



Engineering Standard

SAES-L-810

5 February 2006

Design of Piping on Offshore Structures

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Saudi Aramco DeskTop Standards

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1 Scope

This standard supplements API RP 14E and SAES-L-310 and defines additional design requirements governing piping systems located on fixed offshore platforms.

2 Conflicts and Deviations

- 2.1 Any conflicts between this standard and other applicable Saudi Aramco Engineering Standards (SAESs), Materials System Specifications (SAMSSs), Standard Drawings (SASDs), or industry standards, codes, and forms shall be resolved in writing by the Company or Buyer Representative through the Manager, Consulting Services Department of Saudi Aramco, Dhahran.
- 2.2 Direct all requests to deviate from this standard in writing to the Company or Buyer Representative, who shall follow internal company procedure SAEP-302 and forward such requests to the Manager, Consulting Services Department of Saudi Aramco, Dhahran.

3 References

The selection of material and equipment, and the design, construction, maintenance, and repair of equipment and facilities covered by this standard shall comply with the latest edition of the references listed below, unless otherwise noted.

3.1 Saudi Aramco References

Saudi Aramco Engineering Procedure

<i>SAEP-302</i>	<i>Instructions for Obtaining a Waiver of a Mandatory Saudi Aramco Engineering Requirement</i>
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Saudi Aramco Engineering Standards

<i>SAES-B-009</i>	<i>Fire Protection and Safety Requirements for Offshore Production Facilities</i>
<i>SAES-L-310</i>	<i>Design of Plant Piping</i>
<i>SAES-L-410</i>	<i>Design of Pipelines</i>

3.2 Industry Code and Standards

American Petroleum Institute

<i>API RP 14E</i>	<i>Design and Installation of Offshore Production Platform Piping Systems</i>
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4 Design Standard

- 4.1 Design and installation of new piping systems on all Saudi Aramco offshore platforms shall comply with API RP 14E.
- 4.2 The design factor of the riser is 0.5 except as noted in 4.3.
- 4.3 The design factor of the riser for a scraper line shall be the same as the main pipeline to facilitate passage of scrapers.

5 Piping Layout

- 5.1 Optimum use of available platform space shall be observed. Pipe length, routing below or above decks, and spacing shall be designed such that the flow pattern and process requirements can be satisfied with minimum platform space and minimum weight. Unobstructed passage for exit from all working areas on platform decks shall be maintained. Refer to SAES-B-009.
- 5.2 Working space and access to valves, instrumentation and other components shall not be larger than necessary for operation and routine maintenance. Refer to SAES-L-310 for typical layout drawings of wellhead piping and flowlines for offshore platforms.

6 Utility Piping and Drains

Utility piping between the Boat landing and platform decks required for services and supplies from a barge or boat shall be installed without pockets and shall be sloped such that the piping will be completely drained at the low points after use. The same requirement also applies to piping having intermittent flow, such as the return line of seawater pumps and drain systems to a slops caisson.

Revision Summary

5 February 2006

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