

Engineering Procedure

SAEP-110

31 March, 2004

Saudi Aramco Standard Drawings

Document Responsibility: Engineering Drawing Services

Saudi Aramco DeskTop Standards

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1 Scope

This procedure (1) defines a special type of Saudi Aramco engineering drawing and (2) establishes instructions for the preparation and use of these drawings, together with the responsibilities of those associated with them.

2 Applicable Documents

Saudi Aramco Engineering Procedure

[SAEP-334](#)

*Retrieval, Certification, and Submittal of
Engineering & Vendor Drawings*

Saudi Aramco Engineering Standard

[SAES-A-202](#)

Saudi Aramco Engineering Drawing Preparation

3 Instructions

3.1 Definition and Purpose

Saudi Aramco Standard Drawings, referred herein as Standard Drawings, are prepared engineering drawings, approved by the concerned Saudi Aramco Department. They provide uniformity in design, procurement, fabrication and installation of materials and equipment in Company facilities.

Standard Drawings are mandatory to the extent indicated by specific Saudi Aramco Engineering Standards (SAESs) and Saudi Aramco Materials System Specifications (SAMSSs). Nonetheless, in line with good drafting practice, the content and details of Standard Drawings shall be compatible with and reflect the mandatory requirements of the SAESs and SAMSSs. References to SAESs or SAMSSs are not required, but may be included on Standard Drawings to assist drawing users.

Engineers and design contractors shall incorporate appropriate Standard Drawings into project drawing packages for the construction of new facilities, or the modification of existing facilities. Individuals specifying material and equipment shall attach appropriate Standard Drawings to requisitions and purchase orders. Use of these drawings produce a number of cost-effective benefits, including reducing drafting time and effort, increasing the use of commonly available materials, and assisting construction contractors and inspectors that handle many similar installations.

3.2 Preparation and Revision

The preparation and revision of Standard Drawings will follow the normal production requirements contained in the Saudi Aramco Engineering Standard [SAES-A-202](#), and will be administered by the Standard Coordinator, Consulting Services Department.

3.2.1 Titles and Title Blocks

Select a Standard Drawing title to clearly indicate the subject of the drawing and how to interpret its contents (for example, "Installation of Jack Screws for Flanged Joints"). Do not abbreviate words in the title, unless there is a real shortage of space, and only then if the abbreviation will not be misunderstood. Enter "Standard Drawing" on the left hand side of the fourth line in the title block. If the Standard Drawing has been metricated, enter "Metric" on the right hand side of the fourth line. Just above the title block, put the words "Drawing Responsibility:" followed by the name of the appropriate Standards Committee.

3.2.2 Drawing Number

For identification purposes, all Standard Drawings are assigned Plant Number 990. The first three (3) digits of the six (6) digit Standard Drawing identification number will be "036", while the remaining numbers will be unique.

3.2.3 Drawing Index

Assign the index of every Standard Drawing following the information contained on Standard Drawing AE-036411 sheet 001, "Drawing and Equipment Index Key".

3.2.4 List of Materials

Include on all Standard Drawings that contain material, a list of the material showing SAMS numbers for stock items. If more space is needed, add separate sheets to the Standard Drawing to accommodate the material list.

3.3 Distribution

The distribution of Standard Drawings will follow the normal production requirements contained in the Saudi Aramco Engineering Standard [SAES-A-202](#), and will also be administered by EDSD.

3.3.1 Drawing Management System (PlantDoc)

Standard Drawings are maintained in electronic (CADD) format and listed under Plant 990 and archived under the same plant file by Engineering Drawings Services Division (EDSD) in Dhahran. Authorized users can browse the drawings from the Drawing Management System (PlantDoc), and Intranet Site of EDSD Home Page under "Drawings On-line" (WEB-QVP). This system provides on-line access to Standard Drawings, enabling users to find, view, and print them. The system data is periodically updated to include all latest approved drawings.

3.3.2 DeskTop Standards System

The DeskTop Standards System is an approved source of information for Standard Drawings. Numerical and alphabetical lists of Standard Drawings are included, together with an Alert file identifying approved revisions. These files are updated periodically and can be accessed through the Intranet Site of ES Home Page under "Engineering Standards".

A review of the Alert file will enable users to know the latest revision level and date of approved Standard Drawings.

4 Responsibilities

4.1 Standard Drawing Proponents

The Managers of the Consulting Services, Loss Prevention, and Process & Control Systems Departments are the proponents for the Standard Drawings assigned to their respective Standards Committees, and will exercise approval authority for their drawings. The Standards Coordinator is also responsible for Company-wide distribution of Standard Drawings through DeskTop Standards Program.

4.2 Standards Committee Chairmen

Each Standards Committee Chairman is responsible for periodically reviewing, updating or developing new Standard Drawings, and requesting the cancellation obsolete Standard Drawings no longer needed. They shall ensure that:

- the details and contents of all Standard Drawings correctly communicate the mandatory requirements of SAESs and SAMSSs and clearly distinguishing them from the non mandatory portions of the drawings;

- stock item numbers shown are still available from SAMS, and are the most cost-effective selection based on the service life and environment;
- all proposed revisions or new issues are thoroughly reviewed with other organizations affected by the drawing contents;
- all Standard Drawings are approved by their Manager, prior to issuing for use; and
- all critical supporting documentation, data, and calculations are forwarded to the Standards Coordinator for retention in historical files.

4.3 Standards Coordinator

The Standards Coordinator will:

- ensure that accurate records are maintained on the status of all approved revisions to Standard Drawings, and correctly reported on the DeskTop Standards Alert files;
- obtain electronic images of approved Standard Drawings to include with distribution of the DeskTop Standards Program;
- retain in historical files, all critical supporting documentation, data, and calculations received from Standards Committee Chairmen, and
- coordinate preparation, revision and cancellation of Standard Drawings.

4.4 EDSD

EDSD is responsible for:

- the control, storage, and retrieval of Standard Drawings following the requirements of the Saudi Aramco Engineering Standard [SAES-A-202](#);
- securing approved electronic file of Standard Drawings and loading them into the Intranet Site "WEB QVP" and PlantDoc.

4.5 Users of Standard Drawings

Project Management, Engineering, and Maintenance organizations and other users are responsible for incorporating Standard Drawings into the design, procurement, and construction of new and modification of existing facilities. Include prints of Standard Drawings in project design packages. To eliminate errors between different versions of a Standard Drawing, indicate both the drawing number and its revision number in the other project documents.

Purchasing shall attach Standard Drawings to purchase requisitions and orders, when called for by those documents.

Materials Standardization shall identify references to obsolete SAMS stock numbers for correction, and recommend to the Standards Committee Chairman, use of more cost-effective SAMS stock material.

Revision Summary

31 March, 2004

Revised the "Next Planned Update". Reaffirmed the contents of the document, and reissued with editorial changes.