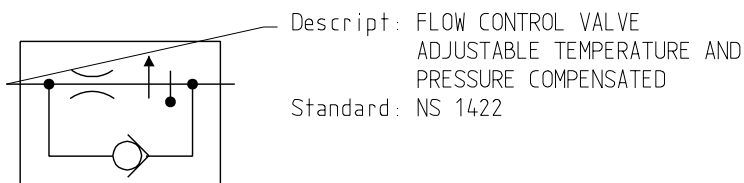
RV027A
SHUTTLE VALVE SINGLE POPPET



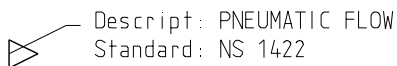
RV028A
FLOW CONTROL VALVE



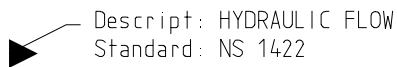
RV029A
FLOW CONTROL VALVE



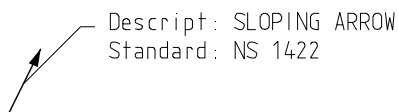
RV030A
FLOW CONTROL VALVE



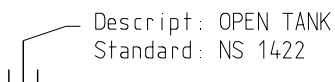
RZ001A
PNEUMATIC FLOW



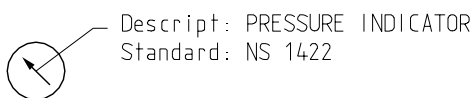
RZ002A
HYDRAULIC FLOW



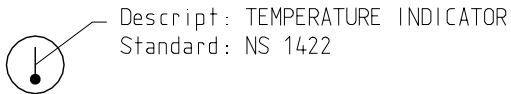
RZ003A
SLOPING ARROW



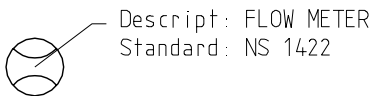
RZ004A
OPEN TANK



RZ005A
PRESSURE INDICATOR



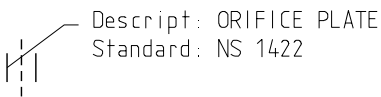
RZ006A
TEMPERATURE INDICATOR



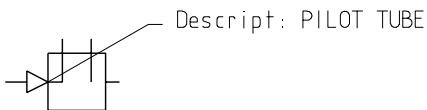
RZ007A
FLOW METER



RZ008A
TOTALIZING FLOW METER



RZ009A
ORIFICE PLATE

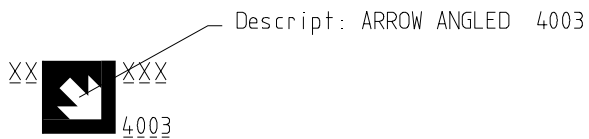


RZ010A
PILOT TUBE

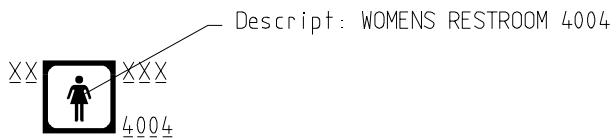
ANNEX H SAFETY (NORMATIVE)



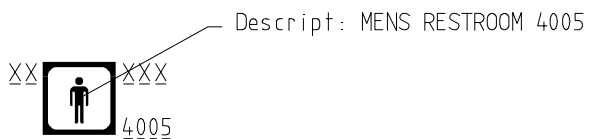
KB051A
ARROW STARIGHT 4002



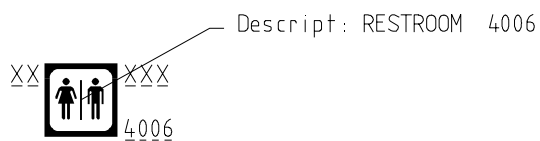
KB052A
ARROW ANGLED 4003



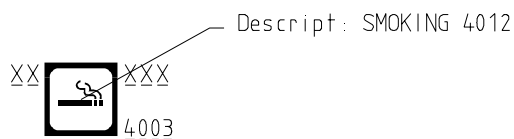
KB053A
WOMENS RESTROOM 4004



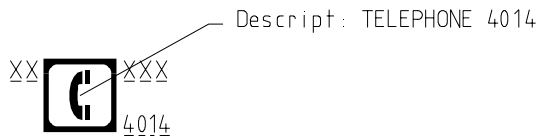
KB054A
MENS RESTROOM 4005



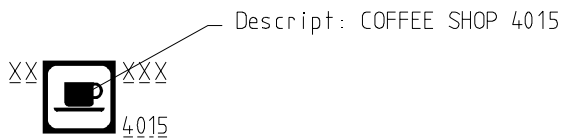
KB055A
RESTROOM 4006



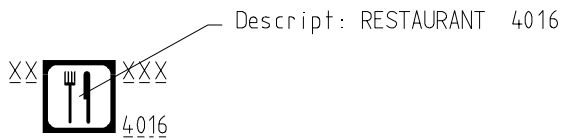
KB056A
SMOKING 4012



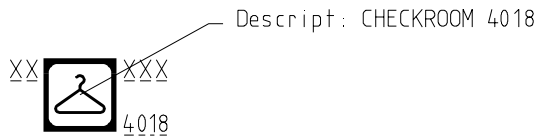
KB057A
TELEPHONE 4014



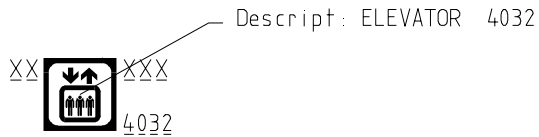
KB058A
COFFEE SHOP 4015



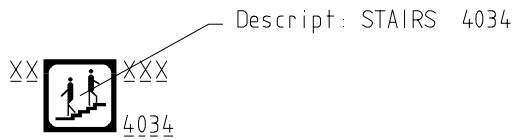
KB059A
RESTAURANT 4016



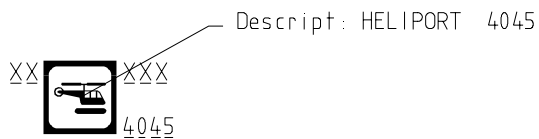
KB060A
CHECKROOM 4018



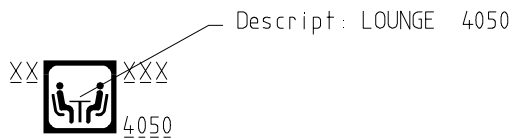
KB061A
ELEVATOR 4032



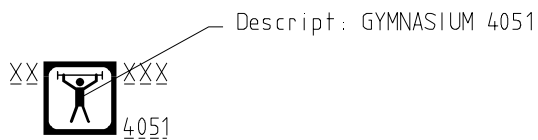
KB062A
STAIRS 4034



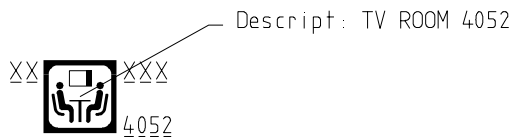
KB063A
HELI PORT 4045



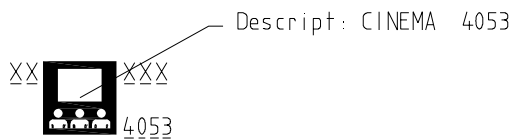
KB064A
LOUNGE 4050



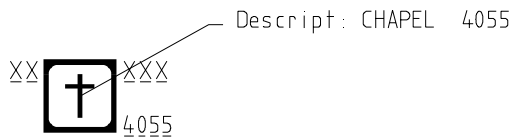
KB065A
GYMNASIUM 4051



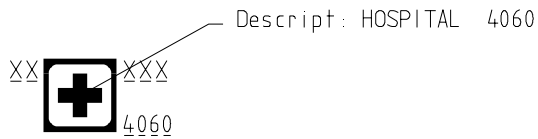
KB066A
TV ROOM 4052



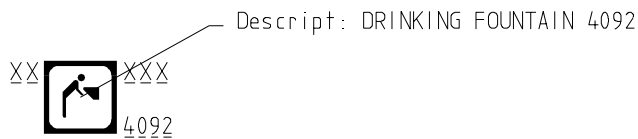
KB067A
CINEMA 4053



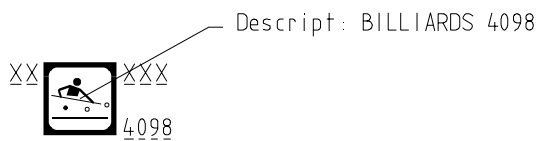
KB068A
CHAPEL 4055



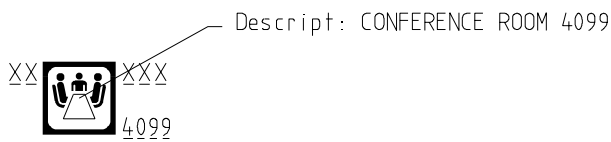
KB069A
HOSPITAL 4060



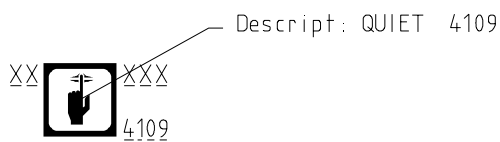
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DRINKING FOUNTAIN 4092



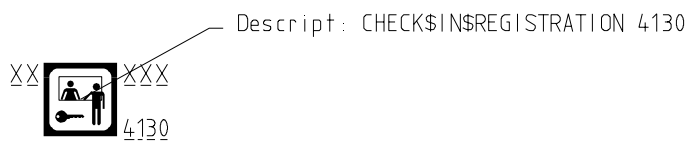
KB071A
BILLIARDS 4098



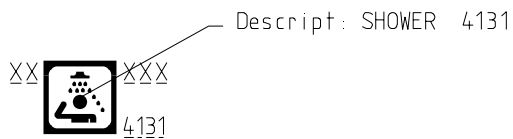
KB072A
CONFERENCE ROOM 4099



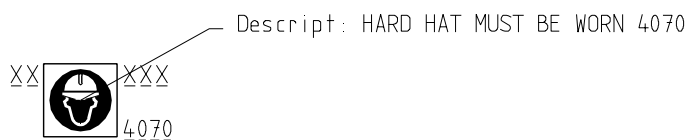
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QUIET 4109



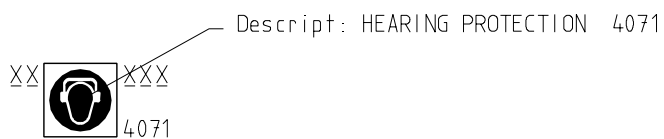
KB074A
CHECKIN\$REGISTRATION 4130



KB075A
SHOWER 4131



KC089A
HARD HAT MUST BE WORN 4070



KC090A
HEARING PROTECTION 4071



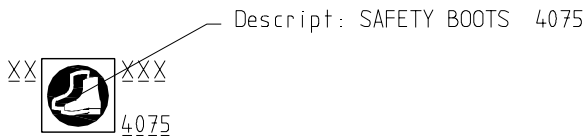
KC091A
EYE PROTECTION 4072



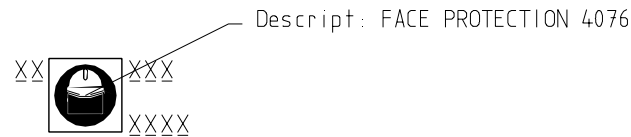
KC092A
RESPIRATION PROTECT. 4073



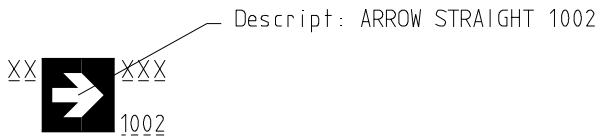
KC093A
HAND PROTECTION 4074



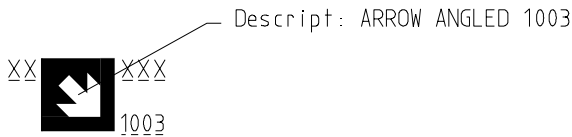
KC094A
SAFETY BOOTS 4075



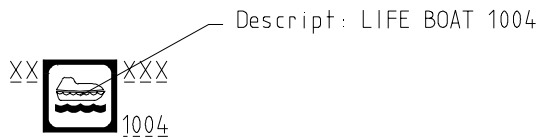
KC095A
FACE PROTECTION 4076



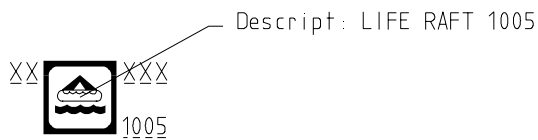
KG001A
ARROW STRAIGHT 1002



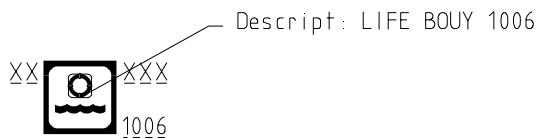
KG002A
ARROW ANGLED 1003



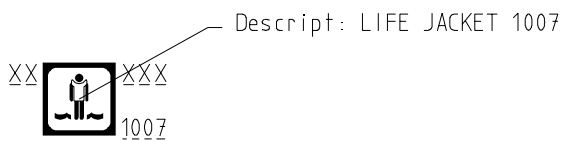
KG003A
LIFE BOAT 1004



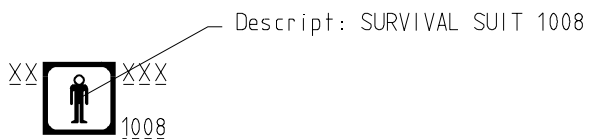
KG004A
LIFE RAFT 1005



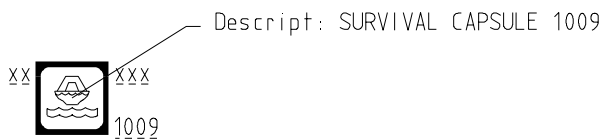
KG005A
LIFE BOUY 1006



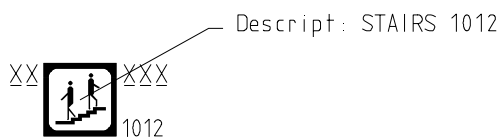
KG006A
LIFE JACKET 1007



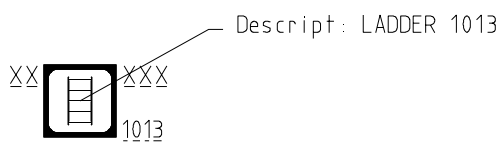
KG007A
SURVIVAL SUIT 1008



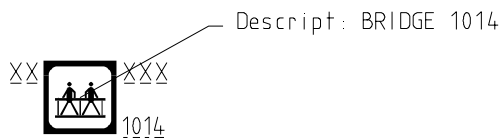
KG008A
SURVIVAL CAPSULE 1009



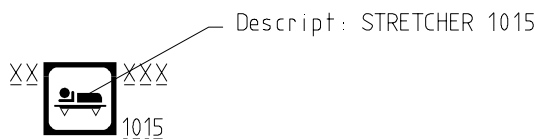
KG009A
STAIRS 1012



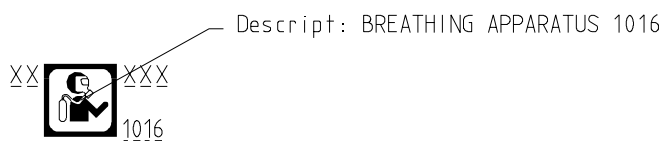
KG010A
LADDER 1013



KG011A
BRIDGE 1014



KG012A
STRETCHER 1015



KG013A
BREATHING APPARATUS 1016



KG014A
EMERGENCY TORCH 1017



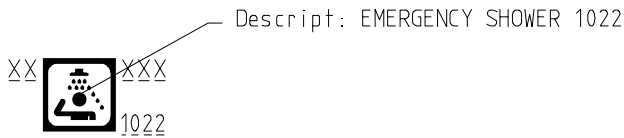
KG015A
ESCAPE ROUTE 1018



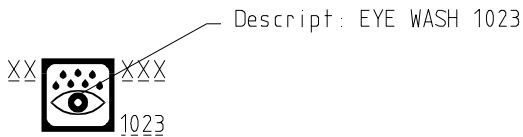
KG016A
FIRST AID STATION 1020



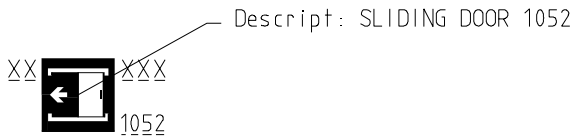
KG017A
FIRST AID EQUIPMENT 1021



KG018A
EMERGENCY SHOWER 1022



KG019A
EYE WASH 1023



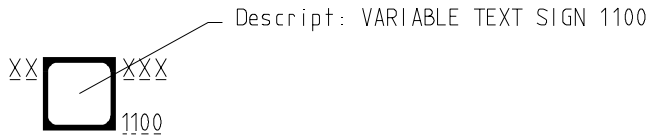
KG020A
SLIDING DOOR 1052



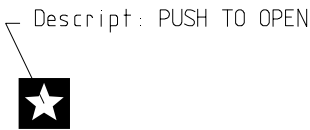
KG021A
NUMBER 1\$9 1 EQ 1090



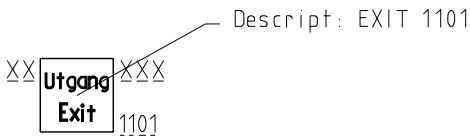
KG022A
LETTER A\$Z A EQ 1091



KG023A
VARIABLE TEXT SIGN 1100



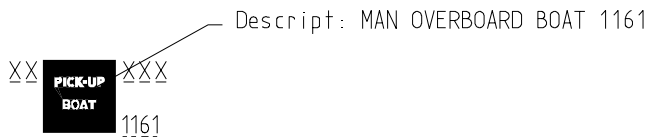
KG029A
PUSH TO OPEN



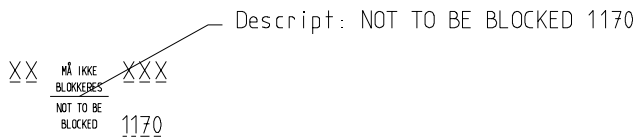
KG024A
EXIT 1101



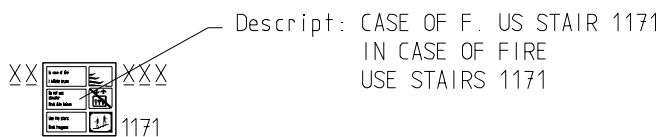
KG025A
EMERGENCY EXIT 1150



KG026A
MAN OVERBOARD BOAT 1161



KG027A
NOT TO BE BLOCKED 1170



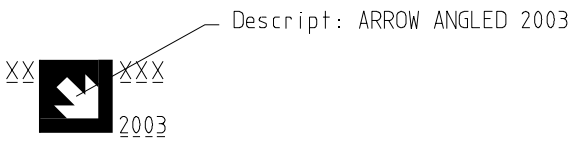
KG028A
CASE OF F. US STAIR 1171



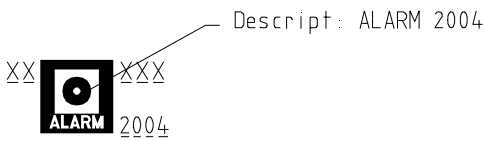
KK030A
FIRE 2001



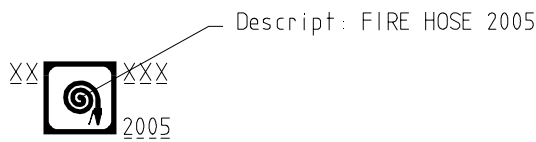
KK031A
ARROW STRAIGHT 2002



KK032A
ARROW ANGLED 2003



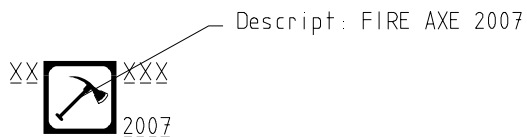
KK033A
ALARM 2004



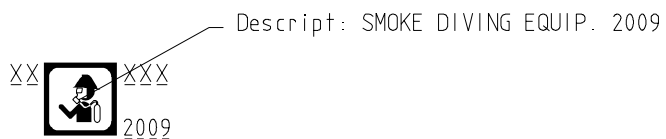
KK034A
FIRE HOSE 2005



KK035A
FIRE EXTINGUISHER 2006



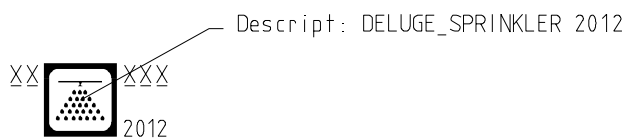
KK036A
FIRE AXE 2007



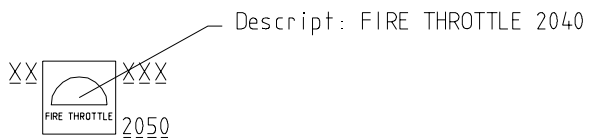
KK037A
SMOKE DIVING EQUIP. 2009



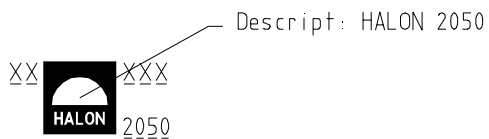
KK038A
HELIC. FIRE STATION 2011



KK039A
DELUGE_SPRINKLER 2012



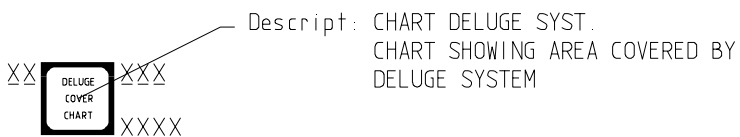
KK040A
FIRE THROTTLE 2040



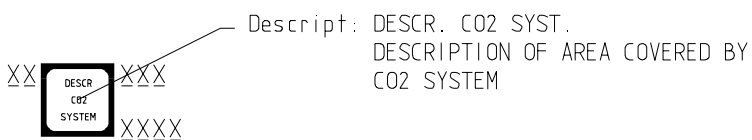
KK041A
HALON 2050



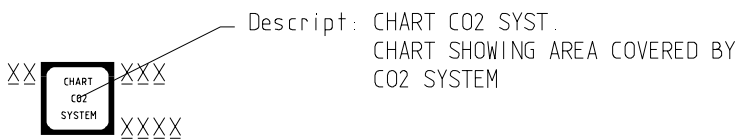
KK042A
DESCR. DELUGE SYST.



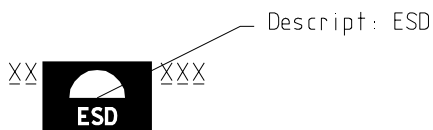
KK043A
CHART DELUGE SYST.



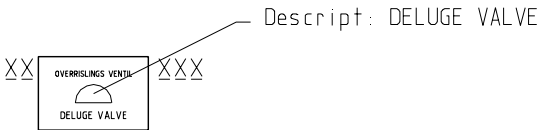
KK044A
DESCR. CO2 SYST.



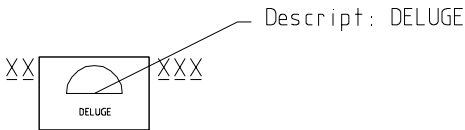
KK045A
CHART CO2 SYST.



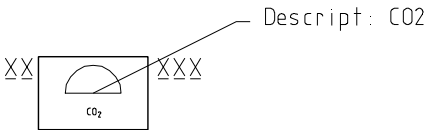
KK046A
ESD



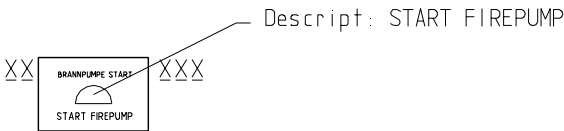
KK047A
DELUGE VALVE



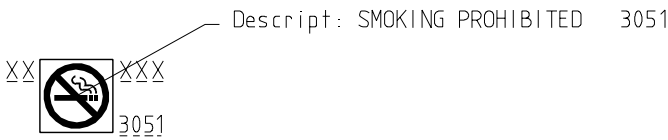
KK048A
DELUGE



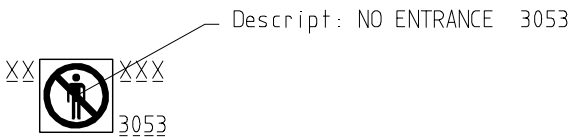
KK049A
CO2



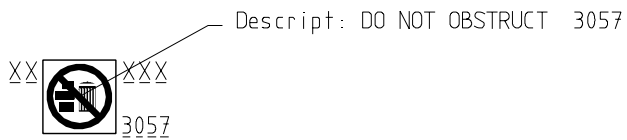
KK050A
START FIREPUMP



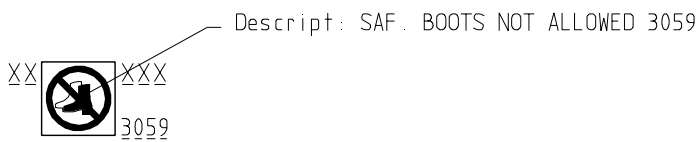
KP084A
SMOKING PROHIBITED 3051



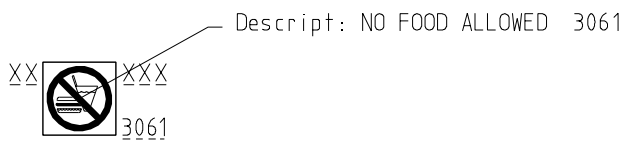
KP085A
NO ENTRANCE 3053



KP086A
DO NOT OBSTRUCT 3057



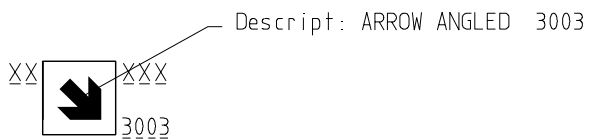
KP087A
SAF. BOOTS NOT ALLOWED 3059



KP088A
NO FOOD ALLOWED 3061



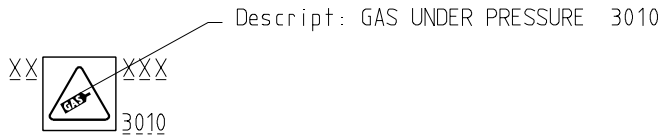
KY076A
ARROW STRAIGHT 3002



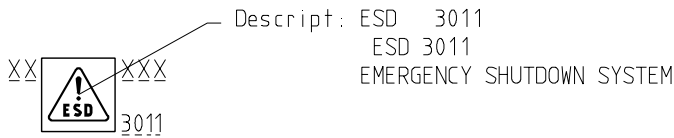
KY077A
ARROW ANGLED 3003



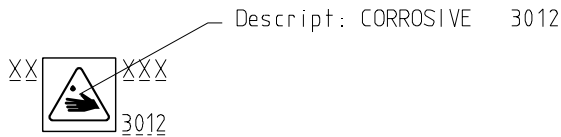
KY078A
HIGH VOLTAGE 3004



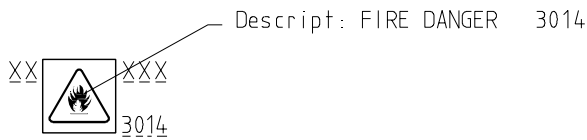
KY079A
GAS UNDER PRESSURE 3010



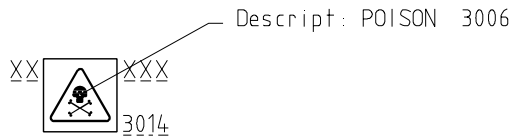
KY080A
ESD 3011



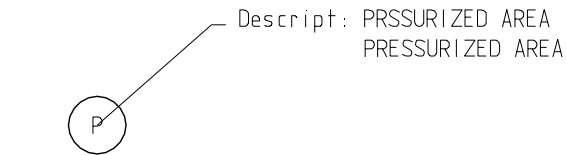
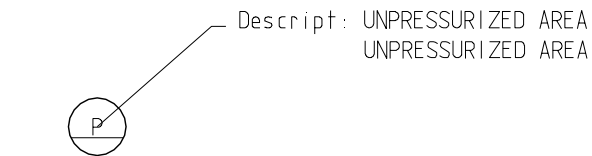
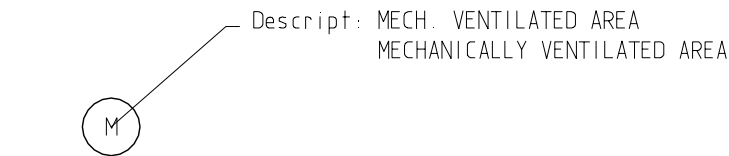
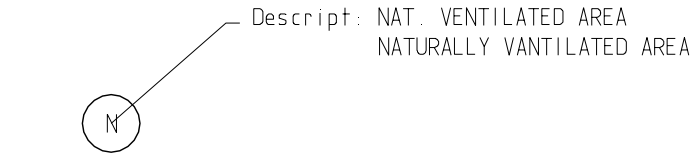
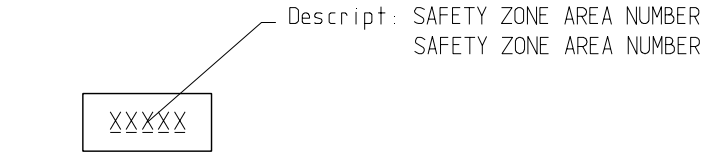
KY081A
CORROSIVE 3012



KY082A
FIRE DANGER 3014



KY083A
POISON 3006





Descript: GAS DETECTOR
H2S ONLY FOR H2S DETECTOR

SF001A
GAS DETECTOR



Descript: FIRE DETECTOR
FIRE DETECTOR
BS = SMOKE DETECTOR
BH = HEAT DETECTOR
IR = INFRARED DETECTOR
UV = ULTRAVIOLET DETECTOR

SF002A
FIRE DETECTOR



Descript: TRIMPLATE PNEU. HEAT DET.
TRIMPLATE PNEUMATIC HEAT DETECTION

SF003A
TRIMPLATE PNEU. HEAT DET



Descript: SPRINKLER SYSTEM SET
SPRINKLER SYSTEM SET
CO2 = CO2 SYSTEM
HFP = HELIDECK FOAM PACKAGE
PB = DRY CHEMICAL FIXED UNIT
DA = DELUGE W AFFF VALVE SET
I = INERGEN SKID
S = WET PIPE SPRINKLER VALVE SET
W = WATER MIST SKID

SF004A
SPRINKLER SYSTEM SET

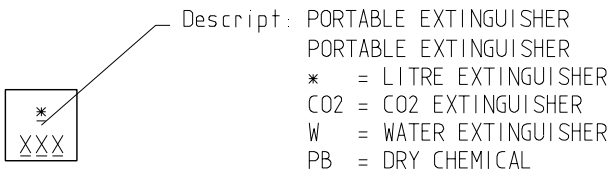


Descript: FIRE DAMPER PANEL
FIRE DAMPER PANEL
SY = CENTRAL FIRE POINT UNIT
F = FIRE DAMPER PANEL

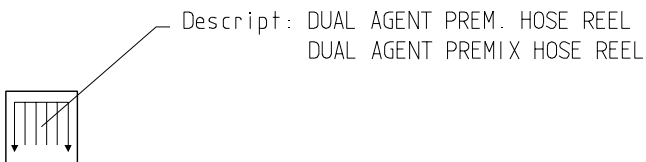
SF005A
FIRE DAMPER PANEL



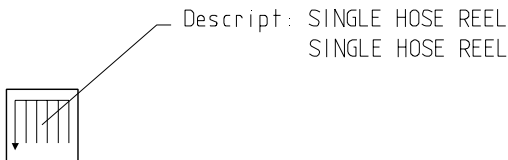
SF006A
FIREDET. STATUS



SF007A
PORTABLE EXTINGUISHER



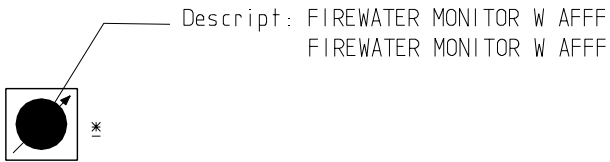
SF008A
DUAL AGENT PREM. HOSE REEL



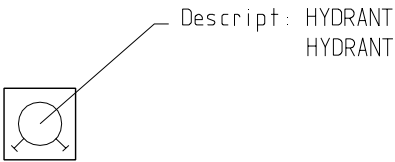
SF009A
SINGLE HOSE REEL



SF010A
FIREWATER MONITOR



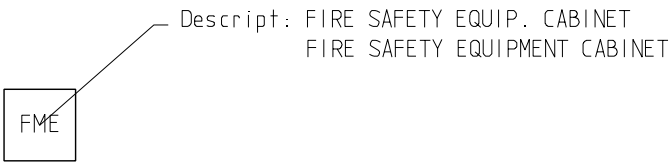
SF011A
FIREWATER MONITOR W.AFFF



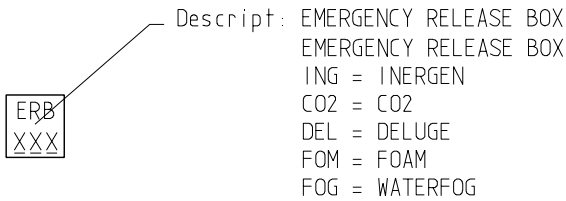
SF012A
HYDRANT



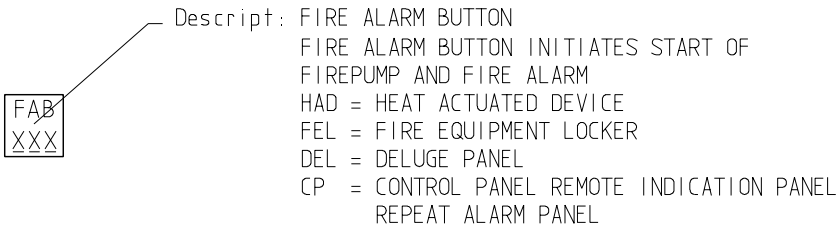
SF013A
HELIDECK CRASH RESC. EQUIP.



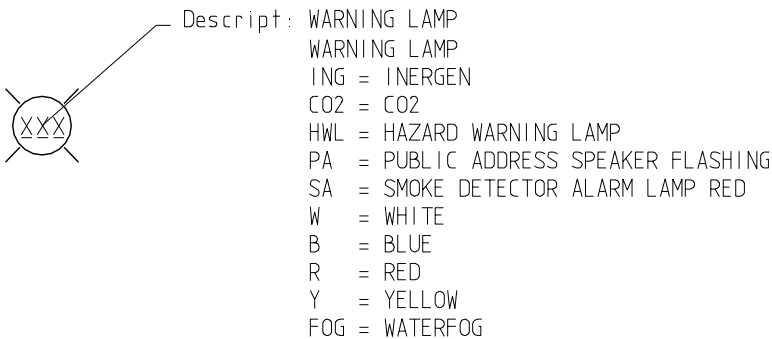
SF014A
FIRE SAFETY EQUIP. CABINET



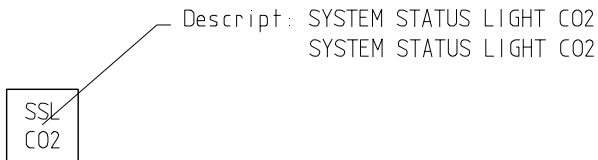
SF015A
EMERGENCY RELEASE BOX



SF016A
FIRE ALARM BUTTON



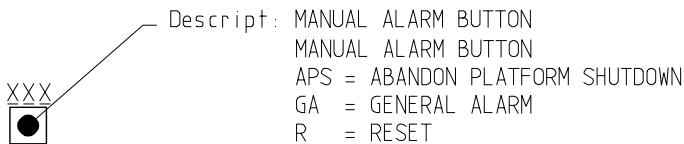
SF017A
WARNING LAMP



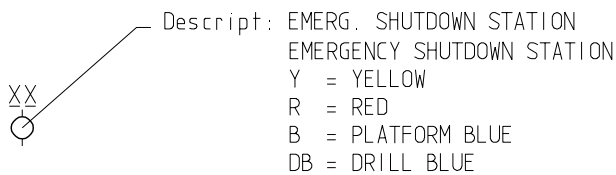
SF018A
SYSTEM STATUS LIGHT CO2



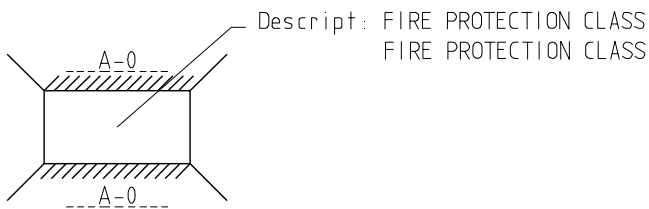
SF019A
FIRE AND GAS PANEL



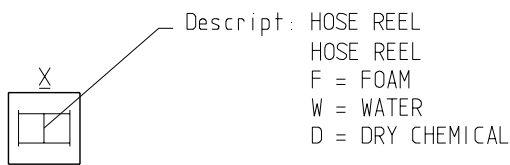
SF020A
 MANUAL ALARM BUTTON



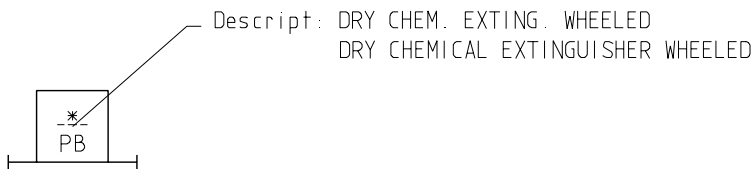
SF021A
 EMERG. SHUTDOWN STATION



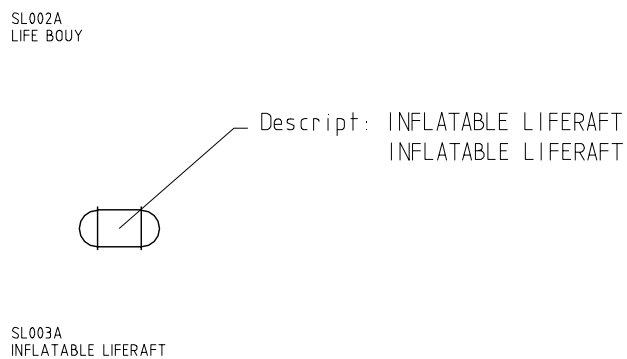
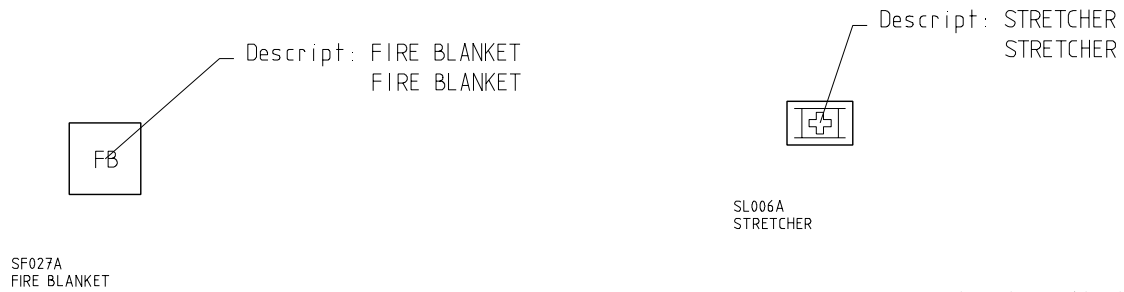
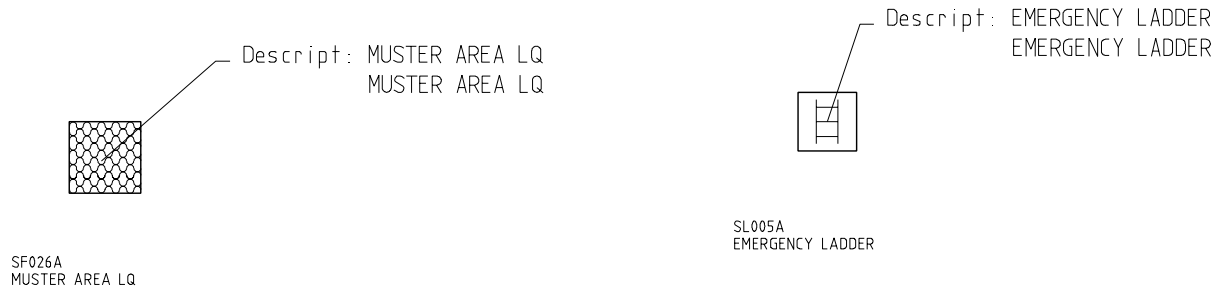
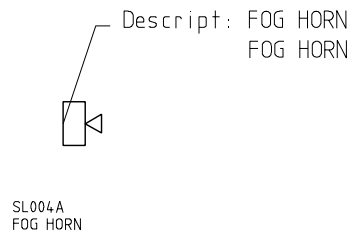
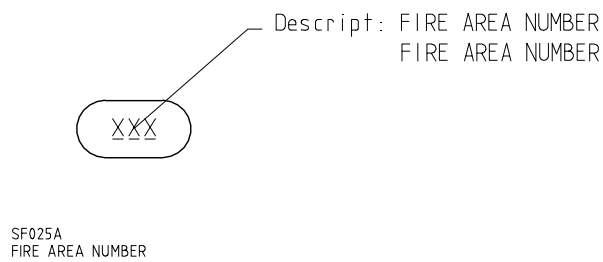
SF022A
 FIRE PROTECTION CLASS



SF023A
 HOSE REEL



SF024A
 DRY CHEM. EXTING. WHEELED





Descript: BREATHING APPARATUS
BREATHING APPARATUS

SL009A
BREATHING APPARATUS



Descript: AIRCRAFT CRASH EQUIP. CAB.
AIRCRAFT CRACH EQUIPMENT CABINET

SL010A
AIRCRAFT CRASH EQUIP. CAB.



Descript: SURVIVAL SUITS
SURVIVAL SUITS

SL011A
SURVIVAL SUITS



Descript: DIRECTION OF FIRE
DIRECTION OF FIRE

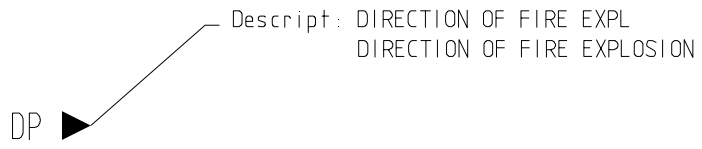
SL012A
DIRECTION OF FIRE

DP

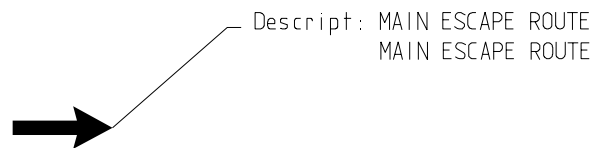


Descript: DIRECTION OF EXPLOSION
DIRECTION OF EXPLOSION

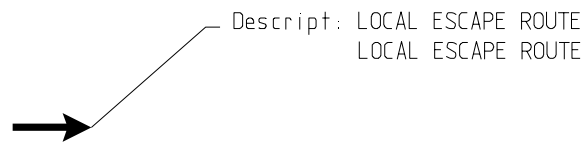
SL013A
DIRECTION OF EXPLOSION



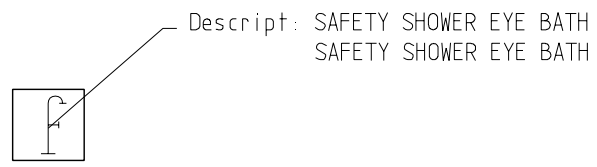
SL014A
DIRECTION OF FIRE EXPL.



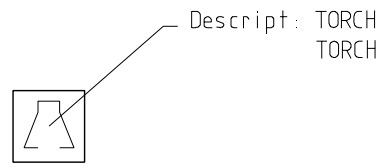
SL015A
MAIN ESCAPE ROUTE



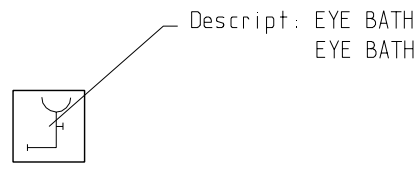
SL016A
LOCAL ESCAPE ROUTE



SL017A
SAFETY SHOWER EYE BATH



SL018A
TORCH



SL019A
EYE BATH



Descript: MAN OVERBOARD BOAT
MAN OVERBOARD BOAT

SL020A
MAN OVERBOARD BOAT



Descript: PERSONNELL BASKET
PERSONNELL BASKET

SL021A
PERSONNELL BASKET



Descript: BREATH AIR RE_CHARGE UNIT
BREATH AIR RE_CHARGE UNIT

SL022A
BREATH AIR RE_CHARGE UNIT



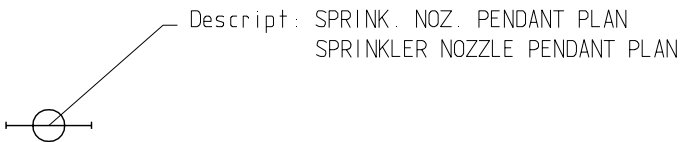
Descript: SPRINK. NOZ. UPRIGHT PLAN
SPRINKLER NOZZLE UPPRIGHT PLAN

SN001A
SPRINK. NOZ. UPRIGHT PLAN

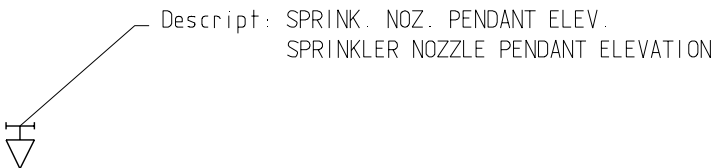


Descript: SPRINK. NOZ. UPRIGHT ELEV.
SPRINKLER NOZZLE UPRIGHT ELEVATION

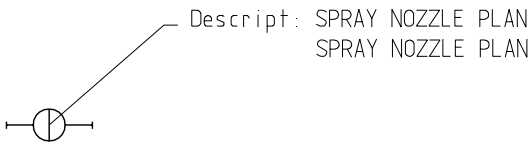
SN002A
SPRINK. NOZ. UPRIGHT ELEV.



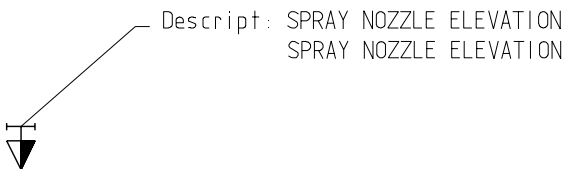
SN003A
SPRINK. NOZ. PENDENT PLAN



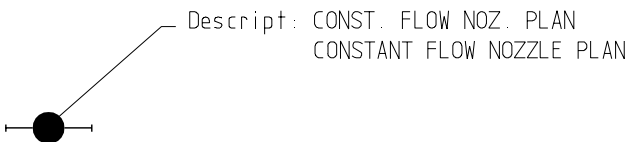
SN004A
SPRINK. NOZ. PENDENT ELEV.



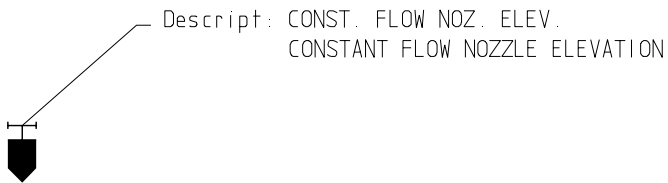
SN005A
SPRAY NOZZLE PLAN



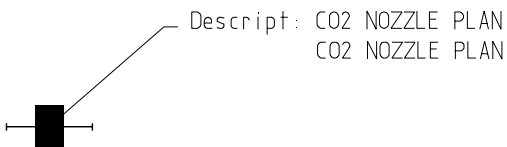
SN006A
SPRAY NOZZLE ELEVATION



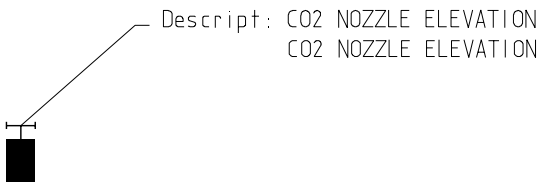
SN007A
CONST. FLOW NOZ. PLAN



SN008A
CONST. FLOW NOZ. ELEV.



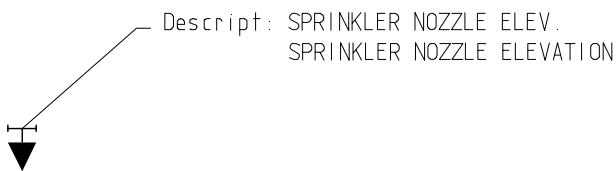
SN009A
CO2 NOZZLE PLAN



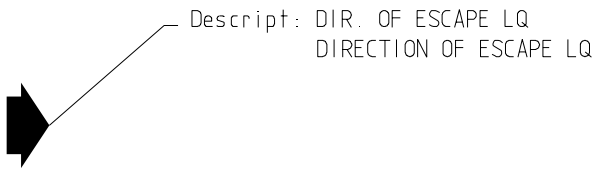
SN010A
CO2 NOZZLE ELEVATION



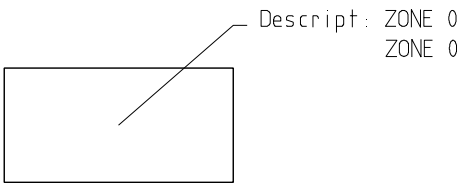
SN011A
SPRINKLER NOZZLE PLAN



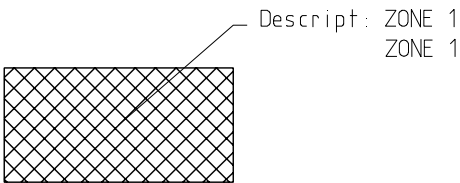
SN012A
SPRINKLER NOZZLE ELEV.



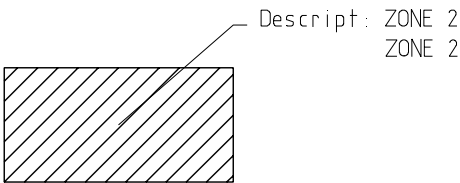
SZ001A
DIR. OF ESCAPE LQ



SZ002A
ZONE 0

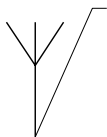


SZ003A
ZONE 1



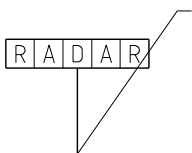
SZ004A
ZONE 2

ANNEX I TELECOMMUNICATION (NORMATIVE)



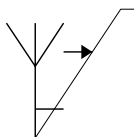
Descript: GENERAL ANTENNA SYMBOL
Standard: IEC 10-04-01

TA001A
GENERAL ANTENNA SYMBOL



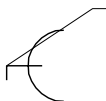
Descript: MARINE RADAR ANTENNA
Standard: IEC 10-05-10

TA002A
MARINE RADAR ANTENNA



Descript: DIRECTIONAL ANTENNA
Standard: IEC 10-04-04

TA003A
DIRECTIONAL ANTENNA



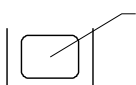
Descript: MICROWAVE LINK ANTENNA
Standard: IEC 10-05-13

TA004A
MICROWAVE LINK ANTENNA



Descript: SATELITE ANTENNA
Standard: IEC 10-05-10

TA005A
SATELITE ANTENNA



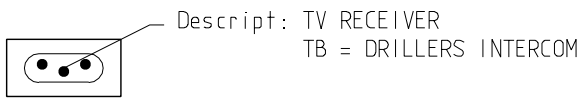
Descript: CCTV MONITOR

TC001A
CCTV MONITOR



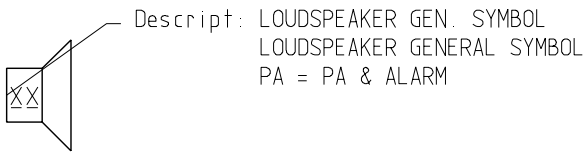
Descript: CCTV CAMERA

TC002A
CCTV CAMERA



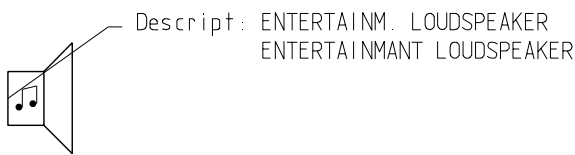
Descript: TV RECEIVER
TB = DRILLERS INTERCOM

TC003A
TV RECEIVER



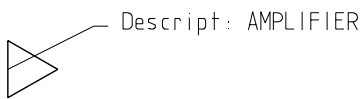
Descript: LOUDSPEAKER GEN. SYMBOL
LOUDSPEAKER GENERAL SYMBOL
PA = PA & ALARM

TC004A
LOUDSPEAKER GEN. SYMBOL



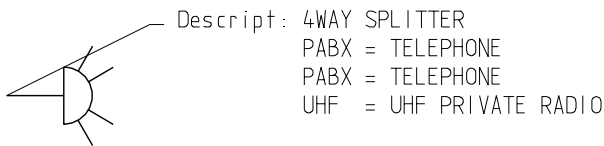
Descript: ENTERTAINM. LOUDSPEAKER
ENTERTAINMANT LOUDSPEAKER

TC005A
ENTERTAINM. LOUDSPEAKER



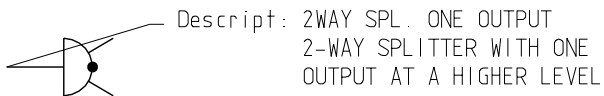
Descript: AMPLIFIER

TC006A
AMPLIFIER



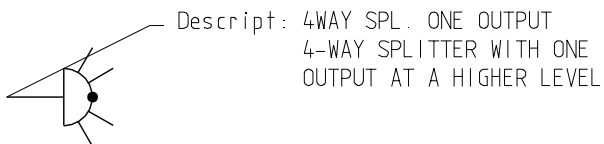
Descript: 4WAY SPLITTER
PABX = TELEPHONE
PABX = TELEPHONE
UHF = UHF PRIVATE RADIO

TC007A
4WAY SPLITTER



Descript: 2WAY SPL. ONE OUTPUT
2-WAY SPLITTER WITH ONE
OUTPUT AT A HIGHER LEVEL

TC008A
2WAY SPL. ONE OUTPUT



Descript: 4WAY SPL. ONE OUTPUT
4-WAY SPLITTER WITH ONE
OUTPUT AT A HIGHER LEVEL

TC009A
4WAY SPL. ONE OUTPUT



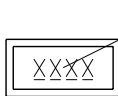
Descript: SOCKET OUTL. ENTERTAINM.
SOCKET OUTLET
ENTERTAINMENT
D/T = COMBINED DATA & TELEPHONE
T = TELEPHONE

TC010A
SOCKET OUTL. ENTERTAINM.



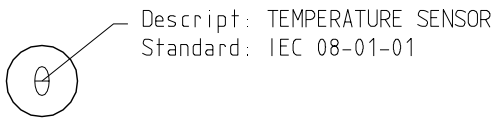
Descript: SOCKET OUTLET GENERAL
SOCKET OUTLET GENERAL
D = DATA
DTB = DRILLERS TALK BACK
EMS = METEROLOGICAL
PA = PA & ALARM
PA = PA & ALARM

TC011A
SOCKET OUTLET GENERAL

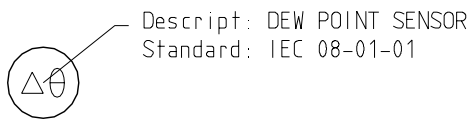


Descript: CONTROL_ACCESS UNIT
CONTROL/ACCESS UNIT
CCTV = CLOSED CIRCUIT TELEVISION

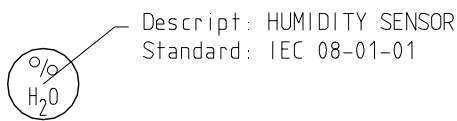
TC012A
CONTROL_ACCESS UNIT



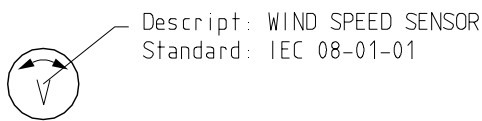
TM001A
TEMPERATURE SENSOR



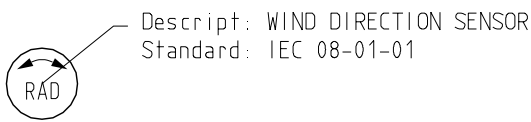
TM002A
DEW POINT SENSOR



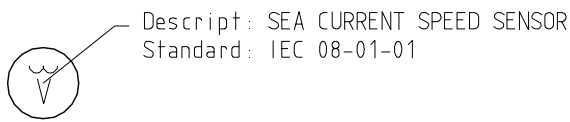
TM003A
HUMIDITY SENSOR



TM004A
WIND SPEED SENSOR



TM005A
WIND DIRECTION SENSOR



TM006A
SEA CURRENT SPEED SENSOR



TM007A
SEA CURRENT DIR. SENSOR



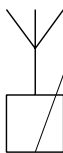
Descript: BAROMETRIC PRESS. SENSOR
Standard: IEC 08-01-01

TM008A
BAROMETRIC PRESS. SENSOR



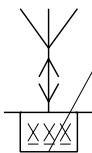
Descript: CEILOGRAPH
Standard: IEC 08-01-01

TM009A
CEILOGRAPH



Descript: RADIO STATION GENERAL
VHF = VHF RADIO
UHF = RADIO
Standard: IEC 10-06-01

TR001A
RADIO STATION GENERAL



Descript: HAND.PORT. RADIO INCL. CHAR
HAND-PORTABLE RADIO, FIXED
INCLUDING CHARGE
Standard: IEC 10-08-05

TR002A
HAND.PORT. RADIO INCL. CHAR



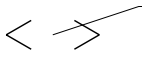
Descript: SPACE STATION \$SATELITE\$
Standard: IEC 10-06-10

TR003A
SPACE STATION \$SATELITE\$



Descript: PROP. IN ONE DIRECTION
PROPAGATION IN ONE DIRECTION
Standard: IEC 02-05-01

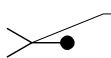
TS001A
PROP. IN ONE DIRECTION

 Descript: PROP. IN 2 DIR ALT. 1 DIR
PROPAGATION IN TWO DIRECTIONS
ALTERNATE IN ONE DIRECTION ONLY
Standard: IEC 02-05-03

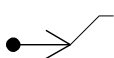
TS002A
PROP. IN 2 DIR ALT. 1 DIR

 Descript: PROP. IN 2 DIR ALT. BOTH DIR
PROPAGATION IN TWO DIRECTIONS
SIMULTANEOUS IN BOTH DIRECTIONS
Standard: IEC 02-05-02

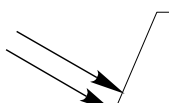
TS003A
PROP. IN 2 DIR ALT. BOTH DIR

 Descript: RECEPTION
Standard: IEC 02-05-05

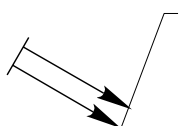
TS004A
RECEPTION

 Descript: TRANSMISSION
Standard: IEC 02-05-04

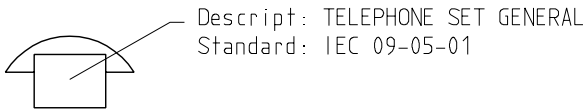
TS005A
TRANSMISSION

 Descript: EL. MAGNETIC WAVES
ELECTROMAGNETIC (RADIO) WAVES
Standard: IEC 02-09-01

TS006A
EL. MAGNETIC WAVES

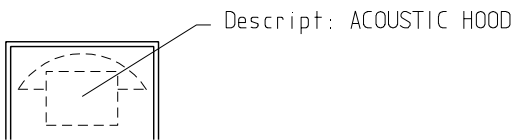
 Descript: COHERENT LIGHT LASER
Standard: IEC 02-09-02

TS007A
COHERENT LIGHT LASER



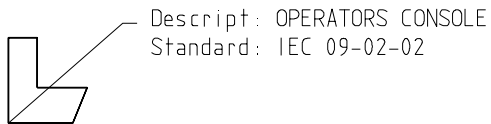
Descript: TELEPHONE SET GENERAL
Standard: IEC 09-05-01

TT001A
TELEPHONE SET GENERAL



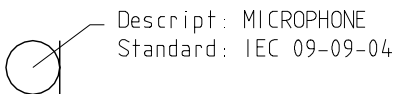
Descript: ACOUSTIC HOOD

TT002A
ACOUSTIC HOOD



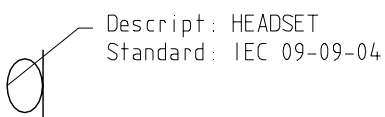
Descript: OPERATORS CONSOLE
Standard: IEC 09-02-02

TT003A
OPERATORS CONSOLE



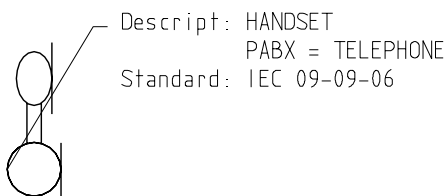
Descript: MICROPHONE
Standard: IEC 09-09-04

TT004A
MICROPHONE



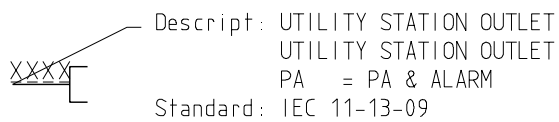
Descript: HEADSET
Standard: IEC 09-09-04

TT005A
HEADSET

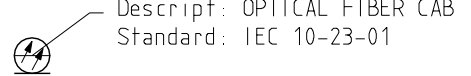


Descript: HANDSET
PABX = TELEPHONE
Standard: IEC 09-09-06

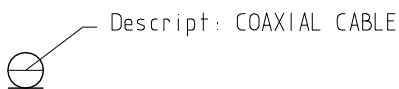
TT006A
HANDSET



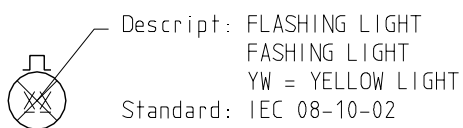
TZ007A
UTILITY STATION OUTLET



TZ007A
OPTICAL FIBER CABLE



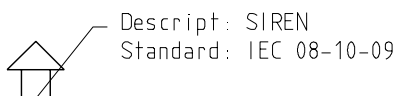
TZ001A
COAXIAL CABLE



TZ002A
FLASHING LIGHT



TZ003A
BELL



TZ004A
SIREN



TZ005A
HORN



TZ006A
CIRCULAR WAVEGUIDE

 Descript: FLEX. WAVEGUIDE CONDUCT.
FLEXIBLE WAVEGUIDE CONDUCTOR

TZ008A
FLEX. WAVEGUIDE CONDUCT.

 Descript: WHISTLE EL. OPERATED
Standard: IEC 08-10-02

TZ009A
WHISTLE EL. OPERATED

 Descript: RECTANGULAR WAVEGUIDE
Standard: IEC 10-07-01

TZ010A
RECTANGULAR WAVEGUIDE

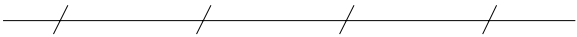
 Descript: ATTENUATOR

TZ011A
ATTENUATOR

ANNEX J SPECIAL LINES (NORMATIVE)

SPECIAL LINES

GENERAL SIGNAL LINE



PNEUMATIC



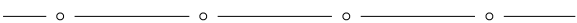
CAPILLARY



HYDRAULIC



DATA LINK



FLEXIBLE PIPE

