



ASME Codes & Standards Development: Offshore Oil and Gas Application

**BSEE Domestic and International Standards
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ASME Representatives

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VOLUNTARY CONSENSUS STANDARDS

- National Technology Transfer and Advancement Act of 1995 – directs U.S. Federal Agencies to use voluntary consensus standards
- Office of Management and Budget Circular No. A119 Promotes use of voluntary consensus standards in lieu of government unique standards
 - Eliminates cost to Government to develop standards
 - Provides incentive to use private sector standards that serve national needs and offset the need for additional regulations or to expand existing regulations.

VOLUNTARY CONSENSUS STANDARDS

Regulators Adopting ASME C&S

- US Government
 - US-DOT/PHMSA
 - DHS/USCG
 - DOI/BSEE
 - DOL/OSHA
 - US-NRC
- US State/Local Jurisdictions
 - BPV Codes and B31 Piping Codes
 - ICC Building Codes

VOLUNTARY CONSENSUS STANDARDS

- ❑ Current ASME C&S in BSEE Regulations:
 - B16.5 Pipe Flanges and Flanged Fittings
 - B31.8 Gas Transmission and Distribution Piping Systems
 - BPV Section I-Power Boilers
 - BPV Section IV-Heating Boilers
 - BPV Section VIII -Divisions 1 and 2 Pressure Vessels
- ❑ Reference Editions Need Updating-Documents Submitted to BSEE

ASME/BSEE Partnership

BSEE Participation in ASME Standards Development

- Agency support membership on ASME committees developing standards aligned with agency needs
- Agency members involved with drafting and balloting new or revised standards

Current Codes & Standards Programs

B31 Pipeline Standards

- B31.8 Gas Transmission & Distribution Piping Systems
- B31.4 Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids
- B31.8S Managing System Integrity of Gas Pipelines
- B31Q Pipeline Personnel Qualification

B31.8 Gas Transmission & Distribution Piping Systems

This Code covers the design, fabrication, installation, inspection, and testing of pipeline facilities used for the transportation of gas. The scope of this Code includes gas transmission and gathering pipelines, including appurtenances, that are installed offshore for the purpose of transporting gas from wellhead separators to production facilities. This Code also covers safety aspects of the operation and maintenance of those facilities.

B31.4 Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids

This Code contains requirements for the design, materials, construction, assembly, inspection, and testing of offshore and onshore pipeline systems. These systems transport a wide range of liquids such as crude oil, natural gasoline, natural gas liquids, liquefied petroleum gas, supercritical carbon dioxide, liquid alcohol, liquid anhydrous ammonia and other liquid petroleum products.

B31.8S Managing System Integrity of Gas Pipelines

This Standard currently applies to onshore pipeline systems constructed with ferrous materials and that transport gas, but can be modified to cover offshore pipeline systems. It describes a process that an operator of a pipeline system can use to assess and mitigate risks in order to reduce both the likelihood and consequences of incidents. It covers both prescriptive and performance-based elements of integrity management programs.

B31Q Pipeline Personnel Qualification

This Standard establishes the requirements for developing and implementing an effective Pipeline Personnel Qualification Program utilizing accepted industry practices. The standard specifies the requirements for identifying covered tasks that impact the safety or integrity of pipelines, for qualifying individuals to perform those tasks, and for managing the qualifications of pipeline personnel.

B31Q Pipeline Personnel Qualification

Underlying Principles

- Focus is “safety and integrity”, is technically based, and contains prescriptive and performance options.
- Over 150 possible tasks listed in appendix provides material necessary to develop complete operator qualification program.
- The standard can be applied to hazardous liquid, gas transmission & gas distribution systems.

Other ASME Codes & Standards Applicable to BSEE

- **B31.3-2010 Process Piping**
- **B31.4-2012 Pipeline Transportation Systems for Liquids and Slurries**
- **B31.5-2010 Refrigeration Piping and Transfer Components**
- **API 579-1/ASME FFS-1 Fitness-For-Service**

Other ASME Codes & Standards Applicable to BSEE

- **BPV Section VIII Division 3 High Pressure Vessels**
- **BPV Section V Nondestructive Examination**
- **BPV Section IX Welding and Brazing Qualifications**
- **33 ASME B16 Standards: flanges, valves, gaskets, fittings**
- **In Preparation: New Standards - Nonmetallic Pressure Piping Systems and Materials**
- **B30 Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings**

Questions?
