

# Engineering Standard

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SAES-O-109

26 October 2005

## Buildings Housing Sensitive or Vital Equipment

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## Saudi Aramco DeskTop Standards

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## 1 General

This standard refers to Buildings Housing Vital Equipment per [SAES-O-100](#), paragraph 1.3. This Standard shall be used in conjunction with Safety and Security Directive No. 9 (SSD/9) of the Saudi Arabian Government Supreme Commission for Industrial Security.

## 2 Amendments

Safety and Security Directive No. 9 has not been amended by the Supreme Commission for Industrial Security.

## 3 Commentary

Certain clarifications have resulted from applying SSD/1 to Saudi Aramco projects. The following items reflect a general understanding reached with representatives of the Supreme Commission for Industrial Security and should be verified through liaison by the Proponent with the General Manager of Industrial Security Operations. The GM of ISO will contact the Managers of the Consulting Services Department and/or Loss Prevention Department in case there are conflicts with other company engineering standards and materials specifications, standard drawings or Industry Codes.

- 3.1 It is understood that the requirements of this specification apply to buildings housing vital or sensitive equipment (refer to [SAES-O-100](#), paragraph 1.1.3). For example, electrical switchgear, diesel generators, computers, remote microprocessor equipment etc.
  - 3.2 Buildings housing vital equipment shall be designed in accordance with SAES-B-014, "Buildings for Essential Oil Operation Facilities" as amended by SSD/9.
  - 3.3 If masonry block is used all cells shall be filled with concrete to form a solid wall.
  - 3.4 Reinforced composite masonry walls are acceptable to meet the 250 mm wall thickness required in SSD/9 paragraph 1a.
  - 3.5 Buildings housing vital equipment shall be a minimum of 60 m from the perimeter security fence (SSD/1 or SSD/2).
  - 3.6 Penetrations (excluding Door Openings, Cable, or Pipe entries) through exterior wall protecting vital or sensitive equipment shall be fitted with a mesh barrier ([SAES-O-120](#)) at the Vital/Nonvital interface to prevent personnel entry into vital areas.
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- 3.7 Masonry walls shall be reinforced and constructed in accordance with [SAES-M-100](#), "Saudi Aramco Building Code".
- 3.8 Ventilation for emergency generator buildings need not be by air-conditioning.
- 3.9 Reference Saudi Aramco Standard (Latest Edition)

#### Saudi Aramco Engineering Standards

<i>SAES-B-Series</i>	<i>Fire &amp; Safety Standards</i>
<a href="#">SAES-K-001</a>	<i>Heating, Ventilation and Air Conditioning</i>
<a href="#">SAES-K-002</a>	<i>Air Conditioning Systems for Essential Operating Facilities</i>
<a href="#">SAES-M-100</a>	<i>Saudi Aramco Building Code</i>
<a href="#">SAES-O-100</a>	<i>Safety &amp; Security, General Requirements</i>
<a href="#">SAES-O-107</a>	<i>Emergency Exit Doors</i>
<a href="#">SAES-O-108</a>	<i>Locks for Security Doors</i>
<a href="#">SAES-O-110</a>	<i>Protection of Vital Equipment</i>
<a href="#">SAES-O-118</a>	<i>Fire Fighting Equipment</i>
<a href="#">SAES-O-120</a>	<i>Expanded Steel Mesh</i>
<a href="#">SAES-Q-001</a>	<i>Criteria for the Design &amp; Construction of Concrete Structures</i>

#### Saudi Aramco Materials System Specification

<a href="#">09-SAMSS-016</a>	<i>Concrete Masonry Units and Concrete Building Bricks</i>
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#### Safety and Security Directives

<i>SSD/1</i>	<i>Standard Security Fence</i>
<i>SSD/2</i>	<i>Category II Fencing</i>
<i>SSD/9</i>	<i>Minimum Standards for Buildings Housing Sensitive or Vital Equipment</i>

#### Revision Summary

26 October, 2005

Revised the "Next Planned Update". Reaffirmed the contents of the document, and reissued with no other changes.