This is a directory of companies licensed to use the API Monogram and APIQR Registration Mark. This directory also lists the companies who have registered Perforator Designs with API. It provides an alphabetical list of approximately 1,400 manufacturers licensed (at the time of publication) to mark their products with the API Monogram. It also contains a classified listing (by specific API specification) of these licensed manufacturers, as well as over 200 APIQR ISO 9000 registered firms. This directory was developed to assist those individuals desiring to purchase products and services meeting API specifications from companies whose quality systems and capabilities are verified by API's Quality Programs. It is updated and published quarterly.

A searchable on-line version of the composite list is updated weekly and can be found at https://mycerts.api.org/Search/CompositeSearch.

Free*

Spec Q1 ◆
Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry

(1st Edition | December 2011 | Product Number: G0Q109 | Price: $82.00)

Portuguese translation of Spec Q1.

9th Edition | June 2013 | Product Number: G0Q109P | Price: $124.00

Spec Q1 *
Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry—Russian

Russian translation of Spec Q1.

9th Edition | June 2013 | Product Number: G0Q109R | Price: $99.00

Spec Q1 *
Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry—Spanish

Spanish translation of Q1.

9th Edition | June 2013 | Product Number: G0Q109SP | Price: $124.00

Spec Q2 ◆
Specification for Quality Management System Requirements for Service Supply Organizations for the Petroleum and Natural Gas Industries

(1st Edition | December 2011 | 2-Year Extension: August 2016 Product Number: G0Q201 | Price: $82.00)

Spec Q2 *
Specification for Quality Management System Requirements for Service Supply Organizations for the Petroleum and Natural Gas Industries—Chinese

Chinese translation of Spec Q2.

1st Edition | December 2011 | Product Number: G0Q201C | Price: $58.00

Spec Q2 *
Specification for Quality Management System Requirements for Service Supply Organizations for the Petroleum and Natural Gas Industries—Portuguese

Portuguese translation of Spec Q2.

1st Edition | December 2011 | Product Number: G0Q201P | Price: $82.00

Spec Q2 *
Specification for Quality Management System Requirements for Service Supply Organizations for the Petroleum and Natural Gas Industries—Russian

Russian translation of Spec Q2.

1st Edition | December 2011 | Product Number: G0Q201R | Price: $66.00

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The document focuses on an evaluation process for HPHT equipment in the petroleum and natural gas industry. It identifies the equipment that is fit-for-service in the applicable HPHT environment where HPHT environments are intended to control the equipment necessary to ensure the equipment is fit-for-service in the validation, material selection considerations, and manufacturing process.

The systems completion process is designed to help prepare and manage the transfer of care, custody, and control of facilities under construction through appropriate certification and documentation, such that the details of progress are evident. This process is intended to replace existing API equipment specifications, but to supplement them by illustrating accepted practices and principles that may be considered in order to maintain the safety and integrity of the equipment. It is intended for pressure-containing and/or pressure-controlling products for upstream activities application. This document was developed for upstream activities application. This document is intended for pressure-containing and/or pressure-controlling products for wellbore fluids but may also be applied to other equipment that is specified by the product owner or customer. While this document and/or portions thereof could be applicable to other industry segments, it is recommended that other segments carefully review these requirements in order to determine their applicability and, if necessary, to develop an applicable annex identifying any segment-specific requirements.

This publication is a new entry in this catalog.
The 2014 Offshore Structural Reliability Conference was hosted by API for the purpose of sharing the collective knowledge of applying reliability theories and operating experiences in order to address the offshore design and operational challenges facing the industry. These proceedings contain the material presented at this conference that included alternating sessions of instruction and topical papers starting with the history of offshore reliability studies, progressed to current activities, and then finally outlined issues for future resolution. This event was of interest for operators, engineers, regulators, academics, and anyone else involved in the design and operations of offshore structures.

This edition of RP 2EQ is the modified national adoption of ISO 19901-2 to the United States’ offshore continental shelf (U.S. OCS). The requirements are applicable to fixed steel structures and fixed concrete structures. The effects of seismic events on floating structures and partially buoyant structures are briefly discussed. Site-specific assessment of jack-ups in elevated condition is only covered to the extent that the requirements are applicable to fixed offshore structures. The intent of the modification is to map the requirements of ISO 19901-2 to the United States offshore structural codes.

Seismic Design Procedures and Criteria for Offshore Structures

Contains requirements for defining the seismic design procedures and criteria for offshore structures and is a modified adoption of API RP 6G. This document defines the seismic requirements for new construction of structures in accordance with RP 2A-WSD, 22nd Edition and later. Earlier editions of RP 2A-WSD are not applicable. Only earthquake-induced ground motions are addressed in detail. Other geologically induced hazards such as liquefaction, slope instability, faults, tsunamis, mud volcanoes, and shock waves are mentioned and briefly discussed. The requirements are intended to reduce risks to persons, the environment, and assets to the lowest levels that are reasonably practicable.

This edition of RP 2EQ is the modified national adoption of ISO 19901-2:2004. Pages: 54

6th Edition | January 2014 | Product Number: G02EQ01 | Price: $129.00

Spec 2F
Specification for Mooring Chain

Covers flash-welded chain and forged center connecting links used for mooring of offshore floating vessels such as drilling vessels, pipe lay barges, deck barges, and storage tankers. Pages: 16

Product Number: G02F06 | Price: $92.00

Spec 2F
Specification for Mooring Chain—Chinese

Chinese translation of Spec 2F.

6th Edition | June 1997 | Product Number: G02F06C | Price: $65.00

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RP 2FB
Recommended Practice for Design of Offshore Facilities Against Fire and Blast Loading

Provides an assessment process for the consideration of fire and blast in the design of offshore structures and includes guidance and examples for setting performance criteria. This document complements the contents of the Section 18 of RP 2A-WSD, 21st Edition with more comprehensive guidance in design of both fixed and floating offshore structures against fire and blast loading. Guidance on the implementation of safety and environmental management practices and hazard identification, event definition and risk assessment can be found in RP 75 and the RP 14 series. The interface with these documents is identified and emphasized throughout, as structural engineers need to work closely with facilities engineers experienced in performing hazard analyses as described in RP 14J, and with the operator's safety management system as described in RP 75. Pages: 63
1st Edition | April 2006 | Reaffirmed: January 2012
Product Number: G2FPB01 | Price: $162.00

RP 2FPS
Planning, Designing, and Constructing Floating Production Systems

Provides guidelines for design, fabrication, installation, inspection, and operation of floating production systems (FPSs). A FPS may be designed with the capability of one or more stages of hydrocarbon processing, as well as drilling, well workover, product storage, and export. This document addresses only floating systems where a buoyant hull of some form supports the deck, production, and other systems. Bottom-fixed components, such as self-sustaining risers and station-keeping systems, such as turret mooring, catenary anchor leg mooring (CALM), single anchor leg mooring (SALM), etc. are considered as ancillary components and are addressed in more detail in other API recommended practices. Pages: 191
2nd Edition | October 2011 | Product Number: G2FPS02 | Price: $192.00

RP 2GEO/ISO 19901-4:2003
Geotechnical and Foundation Design Considerations
(includes Addendum 1 dated October 2014)

Contains requirements and recommendations for those aspects of geoscience and foundation engineering that are applicable to a broad range of offshore structures, rather than to a particular structure type. Such aspects are site characterization, soil and rock characterization, design and installation of foundations supported by the seabed (shallow foundations), identification of hazards, and design of pile foundations.

Aspects of soil mechanics and foundation engineering that apply equally to offshore and onshore structures are not addressed. The user of this document is expected to be familiar with such aspects.

This edition of RP 2GEO is the modified national adoption of ISO 19901-4:2003. Pages: 103
1st Edition | April 2011 | Product Number: G2GEO001 | Price: $159.00

Spec 2H
Specification for Carbon Manganese Steel Plate for Offshore Structures

Covers two grades of intermediate strength steel plates up to 4 in. thick for use in welded construction of offshore structures, in selected critical portions that must resist impact, plastic fatigue loading, and lamellar tearing. These steels are intended for fabrication primarily by cold forming and welding as per Spec 2B. The welding procedure is of fundamental importance and it is presumed that procedures will be suitable for the steels and their intended service. Conversely, the steels should be amenable to fabrication and welding under shopyard and offshore conditions. Pages: 24
9th Edition | July 2006 | Effective Date: February 1, 2007
Reaffirmed: January 2012 | Product Number: G02H09 | Price: $97.00

Bull 2HINS
Guidance for Post-Hurricane Structural Inspection of Offshore Structures

Provides guidance for above- and below-water post-hurricane structural inspections of fixed and floating structures in the Gulf of Mexico. The goal of these special inspections is to determine if a structure sustained hurricane-induced damage that affects the safety of personnel, the primary structural integrity of the asset, or its ability to perform the purpose for which it was intended. This document should be used in conjunction with the applicable API recommended practices for the structure as well as any structure specific owner or regulatory requirements. Pages: 16
1st Edition | May 2009 | Product Number: G2HINS01 | Price: $85.00

RP 2I
In-Service Inspection of Mooring Hardware for Floating Structures

Provides guidelines for inspecting mooring components of mobile offshore drilling units (MODUs) and permanent floating installations. This edition includes:
- inspection guidelines for steel permanent moorings on permanent floating installations are added;
- inspection guidelines for fiber ropes used for permanent and MODU moorings are included;
- special guidance for MODU mooring inspection in the areas of tropical cyclone is provided.

Although this recommended practice was developed for the primary moorings of MODUs and permanent floating installations, some of the guidelines may be applicable to moorings of other floating vessels such as pipe-laying barges and construction vessels. Also some of the guidelines may be applicable to secondary or emergency moorings such as mooring for jack-up units, shuttle tanker mooring, and dynamic positioning (DP) vessel harbor mooring. The applicability of this document to other floating vessels and moorings is left to the discretion of the user. Pages: 73
3rd Edition | April 2008 | Reaffirmed: June 2015
Product Number: G02I03 | Price: $152.00

RP 2MET/ISO 19901-1:2006
Deprivation of Metocean Design and Operating Conditions

Contains general requirements for the determination and use of meteorological and oceanographic (metocean) conditions for the design, construction, and operation of offshore structures in the petroleum and natural gas industries.

The requirements are divided into two broad types:
- those that relate to the determination of environmental conditions in general, together with the metocean parameters that are required to adequately describe them;
- those that relate to the characterization and use of metocean parameters for the design, the construction activities or the operation of offshore structures.

The environmental conditions and metocean parameters discussed in this document comprise the following:
- extreme and abnormal values of metocean parameters that recur with given return periods that are considerably longer than the design service life of the structure;
- long-term distributions of metocean parameters, in the form of cumulative, conditional, marginal, or joint statistics of metocean parameters, and
- normal environmental conditions that are expected to occur frequently during the design service life of the structure.

Metocean parameters are applicable to
- the determination of actions and action effects for the design of new structures;
- the determination of actions and action effects for the assessment of existing structures;
- the site-specific assessment of mobile offshore units,
Exploration and Production

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- the determination of limiting environmental conditions, weather windows, actions and action effects for pre-service and post-service situations (i.e. fabrication, transportation, and installation or decommissioning and removal of a structure), and
- the operation of the platform, where appropriate.

This edition of RP 2MET is the modified national adoption of ISO 19901-1:2006. Pages: 168
1st Edition | November 2014
Product Number: G62MET01 | Price: $206.00

RP 2MOP/ISO 19901-6:2009
Marine Operations
(includes Errata 1 dated April 2015)
Provides requirements and guidance for the planning and engineering of marine operations, encompassing the design and analysis of the components, systems, equipment, and procedures required to perform marine operations, as well as the methods or procedures developed to carry them out safely. This document is also applicable to modifications of existing structures, e.g. installation of additional topsides modules.
This edition of RP 2MOP is the identical national adoption of ISO 19901-6:2009. Pages: 168
1st Edition | July 2010 | Reaffirmed: April 2015
Product Number: G62MOP01 | Price: $250.00

Spec 2MT1 ◆
Specification for Carbon Manganese Steel Plate with Improved Toughness for Offshore Structures
Covers one grade of intermediate strength steel plates for use in welded construction of offshore structures. These steels are intended for fabrication primarily by cold forming and welding as per Spec 2B. The primary use of these steels is for Class "A" applications and should be used where substantial z-directional stresses are expected. Pages: 6
2nd Edition | September 2001 | Effective Date: March 1, 2002
Reaffirmed: January 2012 | Product Number: G2MT12 | Price: $85.00

Spec 2MT2 ◆
Rolled Shapes with Improved Notch Toughness
Covers rolled shapes (wide flange shapes, angles, etc.), having a specified minimum yield strength of 50 ksi (345 Mpa), intended for use in offshore structures. Commonly available Class A, Class B, and Class C beams refer to degrees of fracture criticality as described in RP 2A. Specs 2H, 2W, and 2Y cover other steels providing improved mechanical properties and toughness for Class "A" applications and should be used where substantial z-directional stresses are expected. Pages: 6
1st Edition | June 2002 | Effective Date: December 1, 2002
Reaffirmed: June 2015 | Product Number: G2MT21 | Price: $81.00

RP 2N/ISO 19906:2010
Planning, Designing, and Constructing Structures and Pipelines for Arctic Conditions
Specifies requirements and provides recommendations and guidance for the design, construction, transportation, installation, and removal of offshore structures, related to the activities of the petroleum and natural gas industries in arctic and cold regions. Reference to arctic and cold regions includes both the Arctic and other cold regions that are subject to similar sea ice, iceberg, and icing conditions. The objective of this standard is to ensure that offshore structures in arctic and cold regions provide an appropriate level of reliability with respect to personnel safety, environmental protection, and asset value to the owner, to the industry, and to society in general.
This standard does not contain requirements for the operation, maintenance, service-life inspection, or repair of arctic and cold region offshore structures, except where the design strategy imposes specific requirements. While this standard does not apply specifically to mobile offshore drilling units, the procedures relating to ice actions and ice management contained herein are applicable to the assessment of such units. This standard does not apply to mechanical, process, and electrical equipment or any specialized process equipment associated with arctic and cold region offshore operations except in so far as it is necessary for the structure to sustain safely the actions imposed by the installation, housing, and operation of such equipment.
This edition of RP 2N is the modified national adoption of ISO 19906:2010. Pages: 458
3rd Edition | April 2015 | Product Number: G02N03 | Price: $205.00

Std 2RD
Dynamic Risers for Floating Production Systems
Addresses structural analysis procedures, design guidelines, component selection criteria, and typical designs for all new riser systems used on FPSs. Guidance is also given for developing load information for the equipment attached to the ends of the risers. The recommended practice for structural design of risers, as reflected in this document, is generally based on the principles of limiting stresses in the risers and related components under normal, extreme, and accidental conditions. This document assumes that the risers will be made of steel or titanium pipe or unbonded flexible pipe. However, other materials, such as aluminum, are not excluded if risers built using these materials can be shown to be fit for purpose. Design considerations for unbonded flexible pipe are included primarily by reference to RP 17B and Spec 17J.
81 Pages:
2nd Edition | September 2013 | Product Number: G2RD02 | Price: $252.00

Bull 2S
Design of Windlass Wildcats for Floating Offshore Structures
Covers the design of windlass wildcats to ensure proper fit and function between wildcat and mooring chain. Wildcats are of the five-whelp type for use with studlink anchor chain conforming to the classification society Grades 1, 2, and 3, ORQ and Grade 4 chain. Wildcat dimensions are provided for chains in integral 1/8 in. (3 mm) steps, ranging in size from 2 in. to 4 in. (51 mm to 102 mm). Wildcat dimensions for chain in intermediate 1/16 in. (1.5 mm) steps are not provided, but wildcats in these sizes are permitted within the scope of this publication.
7 Pages:
Product Number: G02S02 | Price: $78.00

Spec 2SC ◆
Manufacture of Structural Steel Castings for Primary Offshore Applications
Castings manufactured to this specification are intended for use in the fabrication of offshore structures, manufacture of critical marine or mechanical or other system components intended for application on permanent offshore structures, or for components used in the construction of offshore tendons, risers and pipelines. This specification is based on the experience acquired during the design, construction, operation, and maintenance of offshore processing units and permanent facilities, as supplemented with the experience of operating companies with topsides, fixed platforms, floating structures (e.g. TLPs and spar), and their tendons and risers. Castings in these applications tend to be limited production components, with relatively few replications, and receive more intense scrutiny than routine mass production runs.
29 Pages:
1st Edition | September 2009 | Effective Date: March 1, 2010
Reaffirmed: June 2015 | Product Number: G2SC01 | Price: $117.00
Fibers manufactured to this specification are intended for use in the fabrication of offshore structures, marine risers, TLP tendons and pipelines, or other system components intended for application on permanent offshore structures. This specification defines the minimum requirements for manufacture, testing, and inspection of carbon and low-alloy steel forgings, including extrusions and heavy-wall seamless tubular product, grades 4345 N/mm² to 586 N/mm² (60 ksi to 85 ksi) for use in primary steel applications. Service categories A, B, and C (SCA, SCB, and SCC) reflect forging geometry and method of incorporation into the overall system, rather than levels of criticality. They may also be designated by the user (purchaser) to reflect moderately different but standardized levels of performance.

Pages: 26

1st Edition | August 2013 | Product Number: G2SF01 | Price: $88.00

**RP 2SIM**  
Structural Integrity Management of Fixed Offshore Structures

Serves as a guide for the structural integrity management of fixed offshore structures used for the drilling, development, production, and storage of hydrocarbons in offshore areas. Specific guidance is provided for the evaluation of structural damage, above and below water structural inspection, fitness-for-purpose assessment, risk reduction, and mitigation planning, and the process of decommissioning.

The SIM process provided in this recommended practice is applicable to platforms installed at any location worldwide. However, this recommended practice also provides specific metocean criteria, which are only applicable for use in fitness-for-purpose assessments of platforms located in the U.S. Gulf of Mexico and the U.S. West Coast. Pages: 97

1st Edition | November 2014 | Product Number: G2SIM01 | Price: $175.00

**RP 2SK**  
Design and Analysis of Stationkeeping Systems for Floating Structures (includes Addendum 1 dated May 2008)

Presents a rational method for analyzing, designing, or evaluating mooring systems used with floating units. This method provides a uniform analysis tool that, when combined with an understanding of the environment at a particular location, the characteristics of the unit being moored, and other factors, can be used to determine the adequacy and safety of the mooring system. Some design guidelines for dynamic positioning systems are also included. Appendix K of 2SK replaces RP 95F. Pages: 181


**RP 2SM**  
Design, Manufacture, Installation, and Maintenance of Synthetic Fiber Ropes for Offshore Mooring

Covers the design, manufacture, and installation of synthetic fiber ropes to include the design and analysis considerations of mooring systems, design criteria for mooring components, rope design and testing, quality assurance, and in-service maintenance and inspection.

This document applies to synthetic fiber ropes used in the form of taut leg or catenary moorings for both permanent and temporary offshore installations such as:

- monohull-based floating production, storage, and offloading units (FPSOs);
- monohull-based floating storage units (FSOs, FSUs);
- monohull or semi-submersible based floating production units (FPUs, FPSes);
- mobile offshore drilling units (MODUs);
- spar platforms;
- catenary anchor leg mooring (CALM) buoys;
- mobile offshore units.

Pages: 108


**RP 2T**  
Planning, Designing and Constructing Tension Leg Platforms

Contains a guide to the designer in organizing an efficient approach to the design of a tension leg platform (TLP). Emphasis is placed on participation of all engineering disciplines during each stage of planning, development, design, construction, installation, and inspection. This publication contains guidelines developed from the latest practices in designing tension leg platforms and are adapted from successful techniques employed for related structural systems in the offshore and marine industries. Pages: 254

3rd Edition | July 2010 | Reaffirmed: June 2015 | Product Number: G2T03 | Price: $234.00

**Bull 2TD**  
Guidelines for Tie-Downs on Offshore Production Facilities for Hurricane Season

Addresses the need to evaluate the tie-downs in use on offshore production facilities for drilling rigs, permanent equipment, and facilities such as quarters, helidecks, etc. The information contained in this document is presented as recommendations to improve tie-down performance during hurricanes. Bull 2TD also addresses situations where failure of a drilling or workover rig would result in significant damage to the platform or adjacent infrastructure. Pages: 3

1st Edition | June 2006 | Product Number: G2T01 | Price: $53.00

**Bull 2U**  
Bulletin on Stability Design of Cylindrical Shells

Contains semi-empirical formulations for evaluating buckling strength of stiffened and unstiffened cylindrical shells. Pages: 146

3rd Edition | June 2004 | Product Number: G02U03 | Price: $197.00

**Spec 2W**  
Specification for Steel Plates for Offshore Structures, Produced by Thermo-Mechanical Control Processing (TMCP)

Covers two grades of high strength steel plates for use in welded construction of offshore structures, in selected critical portions that must resist impact, plastic fatigue loading, and lamellar tearing. Grade 50 is covered in thicknesses up to 6 in. (150 mm) inclusive, and Grade 60 is covered in thicknesses up to 4 in. (100 mm) inclusive. Pages: 15

5th Edition | December 2006 | Effective Date: June 1, 2007 | Reaffirmed: January 2012 | Product Number: G02W05 | Price: $97.00

**Spec 2W**  
Specification for Steel Plates for Offshore Structures, Produced by Thermo-Mechanical Control Processing (TMCP)—Russian

Russian translation of Spec 2W. Pages: 15

5th Edition | December 2006 | Product Number: G02W05R | Price: $78.00

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RP 2X
Recommended Practice for Ultrasonic and Magnetic Examination of Offshore Structural Fabrication and Guidelines for Qualification of Technicians
Contains guidance on commonly used NDE methods such as visual (VT), penetrant (PT), magnetic particle (MT), radiography (RT), and ultrasonic (UT) examinations, which are routinely used in offshore structural fabrication. This recommended practice primarily addresses the MT and UT methods. Guidance on VT, PT, and RT is incorporated by reference to AWS D1.1. Further recommendations are offered for determining the qualifications of personnel using MT and UT techniques. Recommendations are also offered for the integration of these techniques into a general quality control program. The interrelationship between joint design, the significance of defects in welds, and the ability of NDE personnel to detect critical-size defects is also discussed. Pages: 77
Product Number: G02X04 | Price: $151.00

Spec 2Y
Specification for Steel Plates, Quenched-and-Tempered, for Offshore Structures
Covers two grades of high strength steel plate for use in welded construction of offshore structures, in selected critical portions that must resist impact, plastic fatigue loading, and lamellar tearing. Grade 50 is covered in thicknesses up to 6 in. (150 mm) inclusive, and Grade 60 is covered in thicknesses up to 4 in. (100 mm) inclusive. Pages: 13
5th Edition | December 2006 | Effective Date: June 1, 2007
Reaffirmed: January 2012 | Product Number: G02Y05 | Price: $97.00

RP 2Z
Recommendation Practice for Preproduction Qualification for Steel Plates for Offshore Structures
Covers requirements for preproduction qualification, by special welding and mechanical testing, of specific steelmaking and processing procedures for the manufacture of steel of a specified chemical composition range by a specific steel producer. This is a recommended practice for material selection and qualification, but not for the performance of production weld joints. This recommended practice was developed in conjunction with, and is intended primarily for use with, Specs 2W and 2Y. However, it may be used as a supplement to other material specifications (e.g., Spec 2H) if so desired. Pages: 19
Product Number: G02Z04 | Price: $123.00

RP 2Z *
Recommendation Practice for Preproduction Qualification for Steel Plates for Offshore Structures—Russian
Russian translation of RP 2Z.
4th Edition | September 2005 | Product Number: G02Z04R | Price: $98.00

RP 95J
Gulf of Mexico Jackup Operations for Hurricane Season
Presents an interim approach to siting jackup mobile offshore drilling units (MODUs) and to recommend certain operational procedures to enhance jackup survivability and stationkeeping during hurricane season in the Gulf of Mexico during drilling and worker and while stacked (idled) at a non-sheltered location. This RP provides guidance and processes, and when combined with an understanding of the environment at a particular location, the characteristics of the unit being utilized, and other factors, it may be used to enhance operational integrity. This RP was developed through a cooperative arrangement with the International Association of Drilling Contractors’ (IADC) Jackup Rig Committee. Specifically, this RP provides guidance in the following areas:
• site—including location-specific, geotechnical, and metocean;
• preloading process;
• air gap recommendations;
• unit preparations and evacuation;
• post storm recovery; and
• post storm inspections. Pages: 15
Product Number: G95J01 | Price: $64.00

DECKS AND DERRICKS

Spec 4F *
Specification for Drilling and Well Servicing Structures—Chinese
Chinese translation of Spec 4F.

RP 4G
Operation, Inspection, Maintenance, and Repair of Drilling and Well Servicing Structures
(includes Addendum 1 dated August 2016)
Provides guidelines and establishes recommended procedures for inspection, maintenance, and repair of items for drilling and well servicing structures to maintain the serviceability of this equipment. These recommendations should be considered as supplemental to, and not as a substitute for, the manufacturer’s instructions and the recommendations in RP 54. Items of drilling and well servicing structures covered are masts, derricks, substructures, and their accessories. Pages: 57
Product Number: G04G04 | Price: $119.00

RP 4G *
Operation, Inspection, Maintenance, and Repair of Drilling and Well Servicing Structures—Chinese
Chinese translation of RP 4G.
4th Edition | April 2012 | Product Number: G04G04C | Price: $84.00

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This publication is a new entry in this catalog. This publication is related to an API licensing, certification, or accreditation program.
Methods and apparatus calibration and standardization procedures for Covers dimensions, tolerances, and marking requirements for API threads (includes Errata 1 dated June 2018, Errata 2 dated December 2018, and Addendum 1 dated September 2004) Threading, gauging, gauging, gauging, and practice, and inspection of threads for casing, tubing, and line pipe made under Specs 5CT, 5DP, and 5L. Also covers gauge specifications and certification for casing, tubing, and line pipe gauges. Pages: 48

Product Number: G05B105 | Price: $146.00

RP 5B1 Gauging and Inspection of Casing, Tubing and Line Pipe Threads Russian translation of RP 5B1.
5th Edition | August 1999 | Product Number: G05B15K | Price: $117.00

RP 5B1 Gauging and Inspection of Casing, Tubing and Line Pipe Threads— Russian
5th Edition | October 1999 | Product Number: G05B15R | Price: $117.00

RP 5C1 Recommended Practice for Care and Use of Casing and Tubing Covers use, transportation, storage, handling, and reconditioning of casing and tubing. Pages: 31
Product Number: G05C18 | Price: $118.00

RP 5C1 Recommended Practice for Care and Use of Casing and Tubing— Chinese
Chinese translation of RP 5C1.
18th Edition | May 1999 | Product Number: G05C18C | Price: $83.00

TR 5C3 Calculating Performance Properties of Pipe Used as Casing or Tubing
Illustrates the equations and templates necessary to calculate the various pipe properties, including:
- pipe performance properties, such as axial strength, internal pressure resistance, and collapse resistance;
- minimum physical properties;
- product assembly force (torque);
- product test pressures;
- critical product dimensions related to testing criteria;
- critical dimensions of testing equipment; and
- critical dimensions of test samples.
For equations related to performance properties, extensive background information is also provided regarding their development and use. Pages: 400
7th Edition | June 2018 | Product Number: G5C307 | Price: $234.00

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This publication is a new entry in this catalog. This publication is related to an API licensing, certification, or accreditation program.
The requirements that define different levels of standard technical specifications (PSL-1, PSL-2, PSL-3). The requirements for PSL-1 are the basis of this standard. It addresses the primary loads to which casing and tubing strings are subjected: fluid pressure (internal and/or external), axial force (tension and/or compression), bending (flattening and/or wellbore deviation), and temperature variations. Pages: 197

**RP 5CS**
Procedures for Testing Casing and Tubing Connections
Defines tests to perform to determine the galling tendency, sealing performance, and structural integrity of threaded casing and tubing connections. The words “casing” and “tubing” apply to the service application and not to the diameter of the pipe. This recommended practice addresses the primary loads to which casing and tubing strings are subjected: fluid pressure (internal and/or external), axial force (tension and/or compression), bending (flattening and/or wellbore deviation), and temperature variations. Pages: 28


**RP 5CS**
Procedures for Testing Casing and Tubing Connections—Russian
Russian translation of RP 5CS.

**RP 5CS**
Procedures for Testing Casing and Tubing Connections—Chinese
Chinese translation of RP 5CS.

**RP 5C8**
Care, Maintenance, and Inspection of Coiled Tubing
Covers the care, maintenance, and inspection of used alloy carbon steel coiled tubing. Commonly manufactured coiled tubing outside diameters range from 25.4 mm (1.000 in.) to 88.9 mm (3.5 in.). Pages: 122

1st Edition | January 2017 | Product Number: G05C62 | Price: $98.00

**Spec 5CRA/ISO 13680:2008**
Specification for Corrosion Resistant Alloy Seamless Tubes for Use as Casing, Tubing and Coupling Stock
Specifies the technical delivery conditions for corrosion-resistant alloy seamless tubulars for casing, tubing, and coupling stock for two product specification levels. This edition of Spec 5CRA is the identical national adoption of ISO 13680:2010. Pages: 87

1st Edition | February 2010 | Effective Date: August 1, 2010
Reaffirmed: April 2015 | Product Number: G5CRA01 | Price: $124.00

Reaffirmed: April 2015 | Product Number: G5CRA01R | Price: $124.00

**Spec 5CT**
Casing and Tubing
Specifies requirements for the manufacture of two product specification levels (PSL-1 and PSL-2) of seamless and welded steel pipes for use in pipelines and transportation systems in the petroleum and natural gas industries. This specification is not applicable to cast pipe. Pages: 210

10th Edition | June 2018 | Effective Date: July 1, 2019
Product Number: GC5CT010 | Price: $268.00

**Spec 5CT**
Casing and Tubing—Russian
Russian translation of Spec 5CT.
10th Edition | June 2018 | Product Number: G5CT010R | Price: $214.00

**Spec 5DP/ISO 11961:2008**
Specification for Drill Pipe
Specifies the technical delivery conditions for steel drill-pipes with upset pipe-body ends and weld-on joint tools for use in drilling and production operations in petroleum and natural gas industries for three product specification levels (PSL-1, PSL-2, and PSL-3). This International Standard covers the following grades of drill-pipe:
- grade E drill-pipe;
- high-strength grades of drill-pipe, grades X, G, and S.

This International Standard can also be used for drill-pipe with tool joints not specified by ISO or API standards. This International Standard is based on Spec SD and Spec T.

This edition of Spec 5DP is the identical national adoption of ISO 11961:2008. Pages: 112

1st Edition | August 2009 | Effective Date: August 1, 2010
Reaffirmed: April 2015 | Product Number: G5DP01 | Price: $186.00

**Spec 5DP/ISO 11961:2008**
Specification for Drill Pipe—Chinese
Chinese translation of Spec 5DP.
1st Edition | August 2009 | Product Number: G5DP01C | Price: $131.00

**RP 5EX**
Design, Verification, and Application of Solid Expandable Systems
Establishes guidance for design, system verification, and application guidelines of solid expandable systems for the oil and gas industries. This document is not to be used as a specification for purchasing equipment; it is intended for consideration by users for well applications and design of solid expandable systems.
Expandable systems will include drilling liners, hangers, connections, receivers, and launchers for downhole use as defined herein. Only permanently installed equipment/components are covered by this recommended practice. Slotted liners and tools used for the expansion of the tubular goods (such as, but not limited to, implementation tools, pumps, jacks, and expansion tools) are not addressed by this recommended practice. Pages: 54

1st Edition | May 2018 | Product Number: G5EX01 | Price: $108.00

**Spec 5L**
Line Pipe
Specifies requirements for the manufacture of two product specification levels (PSL 1 and PSL 2) of seamless and welded steel pipes for use in pipeline transportation systems in the petroleum and natural gas industries.
This specification is not applicable to cast pipe. Pages: 210

6th Edition | April 2018 | Effective Date: November 1, 2018
Product Number: G05L46 | Price: $284.00

**Spec 5L**
Line Pipe—Russian
Russian translation of Spec 5L.
6th Edition | April 2018 | Product Number: G05L46R | Price: $235.00

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<td>RP 5L1</td>
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<td>Applies to the transportation on railcars of Spec 5L steel line pipe in sizes 2 7/8 and larger in lengths longer than single random. These recommendations cover coated or uncoated pipe, but they do not encompass loading practices designed to protect pipe coating from damage. Pages: 5</td>
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<td>RP 5L9</td>
<td>External Fusion Bonded Epoxy Coating of Line Pipe</td>
<td>Provides standards for pipe suitable for use in conveying gas, water, and oil in both the oil and natural gas industries. Covers seamless and welded steel line pipe, including standard-weight and extra-strong threaded line pipe, and standard-weight plain-end, regular-weight plain-end, special plain-end, extra-strong plain-end, and double-extra-strong plain-end pipe, as well as bell and spigot and through-flowing (TFL) pipe. Pages: 35</td>
<td>1st Edition</td>
<td>December 2001</td>
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Covers seamless, centrifugal cast, and welded corrosion resistant alloy line pipe as well as austenitic stainless, martensitic stainless, duplex stainless, and Ni-base alloys. Also includes standard weight, regular weight, special, extra strong, and double extra strong plain end line pipe as well as processes of manufacturer, chemical and physical requirements, and methods of testing. Pages: 110

Product Number: G5LC04 | Price: $180.00

Spec 5LCP ◆
Specification on Coiled Line Pipe
(includes Errata 1 dated October 2007)
Provides standards for pipe suitable for use in conveying gas, water, and oil in both the oil and natural gas industries. Covers welded steel continuously milled coiled line pipe in the size range 0.5 in. (12.7 mm) to 6.625 in. (168.3 mm). Pipe that is pipe-to-pipe welded outside the confines of the manufacturing plant is not included within this document. Pages: 42
2nd Edition | October 2006 | Effective Date: April 18, 2007
Reaffirmed: November 2012 | Product Number: G5LCP2 | Price: $150.00

Spec 5LCP ◆
Specification on Coiled Line Pipe—Chinese
Chinese translation of Spec 5LCP.
2nd Edition | October 2006 | Product Number: G5LCP2C | Price: $106.00

Spec 5LCP ◆◆
Specification on Coiled Line Pipe—Russian
Russian translation of Spec 5LCP.
2nd Edition | October 2006 | Product Number: G5LCP2R | Price: $121.00

Spec 5LD ◆
CRA Clad or Lined Steel Pipe
(includes Errata 1 dated June 2017)
Covers seamless, centrifugal cast, and welded clad steel line pipe, and lined steel pipe with improved corrosion-resistant properties. The clad and lined steel line pipe specified in this document shall be composed of a base metal outside and CRA layer inside the pipe. The base material shall conform to Spec 5L, except as modified in the 5LC document. Provides standards for pipe with improved corrosion resistance suitable for use in conveying gas, water, and oil in both the oil and natural gas industries. Pages: 38
Product Number: G5LDO4 | Price: $149.00

Spec 5LD ◆◆
CRA Clad or Lined Steel Pipe—Russian
Russian translation of Spec 5LD.

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Spec 5ST ◆
Specification for Coiled Tubing—U.S. Customary and SI Units
Covers the manufacturing, inspection, and testing of all carbon and low alloy steel coiled tubing in Grades CT70, CT80, CT90, CT100, and CT110, in the designations and wall thicknesses given in Table A.5, that can be used as work strings, completion strings, and static installations in oil and gas wells. Coiled tubing may be ordered to this specification. Coiled tubing is manufactured using the continuously milled process. This specification does not cover the joining of seamless or welded tubing segments in lengths less than 200 ft (61 m). Pages: 68
Product Number: GSST01 | Price: $138.00

Spec 5ST *
Specification for Coiled Tubing—U.S. Customary and SI Units—Chinese
Chinese translation of Spec 5ST.
1st Edition | April 2010 | Product Number: GSST01C | Price: $97.00

Bull 5T1
Imperfection and Defect Terminology
Provides terms and definitions and example figures of imperfections and defects that occur in manufacturing steel tubulars. The words “imperfection” and “defect” refer to metallurgical and other features of steel tubular products, which may or may not affect the performance of the products. Inspection requirements and acceptance criteria are not defined in this document, and are found instead in the respective product specification. Pages: 65
11th Edition | October 2017 | Product Number: G05T111 | Price: $131.00

Bull 5T1 *
Imperfection and Defect Terminology—Russian
Russian translation of Bull 5T1.
11th Edition | October 2017 | Product Number: G05T111R | Price: $105.00

TR 5TP
Torque-Position Assembly Guidelines for API Casing and Tubing Connections
Provides alternative connection assembly procedures to those found in Spec 5B (power turns) and those found in RP 5C1 (optimum torque). The procedures set forth are referred to as “torque-position” because the make-up torque and final position are used as acceptance criteria for the assembly operation. The connections are threaded in accordance with Spec 5B. The torque-position assembly parameters have been developed for most SC (short round thread casing), LC (long round thread casing), BC (buttress thread casing), and EU (external upset tubing) connections. Torque-position is a precision assembly method that relies on a controlled process for successful implementation. When defined threading and assembly procedures are followed, the performance of the resulting assembled connection is optimized. Pages: 30
1st Edition | December 2013 | Product Number: G5TP01 | Price: $118.00

Spec 5B (power turns) and those found in RP 5C1 (optimum torque). The connections are threaded in accordance with Spec 5B, and RP 5C1 needed to produce and inspect these connections. By agreement between the purchaser and manufacturer, the supplemental requirements for SR22 shall apply to connections manufactured in accordance with Spec 5CT. Pages: 24
1st Edition | June 2002 | Product Number: GSR22 | Price: $91.00

RP 5UE
Recommended Practice for Ultrasonic Evaluation of Pipe Imperfections
(includes Addendum 1 dated April 2009)
Describes procedures that may be used to “prove-up” the depth or size of imperfections. Included in this practice are the recommended procedures for ultrasonic prove-up inspection of new pipe using the Amplitude Comparison Technique and the Amplitude-Distance Differential Technique for evaluation of:
- surface breaking imperfections in the body of pipe, and
- surface breaking and subsurface imperfections in the weld area of electric resistance, electric induction or laser welded pipe, and
- surface breaking and subsurface imperfections in the weld area of arc welded pipe. Pages: 22
Product Number: GSUE02 | Price: $81.00

VALVES AND WELLHEAD EQUIPMENT

Spec 6A ◆
Specification for Wellhead and Tree Equipment
 Specifies requirements for the performance, dimensional and functional interchangeability, design, materials, testing, welding, marking, handling, storing, shipment, purchasing, repair, and remanufacture of wellhead and tree equipment for use in the petroleum and natural gas industries. This document does not apply to field use, field testing, or field repair of wellhead and Christmas tree equipment. This document is applicable to the following specific equipment: wellhead equipment (integral, blind, and test flanges; ring gaskets; threaded connectors; tees and crosses; bellplugs; valve-removal plugs; standard and nonstandard top connectors; crossover connectors; other end connectors; adapter spools and spacer spools; gate, plug, and ball valves; actuated valves [manual and remote]; check valves [swing and lift-type]; back-pressure valves; slip-type and mandrel-type casing and tubing hangers, casing and tubing heads [housings and adapters]; chokes [fixed, manually actuated, remotely actuated]; actuators [for valves and chokes]; surface safety valve [SSV] assemblies, valves prepared for actuators, and actuators; underwater safety valve [USV] assemblies, valves prepared for actuators, and actuators; boarding shutdown valve [BSDV] assemblies, valves prepared for actuators, and actuators; and tree assemblies). This document defines service conditions in terms of pressure, temperature, and material class for the well-bore constituents, and operating conditions. This international standard establishes requirements for four product specification levels (PSL). These four PSL designations define different levels of technical quality requirements. Pages: 414
21st Edition | November 2018 | Effective Date: November 1, 2019
Product Number: GX06A21 | Price: $295.00

Spec 6A *
Specification for Wellhead and Tree Equipment—Russian
Russian translation of Spec 6A.
21st Edition | November 2018
Product Number: GX06A21R | Price: $236.00

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Provides requirements for age-hardened nickel-base alloys that are intended to supplement the existing requirements of Spec 6A. For downhole applications, refer to Spec 5CRA.

These additional requirements include detailed process control requirements and detailed testing requirements. The purpose of these additional requirements is to ensure that the age-hardened nickel-base alloys used in the manufacture of Spec 6A pressure-containing and pressure-controlling components are not embrittled by the presence of an excessive level of deleterious phases and meet the minimum metallurgical quality requirements. This standard is intended to apply to pressure-containing and pressure-controlling components as defined in Spec 6A. Requirements of this standard may be applied by voluntary conformance by a manufacturer, normative reference in Spec 6A or other product specification(s), or by contractual agreement.

This document expands the scope of Std 6A/718. With its issuance, it replaces Std 6A/718, 2nd Edition in its entirety. Pages: 33

1st Edition | August 2015 | Product Number: G6ACRA1 | $93.00

TR 6AF
Technical Report on Capabilities of API Flanges Under Combinations of Load
(includes Errata 1 dated March 2017)

Presents the results of analysis work done in to establish the load capacity of all flanges give in the April 1986 editions of Spec 6A and Spec 6AB. A total of 69 different geometries were analyzed initially. The various loads considered were bolt makeup (preload), internal pressure, tension, and bending moment. All flanges were analyzed with an axisymmetric finite model for each of the four load cases. A post-processor program was written to calculate the maximum moment capacity for various levels of pressure and tension, based on linear superposition of results. Three different criteria were used to establish the maximum moment:

- ASME Section VIII, Division 2 allowable stress categories for the flange with the basic membrane stress allowable established by API;
- allowable bolt stresses as established by API; and
- loss of preload on the ring joint.

The results of this post-processing are presented in plots of pressure vs. allowable moment for various tension levels. Limitations to this work include: the effects of transverse shear or torsion were not considered in the analysis; dynamic, fatigue, or fretting phenomena were not considered in these results; and thermal stresses or elevated temperature effects were not considered. The charts are intended to be used only as general guidelines for design. These charts are not intended to replace a critical evaluation of any particular connection in an application where the charts show the flange to be marginal. Pages: 79

3rd Edition | September 2008 | Product Number: G6AF03 | Price: $155.00

TR 6AF * ■
Technical Report on Capabilities of API Flanges Under Combinations of Load—Russian

Russian translation of TR 6AF.

3rd Edition | September 2008 | Product Number: G6AF03R | Price: $124.00

TR 6AF1
Technical Report on Temperature Derating of API Flanges Under Combination of Loading

Continuation to the report on the capabilities of flanges under combined loadings that resulted in the publication of Bull 6AF. Included in this technical report is an in-depth look into the effect of elevated temperatures of API flanges. The results in this report are analytical and assume a temperature gradient across the flange as stated in this report. Pages: 256

2nd Edition | November 1998 | Product Number: G06AF1 | Price: $162.00

TR 6AF2
Technical Report on Capabilities of API Integral Flanges Under Combination of Loading—Phase II
(includes Errata 1 dated November 2018)

Result of the evaluation of the load carrying capacity of Spec 6A integral flanges, including the end tension and bending moment in addition to the conventional rated pressure and makeup forces. The effect of a temperature difference corresponding to 250 °F on the inside and 30 °F on the outside is also evaluated. Three-dimensional finite element meshes are generated for the Type 6B and Type 6BX flanges. The computer program SESAM is used to obtain the stresses at selected critical flange and hub sections and to determine the gasket reaction due to each of the four unit load cases and the temperature difference load case. The leakage criterion is defined as the load combination with reduces the initial makeup compressive forces in the gasket to zero. The stresses in each defined section are linearized in accordance with the ASME Section VIII, Division 2 procedure to determine the membrane and membrane-plus-bending stress intensities. The stress intensities are checked against the allowable conditions specified in Spec 6A. Pages: 119

5th Edition | April 2013 | Product Number: G6AF25 | Price: $175.00

TR 6AM
Technical Report on Material Toughness

Includes CVN toughness requirement that can be used as a quality assurance measure in Spec 6A equipment to screen materials with poor notch toughness. Pages: 12

2nd Edition | September 1995 | Product Number: G06AM2 | Price: $78.00

Spec 6AV1 ◆ ■
Validation of Safety and Shutdown Valves for Sandy Service

There are three service classes—Class I, Class II, and Class III—for API 6A surface safety valve (SSV), underwater safety valve (USV), or boarding shutdown valve (BSDV). This standard establishes sandy service design validation for valves to meet Class II and Class III.

Class II is intended to validate the valve bore sealing mechanism if substances such as sand can be expected to cause safety or shutdown valve failure. Class III adds additional requirements and validation of the bonnet assembly inclusive of stem seals and may be selected by the user/purchaser. Validation to Class III also validates the same SSV/USV/BSDV for Class II in accordance with scaling limitations specified in the document. Pages: 32

3rd Edition | July 2018 | Product Number: G6AV103 | Price: $100.00

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Std 6AV2
Installation, Maintenance and Repair of Surface Safety Valves and Underwater Safety Valves Offshore
(includes Errata 1 dated August 2014)
Provides requirements for installing and maintaining surface safety valves (SSV) and underwater safety valves (USV). Included are requirements for receiving inspection, installation and maintenance, field and offsite repair, testing procedures with acceptance criteria, failure reporting, and documentation. Power and control systems for SSV/USVs are not included. This document is applicable to SSVs/USVs used or intended to be used as part of a safety system, as defined by documents such as API 14C. This standard is the revision of and supersedes RP 14H, 5th Edition. Pages: 29
1st Edition | March 2014 | Product Number: G6AV201 | Price: $135.00

Spec 6D
Specification for Pipeline and Piping Valves
Specifies requirements and provides recommendations for the design, manufacturing, testing, and documentation of ball, check, gate, and plug valves for application in pipeline systems meeting ISO 13623 or similar requirements for the petroleum and natural gas industries. This specification is not applicable to subsea pipeline valves, as they are covered by a separate specification (Spec 6DSS). This specification is not for application to valves for pressure ratings exceeding PN 420 (Class 2500). Pages: 108
24th Edition | August 2014 | Effective Date: August 1, 2015
Product Number: G6D024 | Price: $155.00

Spec 6D *
Specification for Pipeline and Piping Valves—Chinese
Chinese translation of Spec 6D.

Spec 6D *
Specification for Pipeline and Piping Valves—Russian
Russian translation of Spec 6D.

RP 6DR
Recommended Practice for the Repair and Remanufacture of Pipeline Valves
Provides guidelines for the repair and remanufacture of steel ball, check, gate, and plug valves normally used in pipeline applications, as defined by Spec 6D. This RP covers repair or remanufacturing of end user’s (owner’s) valves for continued service in the owner’s production applications. Repaired or remanufactured valves may not meet API and/or the OEM standard requirements for new valves. The owner is responsible for the correct application of valves repaired or remanufactured per this document. It does not cover repair or remanufacture of used or surplus valves intended for resale. Furthermore, field repair is outside the scope of this document. Pages: 11
2nd Edition | May 2012 | Product Number: G06DR2 | Price: $80.00

RP 6DR *
Recommended Practice for the Repair and Remanufacture of Pipeline Valves—Russian
Russian translation of Spec RP 6DR.
2nd Edition | May 2012 | Product Number: G06DR2R | Price: $65.00

Spec 6DSS
Specification for Subsea Pipeline Valves
(includes Errata 1 dated May 2018 and Errata 2 dated July 2018)
 Defines the requirements for the design, manufacturing, quality control, assembly, testing, and documentation of ball, check, gate, plug, and axial on-off valves for application in subsea pipeline systems for the petroleum and natural gas industries. The document contains requirements for both full-opening and reduced-opening valves. Valves covered by this specification include one of the following pressure classes: Class 150, Class 300, Class 600, Class 900, Class 1500, or Class 2500. This specification is not applicable to valves for pressure ratings exceeding Class 2500. Pages: 130
3rd Edition | August 2017 | Product Number: G6DSS3 | Price: $170.00

Std 6DX/ISO 12490:2011
Standard for Actuator Sizing and Mounting Kits for Pipeline Valves
Defines the requirements for mechanical integrity and sizing of actuators used on valves manufactured under Spec 6D. It is applicable to all types of electric, pneumatic, and hydraulic actuators, inclusive of mounting kit, installed on pipeline valves. This document is not applicable to actuators installed on control valves, valves being used for regulation, valves in sub-sea service, handheld powered devices, stand-alone manually operated gearboxes, instrument tubing and associated fittings, and actuator control equipment. This edition of Std 6DX is the identical national adoption of ISO 12490:2011. Pages: 51
1st Edition | October 2012 | Product Number: G66DX01 | Price: $135.00

TR 6F1
Summarizes the results of four projects to test the performance of API and ANSI end connections in a fire test according to Spec 6FA. The appendices present the analytical procedures used to generate performance prediction. Pages: 29
3rd Edition | April 1999 | Product Number: G06F13 | Price: $118.00

TR 6F2
Technical Report on Fire Resistance Improvements for API Flanges
Establishes recommended methods for improving the performance of standard API flanges when subjected to the adverse effects of external high temperatures induced by exposure to fires. This publication does not cover fire prevention, suppression, or firefighting practices. Pages: 19
3rd Edition | April 1999 | Product Number: G06F23 | Price: $112.00

Std 6FA
Standard for Fire Test for Valves
(includes Errata 1 dated July 2018 and Errata 2 dated August 2018)
Establishes the requirements for testing and evaluating the pressure-containing performance of API 6A and API 6D valves when exposed to fire. The performance requirements of this document are intended to establish standard limits of acceptability regardless of size or pressure rating. This standard applies to valves with one or more closure members. Pages: 32
4th Edition | June 2018 | Product Number: G064A4 | Price: $90.00

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Spec 6FB
Specification for Fire Test for End Connections
(includes Errata/Supplement dated December 2008)
 Esteastablishes procedures for testing and evaluating the pressure-containing performance of API end connections when exposed to fire. It provides a basis for determining the suitability of end connections for specific fire service applications. This specification covers Spec 6A end connections, which include:
- API flanged and outlet connections (6B, 6BX, and segmented),
- API threaded end and outlet connections, and
- other end connections (OECs).

3rd Edition | May 1998 | Effective Date: November 30, 1998
Reaffirmed: September 2011 | 2-Year Extension: July 2016
Product Number: G6FB03 | Price: $112.00

Spec 6FD
Specification for Fire Test for Check Valves
Establishes the requirements for testing and evaluating the pressure-containing performance of Spec 6A and Spec 6D check valves when exposed to fire. The performance requirements of this document are intended to establish standard limits of acceptability regardless of size or pressure rating. This document establishes acceptable levels of leakage through the test valve and also external leakage after exposure to a fire for a 30-minute time period. The burn period has been established on the basis that it represents the maximum time required to extinguish most fires. Fires of greater duration are considered to be of a major magnitude with consequences greater than those anticipated in this test. Pages: 9

Product Number: G6FD01 | Price: $92.00

Spec 6FD *
Specification for Fire Test for Check Valves—Russian
Russian translation of Spec 6FD.

1st Edition | February 1995 | Product Number: G6FD01R | Price: $74.00

RP 6HT
Heat Treatment and Testing of Carbon and Low Alloy Steel Large Cross Section and Critical Section Components
Supplements the heat treatment and testing requirements found in the API 6A equipment specification and not to replace them altogether. Heat treatment is a critical process that must be appropriate and controlled in order to produce parts that comply with design requirements. The specified mechanical properties may not necessarily be required or achieved through the entire section thickness of the production part(s). These procedures are intended to provide the manufacturer and end user with a means of ensuring that the qualification test coupon (QTC) is the representative of the mechanical properties in a large cross section component than can be expected with a standard API equipment specification QTC. Furthermore, these procedures are intended to provide to optimize the heat treatment and heat treatment response of large cross section components, thereby ensuring that the component has the required mechanical properties at the depth below the surface established by the manufacturer at all critical locations. The recommended practice described herein suggests the requirements for batch-type bath quench and water spray quench-type heat treating practices. Pages: 9

2nd Edition | June 2013 | Reaffirmed: November 2018
Product Number: G6HT02 | Price: $88.00

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Bull 6J
Bulletin on Testing of Oilfield Elastomers—A Tutorial
Contains a tutorial for the evaluation of elastomer test samples of actual elastomeric seal members intended for use in the oil and gas industry. It is also a review of the testing criteria, environments, evaluation procedures, guidelines for comparisons, and effects of other considerations on the evaluation of elastomeric seal materials and members. Pages: 15

1st Edition | February 1992 | Product Number: G03230 | Price: $81.00

TR 6J1
Elastomer Life Estimation Testing Procedures
The proposed procedure discussed in this publication outlines a technique based on the Arrhenius principle of chemical reaction rates, which permits the life of an elastomeric material to be estimated when exposed to a severe service environment. This is a companion document to Bull 6J, 2nd Edition. Pages: 14

1st Edition | August 2000 | Product Number: G06J11 | Price: $81.00

TR 6MET
Metallic Material Limits for Wellhead Equipment Used in High Temperature for API 6A and API 17D Applications
Examines mechanical properties of metallic materials used for API 6A and API 17D wellhead equipment for service above 250 °F. A total of eleven different alloys meeting API 6A, PSL 3 conditions were supplied “in condition” for testing. Materials in this test program included alloys common to the oil and gas industry. The alloys tested included low alloy steels, martensitic, precipitation hardened and duplex stainless steel, and nickel alloys. Yield strength reduction ratios at temperatures of 300 °F, 350 °F, 400 °F, and 450 °F are reported. Testing resulted in yield strength reduction ratios at 300 °F to 450 °F that ranged from 92 % to 87 % for the low alloy steels, 92 % to 88 % for the martensitic stainless steels, 81 % to 73 % for super duplex, 99 % to 89 % for the precipitation-hardened stainless steel, and 94 % to 89 % for the nickel alloys. The reported results represent an average over the different heats for each type of material. These results are intended to expand the data shown in API 6A for design and rating of equipment for use at elevated temperatures. Pages: 57

2nd Edition | August 2018 | Product Number: G6MET02 | Price: $112.00

Std 6X
Design Calculations for Pressure-Containing Equipment
(Refreshed Errata 1 dated May 2014)
Describes the design analysis methodology used in the ASME Boiler and Pressure Vessel Code, 2004 with 2005 and 2006 addenda, Section VIII, Pressure Vessels, Division 2, Alternative Methods, Appendix 4. Methods are included for both elastic and elastic-plastic analysis, and for closed-form as well as finite-element analysis methods of calculation, in accordance with the rules of Appendix 4 of the 2004 Code, Section VIII Division 2. API has adopted slightly different stress limits from the 2004 ASME Code. The criteria used assume stiff, strong, and ductile material behavior. Pages: 8

1st Edition | March 2014 | Product Number: G06X01 | Price: $62.00
Connections that are recut after service. It should be realized that recut finishing. This standard applies both to newly manufactured connections and connection designs. These are traceable to an internationally supported system of gauges and calibration that can be described as number (NC) style, regular (REG) style, or full-hole (FH) style. Pages: 114

Spec 7-1/ISO 10424-1:2004 *
Specification for Rotary Drill Stem Elements—Chinese
Chinese translation of Spec 7-1.
1st Edition | February 2006 | Product Number: GX7101C | Price: $117.00

Spec 7-1/ISO 10424-1:2004 *
Specification for Rotary Drill Stem Elements—Spanish
Spanish translation of Spec 7-1.
1st Edition | February 2006 | Product Number: GX7101SP | Price: $167.00

Spec 7-2 *
Threading and Gauging of Rotary Shouldered Connections (includes Errata 1 dated August 2017)
Specifies requirements on rotary shouldered connections for use in petroleum and natural gas industries, including dimensional requirements on threads and thread gauges, stipulations on gauging practice and gauge specifications, as well as instruments and methods for inspection of thread connections. These connections are intended primarily for use in drill-string components. Other supplementary specifications can be agreed between interested parties for special tolerance requirements, qualification, testing, inspection, and finishing. This standard applies to newly manufactured connections and connections that are recut after service. It should be realized that recut connections are subject to additional inspection and testing—the user is referred to API 7G-2 for such information.
This standard is applicable to the following preferred rotary shouldered connection designs. These are traceable to an internationally supported system of gauges and calibration that can be described as number (NC) style, regular (REG) style, or full-hole (FH) style. Pages: 114
2nd Edition | January 2017 | Product Number: GX70202 | Price: $196.00

Spec 7-2 *
Threading and Gauging of Rotary Shouldered Connections—Russian
Russian translation of Spec 7-2.

Spec 7F *
Oil Field Chain and Sprockets
Covers the manufacture of the components for, and the assembly and packaging of, single and multiple strand, numbers 40 through 240, standard and heavy series roller chains for oil field applications, including chain designation, chain length, tolerance, tensile strength specifications, pin and bushing press-out specifications, and dynamic test requirements. For informational purposes, Annex A provides recommendations for installation, lubrication, and maintenance of oil field chain drives, and Annex B includes a basic description of roller chain sprockets. Pages: 29
8th Edition | November 2010 | Effective Date: May 1, 2011
Reaffirmed: April 2016 | Product Number: G7F008 | Price: $119.00

Spec 7F *
Oil Field Chain and Sprockets—Chinese
Chinese translation of Spec 7F.
8th Edition | November 2010 | Product Number: G7F008C | Price: $84.00

RP 7G
Recommended Practice for Drill Stem Design and Operating Limits (includes Errata 1 dated May 2000, Addendum 1 dated November 2003, and Addendum 2 dated August 2009)
Covers recommendations for the design and selection of drill string members and includes considerations of hole angle control, drilling fluids, weight, and rotary speed. Tables and graphs are included that present dimensional, mechanical, and performance properties of new and used drill pipe; new tool joints used with new and used drill pipe; drill collars; and Kellys. Recommended standards for inspection of used drill pipe, used tubing work strings, and used tool joints are included. Pages: 154
16th Edition | August 1998 | Effective Date: December 1, 1998
Reaffirmed: May 2015 | Product Number: G07G6A | Price: $200.00

RP 7G *
Recommended Practice for Drill Stem Design and Operating Limits—Kazakh
Kazakh translation of RP 7G.

RP 7G *
Recommended Practice for Drill Stem Design and Operating Limits—Russian
Russian translation of RP 7G.

*These translated versions are provided for the convenience of our customers and are not officially endorsed by API. The translated versions shall neither replace nor supersedes the English-language versions, which remain the official standards. API shall not be responsible for any discrepancies or interpretations of these translations. Translations may not include any addenda or errata to the document. Please check the English-language versions for any updates to the documents.
Recommended Practice for Inspection and Classification of Drill Stem Element Inspection
(includes Errata 1 dated February 2014)
Provides guidelines and establishes requirements for inspection, maintenance, repair, and remanufacture of items of hoisting equipment manufactured according to Spec 8A, Spec 8C, or ISO 13535 used in drilling and production operations, in order to maintain the serviceability of this equipment. Items of drilling and production hoisting equipment covered are:
- crown-block sheaves and bearings;
- traveling blocks and hook blocks;
- block-to-hook adapters;
- connectors and link adapters;
- drilling hooks;
- tubing hooks and sucker-rod hooks;
- elevator links;
- casing elevators, tubing elevators, drill-pipe elevators, and drill-collar elevators;
- sucker-rod elevators;
- rotary swivel-bail adapters;

Spec 7NRV
Specification for Drill String Non-Return Valves
Provides the minimum acceptable requirements for drill string non-return valve (NRV) equipment. It covers drill string non-return valves, non-return valve subs, non-return valve landing nipples, non-return valve equalizing heads, and all components that establish tolerances and/or clearances that may affect performance or interchangeability of the NRV equipment. Non-return valve subs, non-return valve landing nipples, non-return valve equalizing heads, and NRVs manufactured by different facilities or manufacturers may be supplied as separate items.

Spec 7NRV *
Specification for Drill String Non-Return Valves—Chinese
Chinese translation of Spec 7NRV.
**Spec 8C**

**Drilling and Production Hoisting Equipment (PSL 1 and PSL 2)**

Provides requirements for the design, manufacture, and testing of hoisting equipment suitable for use in drilling and production operations. This specification is applicable to numerous drilling and production hoisting equipment, some of which include: hoisting sheaves, traveling and hook blocks; elevator links, casing elevators, sucker rod elevators, rotary and power swivels, drilling hooks, wireline anchors, drill string motion compensators, and safety clamps. Pages: 53

5th Edition | April 2012 | Effective Date: October 1, 2012
Product Number: GX08C05 | Price: $144.00

**WIRE ROPE**

**Spec 9A**

**Specification for Wire Rope**

Includes Errata 1 dated October 2012 and Addendum 1 dated November 2016.

Specifies the minimum requirements and terms of acceptance for the manufacture and testing of steel wire ropes not exceeding rope grade 2160 for the petroleum and natural gas industries. The following products are covered by this specification:

- wire rope,
- bright- or drawn-galvanized wire rope,
- well-measuring wire, and
- well-measuring strand.

Typical applications include tubing lines, rod hanger lines, sand lines, cable-tool drilling and clean out lines, cable tool casing lines, rotary drilling lines, winch lines, horse head pumping unit lines, torpedo lines, mast raising lines, guideline tenderer lines, riser tenderer lines, and mooring and anchor lines. Ropes for lifting slings and cranes, and wire for well-measuring and strap for well-service, are also included. The minimum breaking forces for the more common sizes, grades, and constructions of stranded rope are given in tables. However, this standard does not restrict itself to the classes covered by those tables. Other types, such as ropes with compacted strands and compacted (swaged) ropes, may also conform with its requirements. The minimum breaking force values for these ropes are provided by the manufacturer. For information only, other tables present the minimum breaking forces for large diameter stranded and spiral ropes (i.e., spiral strand and locked coil), while approximate nominal length masses for the more common stranded rope constructions and large diameter stranded and spiral ropes are also given. Pages: 57

26th Edition | May 2011 | Effective Date: November 1, 2011
Reaffirmed: April 2016 | Product Number: G9A026C | Price: $112.00

**Spec 9A**

**Specification for Wire Rope—Chinese**

Chinese translation of Spec 9A.


**RP 9B**

**Application, Care, and Use of Wire Ropes for Oil Field Service**

Covers typical wire rope applications for the oil and gas industry. Typical practices in the application of wire rope to oil field service are indicated in Table 1, which shows the sizes and constructions commonly used. Because of the variety of equipment designs, the selection of other constructions than those shown is justifiable.

In oilfield service, wire rope is often referred to as wire line or cable. For the purpose of clarity, these various expressions are incorporated in this recommended practice. Pages: 44

14th Edition | October 2015 | Product Number: G9B014 | Price: $124.00

**OIL WELL CEMENTS**

**Bull E3**

**Wellbore Plugging and Abandonment Practices**

Addresses the environmental concerns related to well abandonment and inactive well practices. The primary environmental concerns are protection of usable aquifers from fluid migration; and isolation of hydrocarbon production and water injection intervals. Additional issues in the document include protection of surface soils and surface waters, future and use, and permanent documentation of plugged and abandoned wellbore locations and conditions. Pages: 22

2nd Edition | April 2018 | Product Number: G11008 | Price: $142.00

**Spec 10A/ISO 10426-1:2009**

**Specification for Cements and Materials for Well Cementing**

This publication is related to an API licensing, certification, or accreditation program.

Addresses the environmental concerns related to well abandonment and inactive well practices. The primary environmental concerns are protection of usable aquifers from fluid migration; and isolation of hydrocarbon production and water injection intervals. Additional issues in the document include protection of surface soils and surface waters, future and use, and permanent documentation of plugged and abandoned wellbore locations and conditions. Pages: 22

Product Number: GX10A24 | Price: $149.00

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RP 10B-2
Recommended Practice for Testing Well Cements
(includes Errata 1 dated June 2006 and Errata 2 dated January 2007) (supersedes RP 10B)
Provides the methods for testing well cement slurries and cement blends for use in a deepwater environment or wells drilled in areas with a low seafloor temperature or areas where low seafloor temperatures exist. This document the term “deepwater” includes areas where low seafloor temperatures exist, independent of water depth. This standard does not address testing at pressures above atmospheric pressure and different boundary conditions. The procedures contained in this document serve as guidance for the testing of well cement slurries used in deepwater well construction. Additionally, testing methods contained in this document (most notably at mudline conditions) may also be used in those circumstances where low seafloor temperatures are found at shallow water depths. These conditions are found in areas including the North Sea, Norwegian Sea, Barents Sea, Kara Sea, Beaufort Sea, Chukchi Sea, Caspian Sea, and Black Sea. The test methods contained in this recommended practice, though generally based on API 10B-2, take into account the specialized testing requirements and unique wellbore temperature profiles found in deepwater wells or wells in areas with low seafloor temperatures. This document does not address the mitigation of shallow water flow zones in deepwater wells, which is addressed in RP 65. Pages: 32
2nd Edition | January 2016 | Product Number: G10B32 | Price: $98.00

RP 10B-3
Testing of Well Cements Used in Deepwater Well Construction
Provides procedures for testing well cement slurries and cement blends for use in a deepwater environment or wells drilled in areas with a low seafloor temperature or areas where low seafloor temperatures exist. This is a base document, because the testing methods contained in this document (most notably at mudline conditions) may also be used in those circumstances where low seafloor temperatures are found at shallow water depths. These conditions are found in areas including the North Sea, Norwegian Sea, Barents Sea, Kara Sea, Beaufort Sea, Chukchi Sea, Caspian Sea, and Black Sea. The test methods contained in this recommended practice, though generally based on API 10B-2, take into account the specialized testing requirements and unique wellbore temperature profiles found in deepwater wells or wells in areas with low seafloor temperatures. This document does not address the mitigation of shallow water flow zones in deepwater wells, which is addressed in RP 65. Pages: 32
2nd Edition | January 2016 | Product Number: G10B32 | Price: $98.00

RP 10B-4
Preparation and Testing of Foamed Cement Formulations at Atmospheric Pressure
Provides the methods for testing foamed cement slurries and foamed cement blends for use in a deepwater environment or wells drilled in areas with a low seafloor temperature or areas where low seafloor temperatures exist. This is a base document, because the testing methods contained in this document (most notably at mudline conditions) may also be used in those circumstances where low seafloor temperatures are found at shallow water depths. These conditions are found in areas including the North Sea, Norwegian Sea, Barents Sea, Kara Sea, Beaufort Sea, Chukchi Sea, Caspian Sea, and Black Sea. The test methods contained in this recommended practice, though generally based on API 10B-2, take into account the specialized testing requirements and unique wellbore temperature profiles found in deepwater wells or wells in areas with low seafloor temperatures. This document does not address the mitigation of shallow water flow zones in deepwater wells, which is addressed in RP 65. Pages: 32
2nd Edition | January 2016 | Product Number: G10B32 | Price: $98.00

RP 10B-5
Recommended Practice on Determination of Static Gel Strength of Cement Formulations
Provides the methods for determining static gel strength (SGS) of the cement slurries and related materials under simulated well conditions. This standard does not address testing at pressures above atmospheric pressure and different boundary conditions. The procedures contained in this document (most notably at mudline conditions) may also be used in those circumstances where low seafloor temperatures are found at shallow water depths. These conditions are found in areas including the North Sea, Norwegian Sea, Barents Sea, Kara Sea, Beaufort Sea, Chukchi Sea, Caspian Sea, and Black Sea. The test methods contained in this recommended practice, though generally based on API 10B-2, take into account the specialized testing requirements and unique wellbore temperature profiles found in deepwater wells or wells in areas with low seafloor temperatures. This document does not address the mitigation of shallow water flow zones in deepwater wells, which is addressed in RP 65. Pages: 32
2nd Edition | January 2016 | Product Number: G10B32 | Price: $98.00

RP 10B-6
Recommended Practice on Determining the Static Gel Strength of Cement Formulations
Provides the methods for determining static gel strength (SGS) of the cement slurries and related materials under simulated well conditions. This standard does not address testing at pressures above atmospheric pressure and different boundary conditions. The procedures contained in this document (most notably at mudline conditions) may also be used in those circumstances where low seafloor temperatures are found at shallow water depths. These conditions are found in areas including the North Sea, Norwegian Sea, Barents Sea, Kara Sea, Beaufort Sea, Chukchi Sea, Caspian Sea, and Black Sea. The test methods contained in this recommended practice, though generally based on API 10B-2, take into account the specialized testing requirements and unique wellbore temperature profiles found in deepwater wells or wells in areas with low seafloor temperatures. This document does not address the mitigation of shallow water flow zones in deepwater wells, which is addressed in RP 65. Pages: 32
2nd Edition | January 2016 | Product Number: G10B32 | Price: $98.00

Spec 10D/ISO 10427-1:2001
Specification for Bow-Spring Casing Centralizers
Provides minimum performance requirements, test procedures, and marking requirements for bow-spring casing centralizers for the petroleum and natural gas industries. This standard does not address test methods for cementing centralizers in the petroleum and natural gas industries. The procedures provide verification testing for the manufacturer’s design, materials, and process specifications and periodic testing to confirm the consistency of product performance. Spec 10D is not applicable to rigid or positive centralizers. This edition of Spec 10D is the identical national adoption of ISO 10427-1:2001. Pages: 12
6th Edition | March 2002 | Effective Date: September 1, 2002
Reaffirmed: April 2015 | Product Number: GX10D06 | Price: $92.00

Spec 10F
Cementing Float Equipment Testing
Provides testing and marking requirements for cementing float equipment to be used in oil and natural gas well construction. Pages: 28
4th Edition | July 2018 | Product Number: GX10F04 | Price: $77.00
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<td>TR 10TR1 *</td>
<td>Cement Sheath Evaluation—Kazakh</td>
<td>2nd Edition</td>
<td>September 2008</td>
<td>97</td>
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<td>G10TR12K</td>
<td>This is a Kazakh translation of TR 10TR1.</td>
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<td>TR 10TR1 *</td>
<td>Cement Sheath Evaluation—Russian</td>
<td>2nd Edition</td>
<td>September 2008</td>
<td>97</td>
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<td>TR 10TR2 *</td>
<td>Shrinkage and Expansion in Oilwell Cements—Russian</td>
<td>1st Edition</td>
<td>July 2008</td>
<td>57</td>
<td>$63.00</td>
<td>G10TR50</td>
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<td>TR 10TR2 *</td>
<td>Shrinkage and Expansion in Oilwell Cements—Kazakh</td>
<td>1st Edition</td>
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<td>57</td>
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<td>TR 10TR4 *</td>
<td>Selection of Centralizers for Primary Cementing Operations—Russian</td>
<td>1st Edition</td>
<td>May 2008</td>
<td>23</td>
<td>$50.00</td>
<td>G10TR40R</td>
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<td>Selection of Centralizers for Primary Cementing Operations—Kazakh</td>
<td>1st Edition</td>
<td>May 2008</td>
<td>23</td>
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<td>TR 10TR5 *</td>
<td>Methods for Testing of Solid and Rigid Centralizers—Russian</td>
<td>1st Edition</td>
<td>May 2008</td>
<td>16</td>
<td>$49.00</td>
<td>G10TR50R</td>
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<td>TR 10TR5 *</td>
<td>Methods for Testing of Solid and Rigid Centralizers—Kazakh</td>
<td>1st Edition</td>
<td>May 2008</td>
<td>16</td>
<td>$49.00</td>
<td>G10TR50K</td>
<td>This is a Kazakh translation of TR 10TR5.</td>
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<td>TR 10TR7</td>
<td>Mechanical Behavior of Cement</td>
<td>1st Edition</td>
<td>December 2017</td>
<td>71</td>
<td>$121.00</td>
<td>G10TR71</td>
<td>Provides the necessary cement property data for use in cement sheath integrity simulations. The compressive strength tests and nondestructive sonic determination of compressive strength of cement defined in API 10B-2 do not provide suitable data for cement sheath integrity simulations. The methods of API 10B-2 provide information on the strength of cement to ensure that the cement is suitable for general well construction applications and to determine when sufficient strength is developed to allow well operations to continue.</td>
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<td>RP 65-1</td>
<td>Cementing Shallow-Water Flow Zones in Deepwater Wells</td>
<td>2nd Edition</td>
<td>June 2018</td>
<td>71</td>
<td>$137.00</td>
<td>G65102</td>
<td>Describes methods designed to prevent shallow-water flow (SWF) during and following cementing of wells located in deep water. It is the compilation of technology and practices developed and used by many operators around the world. Although most of the discussion in this standard is focused on SWF, shallow flows can be mixtures of water, gas, gas hydrates, and formation fines. There is no single method of preventing SWF, and many of the activities described can require customization to fit individual well conditions.</td>
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**This publication is a new entry in this catalog.**

**This publication is related to an API licensing, certification, or accreditation program.**
Std 65-2 ◆
Isolating Potential Flow Zones During Well Construction
Contains best practices for zone isolation in wells to prevent annular pressure and/or flow through or past pressure-containment barriers that are installed and verified during well construction. Well construction practices that may affect barrier sealing performance are mentioned along with methods to help ensure positive effects or to minimize any negative ones. The objectives of this guideline are two-fold. The first is to help prevent and/or control flows just prior to, during, and after primary cementing operations to install or “set” casing and liner pipe strings in wells. The second objective is to help prevent sustained casing pressure (SCP). The guidance from this document covers recommendations for pressure-containment barrier design and installation and well construction practices that affect the zone isolation process to prevent or mitigate annular fluid flow or pressure. Pages: 83
Product Number: G65202 | Price: $134.00

FIELD OPERATING EQUIPMENT

RP 11AR
Recommended Practice for Care and Use of Subsurface Pumps (includes Errata dated December 2013)
Provides information on the proper selection, operation, and maintenance of subsurface pumps so the best economical life can be obtained. Pages: 50
Product Number: G11AR4 | Price: $128.00

Spec 11AX ◆
Specification for Subsurface Sucker Rod Pump Assemblies, Components, and Fittings
Provides the requirements and guidelines for the design of subsurface sucker rod pumps and their components as defined herein for use in the sucker rod lift method for the petroleum and natural gas industry. The specification covers subsurface sucker rod pump assemblies (including insert and tubing), components, and fittings in commonly used bore sizes for the sucker rod lift method. Sufficient dimensional and material requirements are provided to assure interchangeability and standardization of all component parts.
The specification does not cover specialty subsurface sucker rod pump accessories or special design components. Also, installation, operation, and maintenance of these products are not included in this specification; however, recommendations can be found in RP 11AR. Pages: 107
Product Number: G11AX13 | Price: $180.00

Spec 11AX *
Specification for Subsurface Sucker Rod Pump Assemblies, Components, and Fittings—Russian
Russian translation of Spec 11AX.

Spec 11B ◆
Specification for Sucker Rods, Polished Rods and Liners, Couplings, Sinker Bars, Polished Rod Clamps, Stuffing Boxes, and Pumping Tees
(includes Errata 1 dated October 2010 and Errata 2 dated February 2011)
Provides the requirements and guidelines for the design and rating of steel sucker rods and pony rods, polished rods, polished rod liners, couplings and sub-couplings, fiber reinforced plastic (FRP) sucker rods, sinker bars, polished rod clamps, stuffing boxes, and pumping tees as defined herein for use in the sucker rod lift method for the petroleum and natural gas industry. Annexes A through H provide the requirements for specific products. Annex I includes the requirements for thread gauges, Annex J illustrates the components of a sucker rod lift system, and Annex K shows examples of sucker rod discontinuities. This specification does not cover sucker rod guides, sucker rod rotators, shear tools, on-off tools, stabilizer bars, sealing elements used in stuffing boxes, or interface connections for stuffing boxes and pumping tees. Also, installation, operation, and maintenance of these products are not included in this specification. Pages: 91
27th Edition | May 2010 | Effective Date: November 1, 2010
2-Year Extension: February 2015
Product Number: G11B27 | Price: $160.00

Spec 11B *
Specification for Sucker Rods, Polished Rods and Liners, Couplings, Sinker Bars, Polished Rod Clamps, Stuffing Boxes, and Pumping Tees—Chinese
Chinese translation of Spec 11B.

Spec 11B *
Specification for Sucker Rods, Polished Rods and Liners, Couplings, Sinker Bars, Polished Rod Clamps, Stuffing Boxes, and Pumping Tees—Russian
Russian translation of Spec 11B.

RP 11BR
Recommended Practice for the Care and Handling of Sucker Rods
Covers the care and handling of steel sucker rods, including guidelines on selection, allowable stress, proper joint makeup, corrosion control, and used rod inspection. Pages: 28
Product Number: G11BR09 | Price: $108.00

RP 11BR *
Recommended Practice for the Care and Handling of Sucker Rods—Chinese
Chinese translation of RP 11BR.
9th Edition | August 2008 | Product Number: G11BR09C | Price: $76.00

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Progressing Cavity Pump Systems for Artificial Lift—Surface-Drive Systems

Provides requirements for the design, design verification and validation, manufacturing and data control, performance ratings, and repair of progressing cavity pump surface-drive systems used in the petroleum and natural gas industry. This standard is applicable to those products meeting the definition of surface-drive systems. Additionally, informative annexes provide information on brake system selection, installation, and operation and sucker rod selection and use. Equipment not covered by this standard, unless integral by design, includes bottom drive systems, sucker rods, polished rod clamps, stuffing boxes, electrical controls, instrumentation, external power transmission devices, auxiliary equipment, such as belts, sheaves, and equipment guards.

This edition of Std 11D3 is the identical national adoption of ISO 15136-2:2006. Pages: 99

Product Number: G11D301 | Price: $109.00

Spec 11E ♦
Specification for Pumping Units
(includes Errata 1 dated August 2015 and Addendum 1 dated April 2018)

Provides the requirements and guidelines for the design and rating of beam pumping units for use in the petroleum and natural gas industry. Included are all components between the carrier bar and the speed reducer input shaft. This includes the beam pump structure, the pumping unit gear reducer, and the pumping unit chain reducer. Only loads imposed on the structure and/or gear reducer by the polished rod load are considered in this specification. Also included are the requirements for the design and rating of enclosed speed reducers wherein the involute gear tooth designs include helical and herringbone gearings. The rating methods and influences identified in this specification are limited to single and multiple stage designs applied to beam pumping units in which the pitch-line velocity of any stage does not exceed 3,600 ft/min and the speed of any shaft does not exceed 3,600 rpm. This standard does not cover chemical properties of materials, installation and maintenance of the equipment, beam type counterbalance units, prime movers and power transmission devices outside the gear reducer, or control systems.

Pages: 104

19th Edition | November 2013 | Effective Date: May 1, 2014
Product Number: G11E019 | Price: $175.00

Spec 11E *
Specification for Pumping Units—Chinese

Chinese translation of Spec 11E.

19th Edition | November 2013
Product Number: G11E019C | Price: $123.00

Spec 11E *
Specification for Pumping Units—Russian

Russian translation of Spec 11E.

19th Edition | November 2013
Product Number: G11E019R | Price: $140.00

RP 11ER
Recommended Practice for Guarding of Pumping Units

Provides a reference or guide for the design, manufacture, and installation of guards for oil well pumping units. It is based on practices that experience has shown to be functionally safe and practical. This recommended practice is intended to provide safeguards for all persons who are required to work around or on oil well pumping units.

Pages: 17

3rd Edition | November 2009 | Reaffirmed: March 2015
Product Number: G11ER03 | Price: $82.00

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<td>2nd Edition</td>
<td>Reaffirmed October 2013</td>
<td>G11S22</td>
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<td>RP 11S1 Recommended Practice for Electrical Submersible Pump Teardown Report</td>
<td>3rd Edition</td>
<td>Reaffirmed October 2013</td>
<td>G11S03</td>
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<td>Reaffirmed October 2013</td>
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**Spec 12B** ✦
**Specification for Bolted Tanks for Storage of Production Liquids**
Covers material, design, fabrication, and testing requirements for vertical, cylindrical, aboveground, closed and open top, bolted steel storage tanks in various standard sizes and capacities for internal pressures approximately atmospheric. This specification is designed to provide the oil production industry with safe and economical bolted tanks of adequate safety and reasonable economy for use in the storage of crude petroleum and other liquids commonly handled and stored by the production segment of the industry. This specification is for the convenience of purchasers and manufacturers in ordering and fabricating tanks. Pages: 31

16th Edition | November 2014
Product Number: G12B156 | Price: $124.00

**Spec 12D** ✦
**Specification for Field-Welded Tanks for Storage of Production Liquids**
Covers material, design, fabrication, and testing requirements for vertical, cylindrical, aboveground, closed top, welded steel storage tanks with internal pressures approximately atmospheric at various sizes and capacities ranging from 500 to 10,000 barrels. This specification is designed to provide the oil production industry with tanks of adequate safety and reasonable economy for use in the storage of crude petroleum and other liquids commonly handled and stored by the production segment of the industry. This specification is for the convenience of purchasers and manufacturers in ordering and fabricating tanks. Pages: 29

12th Edition | June 2017 | Effective Date: December 1, 2017
Product Number: G12D12 | Price: $111.00

**Spec 12F** ✦
**Specification for Shop Welded Tanks for Storage of Production Liquids**
Covers material, design, fabrication, and testing requirements for shop-fabricated vertical, cylindrical, aboveground, closed top, welded steel storage tanks with internal pressures approximately atmospheric at various sizes and capacities ranging from 90 to 750 barrels. Tanks covered by this specification have been designed using established engineering calculations to determine minimum metal thickness and bolting specifications for each size tank filled with water. This specification is designed to provide the oil production industry with tanks of adequate safety and reasonable economy for use in the storage of crude petroleum and other liquids commonly handled and stored by the production segment of the industry. Pages: 25

12th Edition | October 2008 | Effective Date: April 1, 2009
2-Year Extension: November 2015
Product Number: G12F12 | Price: $100.00

**Spec 12F** ✦
**Specification for Shop Welded Tanks for Storage of Production Liquids—Chinese**
Chinese translation of Spec 12F.
12th Edition | October 2008 | Product Number: G12F12C | Price: $70.00

**Spec 12J** ✦
**Specification for Oil and Gas Separators**
Covers minimum requirements for the design, fabrication, and testing of oil and gas separators and oil-gas-water separators that are used in the production of oil and gas and are located at some point on the producing flow line between the wellhead and pipeline. Separators covered by this specification may be vertical, spherical, or single or double barrel horizontal. Unless otherwise agreed upon between the purchaser and the manufacturer, the jurisdiction of this specification terminates with the pressure vessel as defined in Section VII, Division 1 of the ASME Boiler and Pressure Vessel Code. Pressure vessels covered by this specification are normally classified as natural resource vessels. Separators outside the scope of this specification include centrifugal separators, filter separators, and desanding separators. Pages: 25

8th Edition | October 2008 | Effective Date: April 1, 2009
Product Number: G12J08 | Price: $100.00

**Spec 12J** ✦
**Specification for Oil and Gas Separators—Chinese**
Chinese translation of Spec 12J.
8th Edition | October 2008 | Product Number: G12J08C | Price: $70.00

**Spec 12K** ✦
**Specification for Indirect Type Oilfield Heaters**
Covers minimum requirements for the design, fabrication, and shop testing of oilfield indirect type fired heaters that are used in the production of oil, gas, and associated fluid. The heaters are located at some point on the producing flowline between the wellhead and pipeline. Heater components covered by this specification include the pressurized coils, the shell, heater bath, firetube, and the firing system. For purposes of this specification, the termination of a heater coil is at the first bevel when coils are furnished beveled for welding, or the face of the first fitting when fittings are furnished as the inlet or outlet connection to the coil. All fittings and valves between the inlet and outlet of the coil are to be considered within the coil limit. Heaters outside the scope of this specification include steam and other vapor generators, reboilers, indirect heaters employing heat media other than water solutions, all types of direct fired heaters, shell-and-tube bundles or electrical heating elements, and coils operating at temperatures less than -20 °F. Pages: 35

8th Edition | October 2008 | Effective Date: April 1, 2009
Product Number: G12K08 | Price: $118.00

**Spec 12K** ✦
**Specification for Indirect Type Oilfield Heaters—Chinese**
Chinese translation of Spec 12K.
8th Edition | October 2008 | Product Number: G12K08C | Price: $83.00

**Spec 12L** ✦
**Specification for Vertical and Horizontal Emulsion Treaters**
Covers minimum requirements for material, design, fabrication, and testing of vertical and horizontal emulsion treaters. Emulsion treating is normally conducted on crude oil immediately after it is separated from its associated gas in a vessel referred to as a treater or sometimes as a heater treater. High gas-oil ratio wells or those produced by gas lift may require the installation of an oil and gas separator upstream of the treater to remove most of the associated gas before the emulsion enters the treater. Where the water to oil ratio is high, freewater knockouts may be required upstream of the treater. The jurisdiction of this specification terminates with each pressure vessel as applicable: the emulsion treater with firetube(s) and, if used, the heat exchanger(s) and water siphon. Pressure vessels covered by this specification are classified as natural resource vessels. An emulsion treater is a pressure vessel used in the oil producing industry for separating oil-water emulsions and gas and for breaking or resolving emulsified well streams into water and saleable clean oil components. Emulsion treaters are usually equipped with one or more removable firetubes or heat exchange elements through which heat is applied to the water and/or emulsion to aid the emulsion breaking process. Pages: 39

5th Edition | October 2008 | Effective Date: April 1, 2009
Product Number: G12L05 | Price: $100.00

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RP 12N
Recommended Practice for the Operation, Maintenance and Testing of Firebox Flame Arrestors
Covers practices that should be considered in the installation, maintenance, and testing of firebox flame arrestors installed on the air intake of oilfield production equipment. Pages: 6
Product Number: G12N02 | Price: $85.00

Spec 12P
Specification for Fiberglass Reinforced Plastic Tanks
Covers material, design, fabrication, and testing requirements for fiberglass reinforced plastic (FRP) tanks. Only shop-fabricated, vertical, cylindrical tanks are covered. Tanks covered by this specification are intended for above ground and atmospheric pressure service. This specification applies to new tanks. The requirements may be applied to existing tanks at the discretion of the owner/operator.
This specification is designed to provide the petroleum industry with various standard sizes of FRP tanks. Because of the versatility of FRP tanks, the user shall be responsible for determining the suitability of FRP tanks for the intended service. Unsupported cone bottom tanks are outside the scope of this specification. Pages: 27
4th Edition | February 2016 | Effective Date: August 1, 2016
Product Number: G12P04 | Price: $111.00

RP 12R1
Recommended Practice for Setting, Maintenance, Inspection, Operation, and Repair of Tanks in Production Service
(includes Addendum 1 dated December 2017)
For use as a guide for new tank installations and maintenance of existing tanks, Spec 12R1 contains recommendations for good practices in the collection of well or lease production; gauging; delivery to pipeline carriers for transportation; and other production storage and treatment operations. This recommended practice is intended primarily for application to tanks fabricated to Specs 12F, 12D, 12F, and 12P when employed in on-land production service, but its basic principles are applicable to atmospheric tanks of other dimensions and specifications when they are employed in similar oil and gas production, treating, and processing services. It is not applicable to refineries, petrochemical plants, marketing bulk stations, or pipeline storage facilities operated by carriers. Pages: 63
2-Year Extension: November 2015
Product Number: G12R15 | Price: $136.00

DRILLING, COMPLETION, AND FRACTURING FLUIDS

Spec 13A/ISO 13500:2009 *
Specification for Drilling Fluid Materials—Chinese
Chinese translation of Spec 13A.
18th Edition | February 2010
Product Number: GX13A018C | Price: $131.00

RP 13B-1/ISO 10414-1:2008
Recommended Practice for Field Testing Water-Based Drilling Fluids (includes Errata 1 dated August 2014)
Provides standard procedures for determining the following characteristics of water-based drilling fluids:
- drilling fluid density (mud weight);
- viscosity and gel strength;
- filtration;
- water, oil, and solids contents;
- sand content;
- methylene blue capacity;
- pH;
- alkalinity and lime content;
- chloride content;
- total hardness as calcium.
Annexes A through K provide additional test methods.
This edition of API 13B-1 is the identical national adoption of ISO 10414-1:2008. Pages: 91
Product Number: GX13B14 | Price: $170.00

RP 13B-2
Recommended Practice for Field Testing Oil-Based Drilling Fluids (includes Errata 1 dated August 2014 and Errata 2 dated March 2018)
Provides standard procedures for determining the following characteristics of oil-based drilling fluids:
- drilling fluid density (mud weight);
- viscosity and gel strength;
- filtration;
- oil, water, and solids concentrations;
- alkalinity, chloride concentration, and calcium concentration;
- electrical stability;
- lime and calcium concentrations, calcium chloride, and sodium chloride concentrations;
- low-gravity solids and weighting material concentrations.
The annexes provide additional test methods or examples that can optionally be used for the determination of:
- shear strength (Annex A);
- oil and water concentrations from cuttings (Annex B);
- drilling fluid activity (Annex C);
- aniline point (Annex D);
- lime, salinity, and solids concentration (Annex E);
- sampling, inspection, and rejection (Annex F);
- rig-site sampling (Annex G);
- cuttings activity (Annex H);
- active sulfide (Annex I);
- calibration and verification of glassware, thermometers, viscometers, retort kit cups, and drilling fluid balances (Annex J);
- high-temperature/high-pressure filtration using the permeability-plugging apparatus (PPA) (Annex K);
- elastomer compatibility (Annex L);
- sand content of oil-based fluid (Annex M);
- identification and monitoring of weight-material sag (Annex N);
- oil-based drilling fluid test report form (Annex O). Pages: 141
5th Edition | April 2014 | Product Number: G13B205 | Price: $211.00

Spec 13B-1/ISO 10414-2:2009 *
Recommended Practice for Field Testing Water-Based Drilling Fluids—Chinese
Chinese translation of Spec 13B-1.
18th Edition | February 2010
Product Number: GX13B018C | Price: $131.00

Spec 13C-1/ISO 10414-3:2009 *
Recommended Practice for Field Testing Oil-Based Drilling Fluids—Chinese
Chinese translation of Spec 13C-1.
18th Edition | February 2010
Product Number: GX13C018C | Price: $131.00

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RP 13C
Recommended Practice on Drilling Fluid Processing Systems Evaluation

Specifies a standard procedure for assessing and modifying the performance of solids control equipment systems commonly used in the field in petroleum and natural gas drilling fluids processing. The procedure described in this standard is not intended for the comparison of similar types of individual pieces of equipment. Pages: 60
5th Edition | October 2014 | Product Number: G13C05 | Price: $139.00

RP 13D
Rheology and Hydraulics of Oil-Well Drilling Fluids

Provides a basic understanding of and guidance about drilling fluid rheology and hydraulics, and their application to drilling operations. For this recommended practice, rheology is the study of flow characteristics of a drilling fluid and how these characteristics affect movement of the fluid. Specific measurements are made on a fluid to determine rheological parameters under a variety of conditions. From this information the circulating system can be designed or evaluated regarding how it will accomplish certain desired objectives. Pages: 98
7th Edition | September 2017 | Product Number: G13D07 | Price: $159.00

RP 13I/ISO 10416:2008
Recommended Practice for Laboratory Testing of Drilling Fluids

Provides procedures for the laboratory testing of the physical, chemical, and performance properties of both drilling fluid materials and drilling fluid. It is applicable to both water- and oil-based drilling fluids, as well as the base or “make-up” fluid. It is not applicable as a detailed manual on drilling fluid control procedures. Recommendations regarding agitation and testing temperature are presented because the agitation history and temperature control procedures have a profound effect on drilling fluid properties. This edition of RP 13I is the identical national adoption of ISO 10416:2008.

Product Number: G13I38 | Price: $192.00

RP 13J
Testing of Heavy Brines

Covers the physical properties, potential contaminants, and test procedures for heavy brine fluids manufactured for use in oil and gas well drilling, completion, fracturing, and workover fluids. RP 13J provides methods for assessing the performance and physical characteristics of heavy brines for use in field operations. It includes procedures for evaluating the density or specific gravity, the clarity or amount of particulate matter carried in the brines, the crystallization point or the temperature (both ambient and under pressure) at which the brines make the transition between liquid and solid, the pH, and iron contamination. It also contains a discussion of gas hydrate formation and mitigation, brine viscosity, corrosion testing, buffering capacity, and a standardized reporting form. RP 13J is intended for the use of manufacturers, service companies, and end users of heavy brines. Pages: 76
5th Edition | October 2014 | Product Number: G13J05 | Price: $134.00

RP 13K
Recommended Practice for Chemical Analysis of Barite

Barite is used to increase the density of oil well drilling fluids. It is a mined product that can contain significant quantities of minerals other than its main component, barium sulfate. It is the objective of this publication to provide a comprehensive, detailed description of the chemical analytical procedures for quantitatively determining the mineral and chemical constituents of barite. These procedures are quite elaborate and will normally be carried out in a well-equipped laboratory. Pages: 51
Product Number: G13K03 | Price: $110.00

RP 13M/ISO 13503-1:2003 *
Recommended Practice for the Measurement of Viscous Properties of Completion Fluids

Provides consistent methodology for determining the viscosity of completion fluids used in the petroleum and natural gas industries. For certain cases, methods are also provided to determine the rheological properties of a fluid. This edition of RP 13M is the identical national adoption of ISO 13503-1:2003.

2-Year Extension: June 2015 | Product Number: G13M01 | Price: $101.00

RP 13M/ISO 13503-4:2006 *
Recommended Practice for Measuring Stimulation and Gravel-Pack Fluid Leakoff Under Static Conditions

Provides for consistent methodology to measure fluid loss of stimulation and gravel-pack fluid under static conditions. However, the procedure in this recommended practice excludes fluids that react with porous media.
This edition of RP 13M-4 is the identical national adoption of ISO 13503-4:2006.

Product Number: GG13M41 | Price: $59.00

TR 13M-5 *
Procedure for Testing and Evaluating the Performance of Friction (Drag) Reducers in Aqueous-based Fluid Flowing in Straight, Smooth Circular Conduits

Provides a consistent methodology to test and evaluate the performance of friction (drag) reducers in straight, smooth circular conduits. This standard includes only smooth-walled tubing and excludes any rough-walled tubing.

1st Edition | October 2018 | Product Number: G13M501 | Price: $85.00

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This publication is a new entry in this catalog.
This publication is related to an API licensing, certification, or accreditation program.
Stress corrosion cracking (SCC) is a type of corrosion that occurs when a material is exposed to a specific combination of stress and environment. The stress can be external, such as from mechanical loads, or internal, such as from residual stresses. The environment can include aqueous solutions, gases, or even solid particles. The combination of stress and environment can cause the material to crack at points of stress concentration, even in the absence of visible corrosion. This type of corrosion is particularly important in the design and operation of offshore oil and gas platforms, where the materials are subjected to a wide range of environmental conditions and operating pressures.

The recommendations in this technical report generally are not applicable to the measurement of the PSD of non-isometric (high aspect ratio) materials, such as fibers or flakes. To measure particle size distributions in such cases, the technician should refer to and be guided by the measurement equipment manufacturer's instructions.

The particulates range in size from approximately one micron to as much as several millimeters in diameter and are considered “granular” in shape, i.e. relatively isometric (of similar length, width, and height). The recommendations in this technical report generally are not applicable to the measurement of the PSD of non-isometric (high aspect ratio) materials, such as fibers or flakes. To measure particle size distributions in such cases, the technician should refer to and be guided by the measurement equipment manufacturer's instructions.

The recommendation is that the technician refer to and be guided by the measurement equipment manufacturer's instructions. This is because the particulates range in size from approximately one micron to as much as several millimeters in diameter and are considered “granular” in shape, i.e. relatively isometric (of similar length, width, and height). To measure particle size distributions in such cases, the technician should refer to and be guided by the measurement equipment manufacturer's instructions.

This publication is related to an API licensing, certification, or accreditation program.
RP 14FZ
Recommended Practice for Design, Installation, and Maintenance of Electrical Systems for Fixed and Floating Offshore Petroleum Facilities for Unclassified and Class I, Zone 0, Zone 1, and Zone 2 Locations

This recommended practice (RP) is not applicable to Mobile Offshore Drilling Units (MODUs) without production facilities. This document is intended to bring together in one place a brief description of basic desirable electrical practices for offshore electrical systems. The recommended practices contained herein recognize that special electrical considerations exist for offshore petroleum facilities. These include:

- inherent electrical shock possibility presented by the marine environment and steel decks;
- space limitations that require that equipment be installed in or near hazardous (classified) locations;
- corrosive marine environment;
- motion and buoyancy concerns associated with floating facilities.

2nd Edition | May 2013 | Product Number: G14FZ02 | Price: $288.00

RP 14G
Recommended Practice for Fire Prevention and Control on Fixed Open-Type Offshore Production Platforms

Provides useful procedures and guidelines for planning, designing, and arranging offshore production facilities and performing a hazards analysis on open-type offshore production facilities. Discusses several procedures that can be used to perform a hazards analysis, and presents minimum requirements for process safety information and hazards analysis that can be used for satisfying RP 75. Pages: 38

Product Number: G14G04 | Price: $128.00

RP 14J
Recommended Practice for Design and Hazards Analysis for Offshore Production Facilities

Provides useful procedures and guidelines for planning, designing, and arranging offshore production facilities and performing a hazards analysis on open-type offshore production facilities. Discusses several procedures that can be used to perform a hazards analysis, and presents minimum requirements for process safety information and hazards analysis that can be used for satisfying RP 75. Pages: 75

Product Number: G14J02 | Price: $121.00

Bull 91
Planning and Conducting Surface Preparation and Coating Operations for Oil and Natural Gas Drilling and Production Facilities in a Marine Environment

Worldwide, marine exploration, production, development, and decommissioning operations are conducted from a variety of structures. These installations must be inspected periodically and maintained in order to assure structural integrity and minimize pollution risks. Maintenance of an offshore structure, regardless of its classification, necessarily includes blasting and coating activities. The purpose of this publication is to establish practices and procedures that should be followed to minimize the discharge of spent blast abrasive, and paint overspray to the surrounding waters during these activities. Pages: 16

1st Edition | June 2007 | Product Number: G09101 | Price: $63.00

FIBERGLASS AND PLASTIC PIPE

RP 15CLT
Recommended Practice for Composite Lined Steel Tubular Goods

This publication is a new entry in this catalog.

Recommended Practice for Composite Lined Steel Tubular Goods provides guidelines for the design, manufacturing, qualification, and application of composite lined carbon steel downhole tubing in the handling and transport of multiphase fluids, hydrocarbon gases, hydrocarbon liquids, and water. The principles outlined in this RP also apply to line pipe applications. Composite lined tubing typically consists of a fiber reinforced polymer liner within the steel host, providing protection of that steel host from corrosive attack. Both API and premium connections can be employed, typically using corrosive barrier rings to maintain corrosion resistance between ends of adjacent liners. This document contains recommendations on material selection, product qualification, and definition of safety and design factors. Quality control tests, minimum performance requirements are included. The RP applies to composite lined carbon steel for system up to 10 in. (250 mm) diameter, operating at pressures up to 10,000 psi (69 MPa) and maximum temperatures of 300 °F (150 °C). The principles described in this document can easily be extended to apply to products being developed by manufacturers for application outside this range. Pages: 13

1st Edition | September 2007 | Reaffirmed: October 2018
Product Number: G15CLT1 | Price: $85.00

Spec 15HR
High-Pressure Fiberglass Line Pipe (includes Errata 1 dated August 2016)

This publication is related to an API licensing, certification, or accreditation program.

Formulated to provide for the availability of safe, dimensionally, and functionally interchangeable high-pressure fiberglass line pipe with a pressure rating from 500 lbf/in.² to 5000 lbf/in.² (3.45 MPa to 34.5 MPa), inclusive, in 250 lbf/in.² (1.72 MPa) increments for pipes ≤ than NPS 12 in. and 100 lbf/in.² (0.69 MPa) increments for pipes > than NPS 12 in. This specification is limited to mechanical connections and the technical content provides requirements for performance, design, materials, tests and inspection, marking, handling, storing, and shipping. Critical components are items of equipment having requirements specified in this document. This specification is applicable to rigid pipe components made from thermosetting resins and reinforced with glass fibers. Typical thermosetting resins are epoxy, polyester, vinyl ester, and phenolic. Thermoplastic resins are excluded from the scope of this specification. Any internal liners applied shall be made also from thermosetting resins. Fiberglass line pipe for use in low-pressure systems are covered in Spec 15LR. This specification covers fiberglass pipe utilized for the production of oil and gas. Specific equipment covered by this specification is high-pressure line pipe and couplings, fittings, flanges, reducers, and adapters. Pages: 42

4th Edition | February 2016 | Effective Date: August 1, 2016
Product Number: G15HR4 | Price: $113.00

Spec 15LE
Specification for Polyethylene Line Pipe (PE)

This publication is related to an API licensing, certification, or accreditation program.

Provides standards for polyethylene (PE) line pipe suitable for use in conveying oil, gas, and non-potable water in underground, aboveground, and reliner applications for the oil and gas producing industries. The technical content of this document provides requirements and guidelines for performance, design, materials inspection, dimensions and tolerances, marking, handling, storing, and shipping. Pages: 38

4th Edition | January 2008 | Effective Date: July 1, 2008
Reaffirmed: October 2018 | Product Number: G15LE4 | Price: $104.00

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**Spec 15LE * **
Specification for Polyethylene Line Pipe (PE)—Chinese

Chinese translation of Spec 15LE.


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**Spec 15LR ◆**
Specification for Low Pressure Fiberglass Line Pipe
(includes Errata 1 dated June 2018)

Covers filament wound (FW) and centrifugally cast (CC) fiberglass line pipe and fittings for pipe in diameters up to and including 24 in. in diameter and up to and including 1000 psig cyclic operating pressures. In addition, at the manufacturer's option, the pipe may also be rated for static operating pressures up to 1000 psig. It is recommended that the pipe and fittings be purchased by cyclic pressure rating. The standard pressure ratings range from 150 psig to 300 psig in 50 psig increments, and from 300 psig to 1000 psig in 100 psig increments, based on either cyclic pressure or static pressure. Pages: 25

7th Edition | August 2001 | Effective Date: February 1, 2002
Reaffirmed: October 2018 | Product Number: G15LR7 | Price: $100.00

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**Spec 15RX ◆**
Specification for Crosslinked Polyethylene (PEX) Line Pipe

Covers PEX line pipe utilized for the production and transportation of oil, gas, and nonpotable water. The piping is intended for use in new construction, structural, pressure-rated liner, line extension, and repair of both aboveground and buried pipe applications. Specific equipment covered by this specification is listed as follows:

- PEX line pipe;
- fittings. Pages: 45

7th Edition | September 2018 | Product Number: G15PX1 | Price: $98.00

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**Spec 15S**
Spoolable Reinforced Plastic Line Pipe
(includes Errata 1 dated July 2016)

Provides requirements for the manufacture and qualification of spoolable reinforced plastic line pipe in oilfield and energy applications including transport of multiphase fluids, hydrocarbon gases, hydrocarbon liquids, oilfield production chemicals, and nonpotable water. Also included are performance requirements for materials, pipe, and fittings. These products consist of a liner with helically wrapped steel or nonmetallic reinforcing elements and an outer cover. The helical reinforcing elements shall be a single material. Additional nonhelical reinforcing elements are acceptable. The spoolable reinforced line pipe under this specification is capable of being spooled for storage, transport, and installation. For offshore use, additional requirements may apply and are not within the scope of this document. This specification is confined to pipe, end-fittings, and couplings and does not relate to other system components and appurtenances. Where other system components (e.g., elbows, tees, valves) are of conventional construction, they will be governed by other applicable codes and practices. Pages: 62

2nd Edition | March 2016 | Effective Date: September 1, 2016
Product Number: G15S02 | Price: $129.00

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**Spec 15L**
Recommended Practice for Care and Use of Fiberglass Tubulars

Provides information on the transporting, handling, installing, and reconditioning of fiberglass tubulars in oilfield usage. Appendices are also included to cover adhesive bonding, repair procedures, and inspection practices. Pages: 20

2nd Edition | March 1999 | Reaffirmed: November 2018
Product Number: G15L1 | Price: $100.00

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**DRILLING WELL CONTROL EQUIPMENT AND SYSTEMS**

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**Spec 16A ◆**
Specification for Drill-Through Equipment

(includes Errata 1 dated August 2017, Addendum 1 dated October 2017, Errata 2 dated November 2017, and Errata 3 dated April 2018)

Defines the requirements for performance, design, materials, testing and inspection, welding, marking, handling, storing, and shipping of drill-through equipment used for drilling for oil and gas. Specifically, this document applies to the manufacture and testing of ram blowout preventers; ram blocks, packers, and top seals; annular blowout preventers; annular packing units; and associated connectors. It also defines service conditions in terms of pressure, temperature, and wellbore fluids for which the equipment is designed. Repair and remanufacture of 16A equipment is now covered in Std 16AR. This specification does not apply to field use or field. Pages: 122


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**Std 16AR**
Standard for Repair and Remanufacture of Drill-Through Equipment

(includes Errata 1 dated August 2017)

Specifies requirements for repair and remanufacture of drill-through equipment built under API 16A. This standard also applies to repair and remanufacture of drill-through equipment manufactured to API 6A requirements and produced prior to the existence of API 16A. This standard also covers the testing, inspection, welding, marking, certification, handling, storing, and shipping of equipment repaired or remanufactured per this standard. Pages: 104

1st Edition | April 2017 | Product Number: G16AR01 | Price: $161.00

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**Spec 16C ◆**
Choke and Kill Equipment

(includes Errata 1 dated July 2015, Errata 2 dated November 2015, Errata 3 dated February 2016, and Addendum 1 and Errata 4 dated July 2016)

Establishes the minimum requirements for the design and manufacture of following types of new equipment:

- articulated choke and kill lines;
- choke and kill manifold buffer chamber;
- choke and kill manifold assembly;
- drilling choke actuators;
- drilling choke controls;
- drilling chokes;
- flexible choke and kill lines;
- union connections used in choke and kill assemblies;
- rigid choke and kill lines;
- swivel unions used in choke and kill equipment.

These requirements were formulated to provide for safe and functionally interchangeable surface and subsea choke and kill system equipment utilized for drilling oil and gas wells. Technical content provides the minimum requirements for performance, design, materials, welding, testing, inspection, storing, and shipping. Pages: 114

2nd Edition | March 2015 | Product Number: G16C02 | Price: $155.00

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# This publication is a new entry in this catalog.
◆ This publication is related to an API licensing, certification, or accreditation program.
for designers, for those who select system components, and for those who use and maintain this equipment. For the purposes of this standard, a marine drilling riser system includes the tensioner system and all equipment used for load sharing, riser tensioner rings, telescopic joints, flex/ball joints, and special riser joints. Pages: 120

Spec 16F • Specification for Marine Drilling Riser Equipment

Establishes standards of performance and quality for the design, manufacture, and fabrication of marine drilling riser equipment used in conjunction with a subsea blowout preventer (BOP) stack. This specification applies to all riser system components that are in the primary load path during operation, running, and retrieval, including but not limited to riser couplings, riser main tube, riser adapters, riser external lines when used for load sharing, riser tensioner rings, telescopic joints, flex/ball joints, and special riser joints. Pages: 120

2nd Edition | November 2017 | Product Number: G16F02 | Price: $142.00

Spec 16F * • Specification for Marine Drilling Riser Equipment—Russian

Russian translation of Spec 16F.

2nd Edition | November 2017 | Product Number: G16F02R | Price: $114.00

RP 16Q • Design, Selection, Operation and Maintenance of Marine Drilling Riser Systems

Pertains to the design, selection, operation, and maintenance of marine riser systems for floating drilling operations. Its purpose is to serve as a reference for designers, for those who select system components, and for those who use and maintain this equipment. For the purposes of this standard, a marine drilling riser system includes the tensioner system and all equipment between the top connection of the lower flex/ball joint and the bottom connection of the upper flex/ball joint. It specifically excludes the diverter, LMRP BOP stack, and hydraulic connectors. Pages: 90

2nd Edition | April 2017 | Product Number: G16Q02 | Price: $125.00

RP 16Q * • Design, Selection, Operation and Maintenance of Marine Drilling Riser Systems

Russian translation of RP 16Q.

2nd Edition | April 2017 | Product Number: G16Q02R | Price: $100.00

Spec 16RCD • Specification for Rotating Control Devices

Formulated to provide for the availability of safe and functionally interchangeable rotating control devices (RCDs) utilized in air drilling, drilling operations for oil and gas, and geothermal drilling operations. Technical content provides requirements for design, performance, materials, tests and inspection, welding, marking, handling, storing, and shipping. This specification does not apply to field use or fieldtesting of RCDs. Critical components are those parts having requirements specified in this document. Pages: 52

2nd Edition | September 2015 | Effective Date: March 10, 2016
Product Number: G16RCD02 | Price: $160.00

RP 16ST • Coiled Tubing Well Control Equipment Systems

Addresses coiled tubing well control equipment assembly and operation as it relates to well control practices. Industry practices for performing well control operations using fluids for hydrostatic pressure balance are not addressed in this recommended practice. This document covers well control equipment assembly and operation used in coiled tubing intervention and coiled tubing drilling applications performed through:

- christmas trees constructed to standards stipulated in Spec 6A and/or Spec 11W;
- a surface flow head or surface test tree constructed to standards stipulated in Spec 6A;
- drill pipe or workstrings with connections manufactured in accordance with Spec 7 and/or Spec 5CT. Pages: 75

Product Number: G16ST01 | Price: $149.00

TR 16TR1 • BOP Shear Ram Performance Test Protocol

(includes Errata 1 dated October 2018)

Outlines the standardized test protocol, including data and reporting requirements, for performing sealing and non-sealing blowout preventer (BOP) shear ram performance tests. This protocol determines the parameters that can support field system performance and confidence in successful shearing and sealing. This document is not intended to be used for qualifying BOP shear rams or as a factory acceptance test procedure. Qualification and factory acceptance testing of BOP shear rams is per API 16A. Pages: 30

1st Edition | July 2018 | Product Number: G16TR11 | Price: $100.00

Std 53 • Well Control Equipment Systems for Drilling Wells

Provides requirements on the installation and testing of blowout prevention equipment systems on land and marine drilling rigs (barge, platform, bottom-supported, and floating). Blowout preventer equipment systems are comprised of a combination of various components. The following components are required for operation under varying rig and well conditions: blowout preventers (BOPs); choke and kill lines; choke manifolds; control systems; auxiliary equipment. The primary functions of these systems are to confine well fluids to the wellbore, provide means to add fluid to the wellbore, and allow controlled volumes to be withdrawn from the wellbore. Pages: 86

5th Edition | December 2018 | Product Number: G05305 | Price: $156.00

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This publication is a new entry in this catalog. This publication is related to an API licensing, certification, or accreditation program.
RP 59
Recommended Practice for Well Control Operations
Provides information that can serve as a voluntary industry guide for safe well control operations. This publication is designed to serve as a direct field aid in well control and as a technical source for teaching well control principles. This publication establishes recommended operations to retain pressure control of the well under pre-kick conditions and recommended practices to be utilized during a kick. It serves as a companion to RP 53 and RP 64. Pages: 92
2nd Edition | May 2006 | Reaffirmed: December 2018
Product Number: G59002K | Price: $101.00

RP 59 *
Recommended Practice for Well Control Operations—Kazakh
Kazakh translation of RP 59.

Std 64
Diverter Equipment Systems
(includes Errata 1 dated March 2018 and Addendum 1 dated December 2018)
Provides information on the design, manufacture, quality control, installation, maintenance, and testing of the diverter system, and associated components. The diverter system provides a flow control system to direct controlled or uncontrolled wellbore fluids away from the immediate drilling area for the safety of personnel and equipment. Pages: 69
3rd Edition | August 2017 | Product Number: G64003 | Price: $141.00

SUBSEA PRODUCTION SYSTEMS

RP 17A
Design and Operation of Subsea Production Systems—General Requirements and Recommendations
Provides guidelines for the design, installation, operation, repair, and decommissioning of subsea production systems. The elements of subsea production systems included are wellheads (both subsea and mudline casing suspension systems) and trees; pipelines and end connections; controls, control lines, and control fluids; templates and manifolds; and production risers (both rigid and flexible). Other sections cover operations, quality assurance, materials, and corrosion. This is intended as an umbrella document to govern other parts of the subsea document suite of standards dealing with more detailed requirements for the subsystems that typically form part of a subsea production system. However, in some areas (e.g. system design, structures, manifolds, lifting devices, and color and marking) more detailed requirements are included herein, as these subjects are not covered in a subsystem standard. The complete subsea production system comprises several subsystems necessary to produce hydrocarbons from one or more subsea wells and transfer them to a given processing facility located offshore (fixed, floating, or subsea) or onshore, or to inject water/gas through subsea wells. Specialized equipment such as split trees and trees and manifolds in atmospheric chambers, are not specifically discussed because of their limited use. However, the information presented is applicable to those types of equipment. Pages: 55
5th Edition | May 2017 | Product Number: GX17A05 | Price: $102.00

RP 17B
Recommended Practice for Flexible Pipe
Provides guidelines for the design, analysis, manufacture, testing, installation, and operation of flexible pipes and flexible pipe systems for onshore, subsea, and marine applications. This recommended practice (RP) supplements Specs 17J and 17K, which specify minimum requirements for the design, material selection, manufacture, testing, marking, and packaging of unbonded and bonded flexible pipe, respectively. This RP applies to flexible pipe assemblies, consisting of segments of flexible pipe body with end fittings attached to both ends. Both bonded and unbonded pipe types are covered. In addition, this RP applies to flexible pipe systems, including ancillary components. The applications covered by this RP are sweet- and sour-service production, including export and injection applications. This RP applies to both static and dynamic flexible pipe systems used as flowlines, risers, and jumpers. This RP does cover, in general terms, the use of flexible pipes for offshore loading systems. This RP does not cover flexible pipes for use in choke and kill lines or umbilical and control lines. Pages: 268
5th Edition | May 2014 | Product Number: G017B05 | Price: $237.00

Spec 17D/ISO 13628-4 *
Design and Operation of Subsea Production Systems—Subsea Wellhead and Tree Equipment
(includes Errata 1 dated September 2011, Errata 2 dated January 2012, Errata 3 dated June 2013, Errata 4 dated July 2013, Errata 5 dated October 2013, Errata 6 dated August 2015, Addendum 1 dated September 2015, and Errata 7 dated October 2015)
Provides specifications for subsea wellheads, mudline wellheads, drill-through mudline wellheads, and both vertical and horizontal subsea trees. It specifies the associated tooling necessary to handle, test, and install the equipment. It also specifies the areas of design, material, welding, quality control (including factory acceptance testing), marking, storing, and shipping for both individual sub-assemblies (used to build complete subsea tree assemblies) and complete subsea tree assemblies. The user is responsible for ensuring subsea equipment meets any additional requirements of governmental regulations for the country in which it is installed. This is outside the scope of this document. Where applicable, this document can also be used for equipment on satellite, cluster arrangements and multiple well template applications. This document includes equipment definitions, an explanation of equipment use and function, an explanation of service conditions and product specification levels, and a description of critical components. This document is not applicable to the rework and repair of used equipment. Pages: 254
2nd Edition | May 2011 | Effective Dates: February 1, 2013 [for Valve and Actuator Design Validation (Test Requirements) Only] and November 1, 2011 [for All Other Requirements]
Reaffirmed: November 2018 | 2-Year Extension: July 2016
Product Number: GX17D02 | Price: $192.00

Spec 17D/ISO 13628-4 *
Design and Operation of Subsea Production Systems—Subsea Wellhead and Tree Equipment—Chinese
Chinese translation of Spec 17D.
2nd Edition | May 2011 | Product Number: GX17D02C | Price: $135.00

Spec 17D/ISO 13628-4 *
Design and Operation of Subsea Production Systems—Subsea Wellhead and Tree Equipment—Russian
Russian translation of Spec 17D.
2nd Edition | May 2011 | Product Number: GX17D02R | Price: $154.00
**Spec 17E**
Specification for Subsea Umbilicals

(includes Addendum 1 dated December 2017)

Specifies requirements and gives recommendations for the design, material selection, manufacture, design verification, testing, installation, and operation of subsea control systems, chemical injection, gas lift, utility and service umbilicals, and associated ancillary equipment for the petroleum and natural gas industries. This also applies to umbilicals containing electrical conductors, optical fibers, thermoplastic hoses, and metallic tubes, either alone or in combination, and applies to umbilicals that are for static or dynamic service, and with routings of surface-surface, surface-subsea, and subsea-subsea.

Pages: 178

5th Edition | July 2017 | Product Number: G17E05 | Price: $200.00

**Std 17F**
Standard for Subsea Production Control Systems

(includes Errata 1 dated July 2018)

Applies to design, fabrication, testing, installation, and operation of subsea production control systems. Covers surface control system equipment, subsea-installed control system equipment, and control fluids. This equipment is utilized to control subsea production of oil and gas and for subsea water and gas injection services. Where applicable, this standard may be used for equipment on multiple-well applications.

This document establishes design standards for systems, subsystems, components, and operating fluids in order to provide for the safe and functional control of subsea production equipment. It contains various types of information related to subsea production control systems that includes: informative data that provide an overview of the architecture and general functionality of control systems for the purpose of introduction and information; basic prescriptive data that shall be adhered to by all types of control systems; selective prescriptive data that are control-system-type sensitive and shall be adhered to only when they are relevant; and optional data or requirements that need be adopted only when considered necessary either by the purchaser or the vendor.

Rework and repair of used equipment are beyond the scope of this standard.

Pages: 239

4th Edition | November 2017 | Product Number: G017F04 | Price: $249.00

**RP 17G/ISO 13628-7:2005**
Recommended Practice for Completion/Workover Riser

Gives requirements and recommendations for the design, analysis, materials, fabrication, testing, and operation of subsea completion/workover (C/WO) riser systems run from a floating vessel. This document is intended to serve as a common reference for designers, manufacturers, and operators/users, thereby reducing the need for company specifications. This recommended practice is limited to risers, manufactured from low alloy carbon steels. Risers fabricated from special materials such as titanium, composite materials, and flexible pipes are beyond the scope of this document. Specific equipment covered is listed as follows: riser joints; connectors; workover control systems; surface flow trees; surface tree tension frames; lower workover riser packages; lubricator valves; retainer valves; subsea test trees; shear subs; tubing hanger orientation systems; swivels; annulus circulation hoses; riser spiders; umbilical clamps; handling and test tools; and tree cap running tools. Associated equipment not covered includes: tubing hangers; internal and external tree caps; tubing hanger running tools; surface coiled tubing units; surface wireline units; and surface tree kill and production jumpers.

This edition of RP 17G is the identical national adoption of ISO 13628-7:2005.

Pages: 242

Product Number: G017G02 | Price: $187.00

**Spec 17K**
Specification for Bonded Flexible Pipe

Defines the technical requirements for safe, dimensionally and functionally interchangeable bonded flexible pipes that are designed and manufactured to uniform standards and criteria. Minimum requirements are specified for the design, material selection, manufacture, testing, marking, and packaging of flexible pipes, with reference to existing codes and standards where applicable. See RP 17B for guidelines on the use of flexible pipes and ancillary components. This specification applies to unbonded flexible pipe assemblies, consisting of segments of flexible pipe body with end fittings attached to both ends. This specification does not cover flexible pipes of bonded structure. This specification does not apply to flexible pipe ancillary components. Guidelines for bend stiffeners and bend restrictors are given in Annex B. This specification does not apply to flexible pipes that include non-metallic tensile armour wires. Pipes of such construction are considered as prototype products subject to qualification testing. The applications addressed by this document are sweet and sour service production, including export and injection applications. Production products include oil, gas, water, and injection chemicals. This specification applies to both static and dynamic flexible pipes used as flowlines, risers, and jumpers. This specification does not apply to flexible pipes for use in choke-and-kill line applications.

Pages: 90

4th Edition | May 2014 | Effective Date: November 1, 2014
Product Number: G017J04 | Price: $139.00

**RP 17H**
Remotely Operated Tools and Interfaces on Subsea Production Systems

(includes Errata 1 dated January 2014)

Provides recommendations for development and design of remotely operated subsea tools and interfaces on subsea production systems in order to maximize the potential of standardizing equipment and design principles. This document does not cover manned intervention, internal wellbore intervention, internal flowline inspection, tree running, and tree running equipment. However, all the related subsea remotely operated vehicle/remote operated tool (ROV/ROT) interfaces are covered by this standard. It is applicable to the selection, design, and operation of ROVs and ROTs including ROV tooling, hereafter defined in a common term as subsea intervention systems.

This document was written to include the information from RP 17M, 1st Edition (2004). With the release of RP 17H, 2nd Edition (2013), RP 17M is withdrawn. Pages: 83

2nd Edition | June 2013 | Product Number: G17H02 | Price: $165.00

**RP 17I**
Specification for Unbonded Flexible Pipe

(includes Errata 1 dated September 2016, Errata 2 dated May 2017, and Addendum 1 dated October 2017)

Defines the technical requirements for safe, dimensionally and functionally interchangeable flexible pipes that are designed and manufactured to uniform standards and criteria. Minimum requirements are specified for the design, material selection, manufacture, testing, marking, and packaging of flexible pipes, with reference to existing codes and standards where applicable. See RP 17B for guidelines on the use of flexible pipes and ancillary components. This specification applies to unbonded flexible pipe assemblies, consisting of segments of flexible pipe body with end fittings attached to both ends. This specification does not cover flexible pipes of bonded structure. This specification does not apply to flexible pipe ancillary components. Guidelines for bend stiffeners and bend restrictors are given in Annex B. This specification does not apply to flexible pipes that include non-metallic tensile armour wires. Pipes of such construction are considered as prototype products subject to qualification testing. The applications addressed by this document are sweet and sour service production, including export and injection applications. Production products include oil, gas, water, and injection chemicals. This specification applies to both static and dynamic flexible pipes used as flowlines, risers, and jumpers. This specification does not apply to flexible pipes for use in choke-and-kill line applications.

Pages: 96

3rd Edition | August 2017 | Product Number: G17K03 | Price: $140.00
Spec 17L1
Specification for Flexible Pipe Ancillary Equipment
(includes Errata 1 dated January 2015 and Errata 2 dated November 2015)

Defines the technical requirements for safe, dimensionally and functionally interchangeable flexible pipe ancillary equipment that is designed and manufactured to uniform standards and criteria. Minimum requirements are specified for the design, material selection, manufacture, testing, documentation, marking, and packaging of flexible pipe ancillary equipment, with reference to existing codes and standards where applicable. The applicability relating to a specific item of ancillary equipment is stated at the beginning of the particular clause for the ancillary equipment in question. This document applies to the following flexible pipe ancillary equipment: bend stiffeners; bend restrictors; bellmouths; buoyancy modules and ballast modules; subsea buoys; tethers for subsea buoys and tether clamps; riser and tether bases; clamping devices; piggy-back clamps; repair clamps; I/J-tube seals; pull-in heads/installation aids; connectors; load-transfer devices; mechanical protection; and fire protection. This document may be used for bonded flexible pipe ancillary equipment, though any requirements specific to these applications are not addressed. This document does not cover flexible pipe ancillary equipment beyond the connector, with the exception of riser bases and load-transfer devices. Therefore, this document does not cover turret structures or J-tubes and I-tubes, except in instance where it is reasonable, for example. In addition, this document does not cover flexible pipe storage devices such as reels, for example. This specification is intended to cover ancillary equipment made from several material types, including metallic, polymer and composite materials. It also refers to material types for particular ancillary components that are not commonly used for such components currently, but may be adopted more frequently in the future.

Pages: 340
1st Edition | March 2013 | Product Number: G17L101 | Price: $175.00

RP 17N
Recommended Practice on Subsea Production System Reliability, Technical Risk, and Integrity Management
(includes Addendum 1 dated May 2018)

Provides a structured approach that organizations can adopt to manage uncertainty throughout the life of a project. This may range from the management of general project risk through to the identification and removal of potential failure modes in particular equipment. This recommended practice aims to provide operators, contractors, suppliers with guidance in the application of technical equipment to subsea projects within their scope of work and supply only. It is applicable to standard and nonstandard equipment, and all phases of projects, from feasibility studies to operation.

It does not prescribe the use of any specific equipment or limit the use of any existing installed equipment or recommend any action, beyond good engineering practice, where current reliability is judged to be acceptable. It is also not intended to replace individual company processes, procedures, document nomenclature, or numbering: it is a guide. However, this recommended practice may be used to enhance existing processes, if deemed appropriate.

Most organizations will find much that is familiar and recognized as good practice. Some annex sections may only be of interest to a reliability specialist. The basic approach, however, is simple and consistent, and when applied correctly, has the potential to greatly reduce the financial risk of designing, manufacturing, installing, and operating subsea equipment.

Pages: 178
2nd Edition | June 2017 | Product Number: G17N02 | Price: $183.00

RP 17O
Recommended Practice for Subsea High Integrity Pressure Protection Systems (HIPPS)

Addresses the requirements for the use of high integrity pressure protection systems (HIPPS) for subsea applications. RP 14C, IEC 61508, and IEC 61511 specify the requirements for onshore, topsides, and subsea safety instrumented systems (SIS) and are applicable to HIPPS, which are designed to automatically isolate downstream facilities from overpressure situations. This document integrates these requirements to address the specific needs of subsea production. These requirements cover the HIPPS pressure sensors, logic solver, shutdown valves, and ancillary devices including testing, communications, and monitoring subsystems.

Pages: 45
2nd Edition | July 2014 | Product Number: G17O02 | Price: $124.00

Design and Operation of Subsea Production Systems—Subsea Structures and Manifolds

Addresses specific requirements and recommendations for subsea structures and manifolds, within the framework set forth by recognized and accepted industry specifications and standards. As such, it does not supersede or eliminate any requirement imposed by any other industry specification.

This recommended practice covers subsea manifolds and templates utilized for pressure control in both subsea production of oil and gas, and subsea injection services. Equipment within the scope of this recommended practice is listed as follows: production and injection manifolds; modular and integrated single satellite and multiwell templates; subsea processing and subsea boosting stations; flowline riser bases and export riser bases (FRB, ERB); pipeline end manifolds (PLEM); pipeline end terminations (PLET); T- and Y-connections; subsea isolation valve structures (SSI); subsea controls and distribution structures; and associated protection structures.

This edition of Spec 17P is the identical national adoption of ISO 13628-15:2011.

Pages: 69
1st Edition | January 2013 | Product Number: G17P01 | Price: $155.00
RP 17Q  Recommended Practice on Subsea Equipment Qualification
Provides suppliers, contractors, and operators with process-level guidance to qualify equipment intended for use in subsea applications. This document is intended to provide high-level guidance only, so that the petroleum and natural gas industry has a common set of principles to follow for equipment qualification. It is written to simplify the qualification process and to align associated expectations within individual organizations and within the industry. It is not intended to replace existing company processes or procedures. The application of this recommended practice is dependent on the stakeholder companies (qualifier and end user) accepting its use. Although developed for application to subsea equipment, the process described by the recommended practice can be applied to non-subsea equipment as well. Pages: 54
2nd Edition | May 2018 | Product Number: G17Q02 | Price: $138.00

RP 17R  Recommended Practice for Flowline Connectors and Jumpers
Addresses specific requirements and recommendations for subsea flowline connectors and jumpers within the frameworks set forth by recognized and accepted industry specifications and standards. As such, it does not supersede or eliminate any requirement imposed by any other industry specification.

This document covers subsea flowline connectors and jumpers used for pressure containment in both subsea production of oil and gas, and subsea injection services. Equipment within the scope of this document are listed below.

Equipment used to make the following subsea connections are included:
- pipeline end terminations to manifolds,
- pipeline end terminations to trees,
- pipeline end terminations to riser bases,
- manifolds to trees,
- pipeline inline sleds to other subsea structures.
The following connection components and systems are included:
- jumper assemblies,
- monobore connectors systems,
- multibore connectors systems,
- pressure and flooding caps,
- connector actuation tools. Pages: 52
1st Edition | March 2015 | Product Number: G17R01 | Price: $124.00

RP 17S  Recommended Practice for the Design, Testing, and Operation of Subsea Multiphase Flow Meters
Provides recommendations for the sizing, specification, system integration, and testing of subsea flow meters (referred to as multiphase flow meters (MPFMs)) for measurement of full stream, multiphase flow. In subsea applications, MPFMs are normally used in well testing, allocation measurement, fiscal measurement, well management, and/or flow assurance applications. The categorization of MPFM application is important since it can be used to determine the required level of factory testing, independent verification, field maintenance, and ongoing verification required during operation. This document includes wet gas flow meters as a subset of MPFMs. In-line MPFMs are typically used in subsea applications and are the focus of this document. These recommendations and guidelines are intended for use by the engineer responsible for the delivery of the MPFM. Pages: 32
1st Edition | June 2015 | Product Number: G17S01 | Price: $88.00

TR 17TR1  Evaluation Standard for Internal Pressure Sheath Polymers for High Temperature Flexible Pipes
Defines the methodology and test procedures necessary for the evaluation of polymeric materials suitable for use as the internal pressure sheath of unbonded flexible pipes in high temperature applications. It describes the processes by which the critical material properties, both static and dynamic, can be measured and evaluated against relevant performance criteria.

This document relates primarily to the properties necessary for an internal pressure sheath required for oil and gas production. These are most relevant to high temperature applications. Only thermoplastic materials are considered for the internal pressure sheath. Elastomeric materials, which are used in bonded flexible pipes, are not considered in this document. Pages: 47
1st Edition | March 2003 | Product Number: G17TR11 | Price: $136.00

TR 17TR2  The Aging of PA-11 In Flexible Pipes
Provides comprehensive guidance on materials and pipe issues regarding the use and operation of PA-11 in flexible pipe applications and concentrates on the use of PA-11 in the internal sheath of flexible pipes. The collective goal of this document is to prevent failure of the internal pressure sheath, as a result of aging and associated loss of mechanical properties, by determining and disseminating the necessary scientific and practical information. Pages: 31
1st Edition | June 2003 | Product Number: G17TR21 | Price: $104.00

TR 17TR3  An Evaluation of the Risks and Benefits of Penetrations in Subsea Wellheads Below the BOP Stack
Provides an evaluation of the risks and benefits of allowing penetrations in subsea wellheads below the blowout preventer (BOP) stack so annuli other than the production tubing (commonly referred to as the “A” annulus) could be monitored. Current industry standards (Spec 17D and ISO 13628-4) for the design of subsea wellheads prohibit penetrations below the BOP stack. In contrast, U.S. regulations (30 CFR 250.517) require that all annuli be monitored for sustained casing pressure and that every occurrence of sustained casing pressure be reported immediately. The study concludes that the risks outweigh the benefits since the risk of maintaining the pressure barrier using a wellhead with penetrations is approximately 2.5 times that of a system without penetrations.

The scope of this study is limited to completed subsea wells in the Gulf of Mexico (GOM). The risks were evaluated using fault tree analysis for three systems:
- wellhead system without penetrations,
- wellhead system with one penetration, and
- wellhead system with two penetrations. Pages: 123
1st Edition | November 2004 | Product Number: G17TR31 | Price: $136.00

TR 17TR4  Subsea Equipment Pressure Ratings
The impact of operation in deep water on the pressure rating of equipment is a special concern. The objective of this document is to foster a better understanding of the effects of simultaneous internal and external pressures on the internal pressure rating of well control equipment. Pages: 12
2nd Edition | May 2016 | Product Number: G17TR402 | Price: $67.00
The document also addresses the issues of topside equipment that provide guidelines for oil and gas subsea equipment used in high-pressure high-temperature (HPHT) environments. It covers the control and chemical injection (CI) services necessary for the operation of umbilical systems, etc. but also the fluids to be conveyed, initially from the fluid manufacturers’ facilities through to bunkering at the host facility and, ultimately injection or usage at remote subsea locations.

The document also addresses the issues of topside equipment that provide the control and chemical injection (CI) services necessary for the operation and performance of a SPS. Pages: 44


TR 17TR6
Attributes of Production Chemicals in Subsea Production Systems

This publication identifies and specifies the essential attributes of production chemicals intended to be introduced to subsea oil and gas production systems. The document is intended for use by chemical suppliers to facilitate the provision of chemicals compatible with existing and intended subsea production systems (SPS) although it is envisaged that use of the document for specification purposes by the operators of such processes will assist in ensuring the completeness of requests to supply.

This document specifies parameters that address manufacture, storage, and transportation of the production chemical, as well as its deployment using the SPS chemical injection system. The document provides for two approaches, requiring that parameters be either:

- measured and reconciled with SPS design and operation, or
- meet, or exceed, acceptance criteria specified, either in this document or by manufacturers of production chemicals or equipment used to deliver production chemicals.

This document is intended to be applicable to all subsea developments, irrespective of whether the development is in shallow or deep water. Pages: 42

1st Edition | March 2012 | Product Number: G17TR601 | Price: $101.00

TR 17TR7
Verification and Validation of Subsea Connectors

This publication provides requirements and recommendations for the verification and validation of subsea connectors. It is intended to serve as a common reference for designers, manufacturers, and users to improve the performance assessment of subsea connectors and to improve the reliability and integrity of subsea systems.

This technical report is applicable to subsea connectors along the vertical centerline of subsea hardware (i.e. tree, tubing head, tree cap, tree running tool, well control package connectors, and EDP connectors), the subsea wellhead, and the completion/workover riser. The methodology provided herein may also be used in other connector designs. Connectors outboard of the vertical centerline are addressed in API 17R. Pages: 25

1st Edition | April 2017 | Product Number: G17TR701 | Price: $88.00

TR 17TR8
High-Pressure High-Temperature Design Guidelines

This publication serves as a general design guideline for HPHT application. It provides design guidelines for oil and gas subsea equipment used in high-pressure high-temperature (HPHT) environments. Pages: 112

2nd Edition | March 2018 | Product Number: G17TR802 | Price: $142.00

TR 17TR9
Umbilical Termination Assembly (UTA) Selection and Sizing Recommendations

This publication identifies and describes:

- technical, commercial, and installation risks associated with high-functionality umbilicals and umbilical terminations [resulting in large and heavy umbilical termination assemblies (UTAs)], especially with respect to installation;
- implications of decisions made early in the umbilical and subsea umbilical termination (SUT) planning, selection, and design phases, to ease the manufacturing, handling, and final umbilical/UTA installation;
- guidance on specification and sizing of umbilical terminations, including overall size, weight, and handling requirements.

This document acts as a reference guide during the early field development planning stage to ensure that due consideration is given to the implications of the size of UTAs and possible consequences during installation. It is intended to be used as a reference guide by end users and operators, UTA and umbilical manufacturers, installers, and front-end engineering design (FEED) companies. The intention is that the document will enable the currently inherent installation difficulties to be addressed up front by the UTA designers, prior to commencing SUT design and functionality definition. It is also intended to be used as a reference document to enable reviews to be undertaken to ensure that installation risk has been properly considered as part of SUT design and operations reviews on a case-by-case basis.

Pages: 53

1st Edition | August 2017 | Product Number: G17TR901 | Price: $107.00

TR 17TR10
Subsea Umbilical Termination (SUT) Design Recommendations

This publication provides best practice technical guidance for subsea umbilical design (SUT) design, in order to aid in making informed choices during the design phase. This document was generated in response to the increasing difficulties in installation of high-functionality SUTs, due to their increasing size. This document is intended to be used as a reference guide by operators, umbilical termination assembly (UTA) and umbilical specifiers, installers, and front-end engineering design (FEED) companies. It is also intended to be used as a reference document to enable reviews to be undertaken to ensure that installation risk has been properly considered as part of SUT design and operation reviews.

Additionally, the document has been designed to be educational such that persons new to the industry, or, less experienced persons within the industry, can understand the implications of UTA design on installation feasibility. This document aims at capturing the primary aspects impacting on the overall dimensions and weight of the UTA, and highlighting the consequences of design choices.

This document excludes multibore hub connection-type (MHC) UTAs that can connect the umbilical directly to other subsea hardware. Although MHC UTAs are out of scope, many of the guidelines in this document would apply.

Pages: 66

1st Edition | December 2015 | Product Number: G17TR101 | Price: $107.00

TR 17TR11
Pressure Effects on Subsea Hardware During Flowline Pressure Testing in Deep Water

This publication provides guidance to the industry on allowable pressure loading of subsea hardware components that can occur during hydrotesting of subsea flowlines and risers and during pre-commissioning/leak testing of these systems. There are potential problems with confusion arising from high hydrostatic pressure in deep water, partially due to the variety of applicable test specifications and partly from the inconsistent use of a variety of acronyms for pressure terminology.

Pages: 11

1st Edition | September 2015 | Product Number: G17TR111 | Price: $82.00
Exploration and Production

This publication is a new entry in this catalog.

This publication is related to an API licensing, certification, or accreditation program.

TR 17TR12
Consideration of External Pressure in the Design and Pressure Rating of Subsea Equipment

Addresses issues related to the effects of external pressure acting on subsea equipment installed in deepwater for containing or controlling wellbore fluids. External pressure at deepwater can significantly reduce the differential pressure acting on the wall of subsea equipment; therefore, this can improve its internal pressure containment capability. External pressure is typically ambient seawater pressure, but in some cases, external pressure may be due to the hydrostatic head of drilling mud, completion fluids, or other fluids contained within risers or other conduits that connect the subsea equipment to surface facilities.

This document provides guidance for subsea equipment designers/manufacturers to consider the effects of external pressure or differential pressure when designing and validating subsea equipment. Additionally, this technical report provides guidance to equipment purchaser/end-user to appropriately select rated equipment for their subsea systems with consideration to the effects of external pressure in addition to internal pressure, including differential pressure across a closure mechanism, and other applied mechanical or structural loads under all potential operating scenarios and functionality criteria.

It is necessary that users of this technical report be aware of regulations to the consideration of external pressure or differential pressure in equipment designs. Pages: 28

1st Edition | March 2015 | Product Number: G17TR121 | Price: $98.00

TR 17TR13
General Overview of Subsea Production Systems

Subsea production systems can range in complexity from a single satellite well with a flowline linked to a fixed platform to several wells on a template producing and transferring via subsea processing facilities to a fixed or floating facility or directly to an onshore installation. The objectives of this document are to describe typical examples of the various subsystems and components that can be combined, in a variety of ways, to form complete subsea production systems; to describe the interfaces with typical downhole and topsides equipment that are relevant to subsea production systems; and to provide some basic design guidance on various aspects of subsea production systems. Pages: 100

1st Edition | March 2016 | Product Number: G17TR131 | Price: $124.00

TR 17TR15
API 17H Hydraulic Interfaces for Hot Stabs

Describes a number of common or previously used ROV hydraulic hot stab and receptacle configurations. The intent is to ensure backward compatibility of the hot stab described in API 17H, Second Edition, June 2013, and to align API 17H with API 553, API 17D, and API 16D. This technical report defines three major categories of hot stabs and describes the geometry to maintain compatibility across all manufacturers. Pages: 17

1st Edition | December 2017 | Product Number: G17TR151 | Price: $83.00

RP 17U
Recommended Practice for Wet and Dry Thermal Insulation of Subsea Flowlines and Equipment

Provides guidance for the performance, qualification, application, quality control, handling, and storage requirements of wet and dry thermal insulation for subsea applications in the petroleum and gas industries. This guideline also covers the inspection of the insulation, and the repair of insulation defects. For flowlines, the installation method is not defined and may be either S-lay, J-lay, or reel-lay. This guideline is intended to cover all three installation methods. This guideline also takes into consideration the design and structural handling of subsea trees, manifolds, pipeline end terminations (PLETs), flowline jumpers, etc., as it pertains to the placement of structure, sacrificial anodes, handling appurtenances, etc., to ensure the integrity of the insulation's construction.

This recommended practice is applicable to the following systems and components:
- flowlines and risers;
- christmas tree, valve block, and piping;
- manifold valves and pipework;
- PLET piping;
- jumpers (i.e., piping and bends);
- connectors and fittings;
- valves and chokes. Pages: 24

1st Edition | February 2015 | Product Number: G17U01 | Price: $77.00

RP 17V
Recommended Practice for Analysis, Design, Installation, and Testing of Safety Systems for Subsea Applications

Includes Errata 1 dated July 2015

Presents recommendations for designing, installing, and testing a process safety system for subsea applications. The basic concepts of subsea safety systems are discussed and protection methods and requirements of the system are outlined. For the purposes of this document, “subsea system” includes all process components from the wellhead (and surface controlled subsurface safety valve [SCSSV]) to upstream of the boarding shutdown valve. For gas injection, water injection, and gas lift systems, the shutdown valve is within the scope of this document.

This document is a companion document to API 14C, which provides guidance for topsides safety systems on offshore production facilities. Some sections of this document refer to API 14C for safety system methodology and processes. This recommended practice illustrates how system analysis methods can be used to determine safety requirements to protect any process component. Actual analyses of the principal components are developed in such a manner that the requirements determined will be applicable whenever the component is used in the process. The safety requirements of the individual process components may then be integrated into a complete subsea safety system. The analysis procedures include a method to document and verify system integrity. The uniform method of identifying and symbolizing safety devices is presented in API 14C and adopted in this recommended practice. Pages: 63

1st Edition | February 2015 | Product Number: G17V01 | Price: $144.00

RP 17W
Recommended Practice for Subsea Capping Stacks

Contains subsea capping stack recommended practices for designing, building, and using, as well as maintaining and testing during storage. The document focuses on:
- topics for drafting a Basis of Design (BOD) document that could be used for constructing a new subsea capping stack;
- topics that may drive improvements for existing subsea capping stack equipment, and
- topics for drafting plans for storing, transporting, maintaining, and testing a subsea capping stack.

Other important elements of a complete subsea capping stack system that are addressed in this document include:
- minimal documentation requirements,
- minimal analysis and modeling that should accompany any subsea capping stack design,
- competencies of personnel who operate, maintain, and test subsea capping stacks, and
- potential unknowns/risks that may be encountered with incident wells that impact the use of a subsea capping stack and relevant contingency procedures.

While it is not within the scope of this document to recommend procedures to use a subsea capping stack, this document does contain example procedures for reference only. These procedures are not presented as a recommended practice but rather to indicate to industry that the preparation and use of such procedures is a recommended practice. Pages: 65

1st Edition | July 2014 | Product Number: G17W01 | Price: $129.00
Exploration and Production

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COMPLETION EQUIPMENT

Spec 11D1/ISO 14310:2008
Packers and Bridge Plugs
Provides requirements and guidelines for packers and bridge plugs as defined herein for use in the petroleum and natural gas industry. This specification provides requirements for the functional specification and technical specification, including design, design verification and validation, materials, documentation and data control, repair, shipment, and storage. In addition, products covered by this specification apply only to applications within a conduit. Installation and maintenance of these products are outside the scope of this specification.

This specification includes requirements for the following:
- HPHT environment equipment;
- HPHT environment operational tools;
- external flow testing.

This edition of Spec 11D1 is the modified national adoption of ISO 14310:2008. Pages: 62
3rd Edition | April 2015 | Effective Date: October 9, 2015
Product Number: G11D103 | Price: $118.00

Spec 11D1/ISO 14310:2008 *
Packers and Bridge Plugs—Russian
Russian translation of Spec 11D1.
3rd Edition | April 2015 | Product Number: G11D103R | Price: $95.00

RP 11V5
Recommended Practices for Operation, Maintenance, Surveillance, and Troubleshooting of Gas-Lift Installations
Assists gas-lift system operators, analysts, technicians, engineers, and others in understanding how to effectively plan, operate, maintain, troubleshoot, and provide surveillance for gas-lift systems and gas-lift wells. These recommended practices discuss continuous gas-lift with injection in the casing/tubing annulus and production up the tubing. Annular flow gas-lift (injection down the tubing and production up the annulus), dual gas-lift (two tubing strings in the same casing), and intermittent gas-lift are mentioned; however, most of the discussion focuses on conventional continuous gas-lift. Pages: 123
Product Number: G11V53 | Price: $160.00

RP 11V6
Recommended Practice for Design of Continuous Flow Gas Lift Installations Using Injection Pressure Operated Valves
Sets guidelines for continuous flow gas lift installation designs using injection pressure operated valves. The assumption is made that the designer is familiar with and has available data on the various factors that affect a design. Pages: 88
Product Number: G11V62 | Price: $153.00

RP 11V8
Recommended Practice for Gas Lift System Design and Performance Prediction
Emphasizes gas lift as a system and discusses methods used to predict its performance. Information must be gathered and models validated prior to a system design, which must precede wellbore gas lift mandrel and valve design. The subsurface and surface components of the system must be designed together to enhance the strengths of each and to minimize the constraints. Pages: 79
Product Number: G11V81 | Price: $123.00

Spec 14A *
Specification for Subsurface Safety Valve Equipment
(includes Errata 1 dated July 2015 and Addendum 1 dated June 2017)
Provides the requirements for subsurface safety valves (SSSVs), and the secondary tools as defined herein necessary to operate the features included within them, including all components that establish tolerances and/or clearances that may affect performance or interchangeability of the SSSV components. It includes repair operations and the interface connections to control conduits and/or other equipment, but does not cover the connections to the primary well conduit. Pages: 140
Product Number: G14A12 | Price: $232.00

Spec 14L/ISO 16070:2005
Specification for Lock Mandrels and Landing Nipples
Provides the requirements for lock mandrels and landing nipples within the production/injection conduit for the installation of flow control or other equipment used in the petroleum and natural gas industries. It includes the interface connections to the flow control or other equipment, but does not cover the connections to the well conduit.
This edition of Spec 14L is the identical national adoption of ISO 16070:2005. Pages: 25
Product Number: G414L02 | Price: $123.00

Spec 14L/ISO 16070:2005 *
Specification for Lock Mandrels and Landing Nipples—Chinese
Chinese translation of Spec 14L.
2nd Edition | July 2007 | Product Number: GX14L02C | Price: $87.00

Spec 19AC/ISO 14998:2013
Specification for Completion Accessories
Provides requirements and guidelines for completion accessories, as defined herein, for use in the petroleum and natural gas industry. This international standard provides requirements for the functional specification and technical specifications, including design, design verification and validation, materials, documentation and data control, quality requirements, redress, repair, shipment, and storage. This international standard covers the pressure-containing, non-pressure-containing, load-bearing, disconnect/reconnect, tubing-movement, and opening-a-port functionalities of completion accessories. Products covered under another API or international specification are not included. Also not included are other products such as line/tubing hangers, downhole well test tools, inflow control devices, surface-controlled downhole chokes, downhole artificial lift equipment, control lines and fittings, and all functionalities relating to electronics or fiber optics. This international standard does not cover the connections to the well conduit. Installation, application, and operation of these products are outside the scope of this international standard.
This edition of Spec 19AC is the modified national adoption of ISO 14998:2013. Pages: 63
1st Edition | September 2016
Product Number: G19AC01 | Price: $115.00

*These translated versions are provided for the convenience of our customers and are not officially endorsed by API. The translated versions shall neither replace nor supersede the English-language versions, which remain the official standards. API shall not be responsible for any discrepancies or interpretations of these translations. Translations may not include any addenda or errata to the document. Please check the English-language versions for any updates to the documents.
Recommended Practice for Evaluation of Well Perforators—Chinese
(formerly RP 43)

Recommended Practice for Evaluation of Well Perforators—Kazakh
(formerly RP 43)

Recommended Practices for Evaluation of Well Perforators—Russian

Measurement of and Specifications for Proppants Used in Hydraulic Fracturing and Gravel-Packing Operations

Measuring the Long-Term Conductivity of Proppants
(includes Errata 1 dated July 2008)

Side-Pocket Mandrels
(includes Errata 1 dated December 2014)

Side-Pocket Mandrels—Chinese

Side-Pocket Mandrels—Kazakh

Side-Pocket Mandrels—Russian

This publication is related to an API licensing, certification, or accreditation program.

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Provides requirements for subsurface flow-control devices used in side-pocket mandrels (hereafter called flow-control devices) intended for use in the worldwide petroleum and natural gas industry. This includes requirements for specifying, selecting, designing, manufacturing, quality-control, testing, and preparation for shipping of flow-control devices. Additionally, it includes information regarding performance testing and calibration procedures.

The installation and retrieval of flow-control devices is outside the scope of Spec 19G2. Additionally, Spec 19G2 is not applicable to flow-control devices used in center-set mandrels or with tubing-retrievable applications.

Spec 19G2 does not include requirements for side-pocket mandrels, running, pulling, and kick-over tools, and latches that might or might not be covered in other API/ISO specifications. Reconditioning of used flow-control devices is outside of the scope of Spec 19G2.

This edition of Spec 19G2 is the modified national adoption of ISO 17078-2:2007. Pages: 43

Product Number: G19G201 | Price: $149.00

Provides requirements and guidelines for running tools, pulling tools, kick-over tools, and latches used for the installation and retrieval of flow control and other devices to be installed in side-pocket mandrels for use in the petroleum and natural gas industries. This includes requirements for specifying, selecting, designing, manufacturing, quality control, testing, and preparation for shipping of these tools and latches. Additionally, it includes information regarding performance testing and calibration procedures.

The processes of installation, retrieval, maintenance, and reconditioning of used running, pulling, and kick-over tools and latches are outside the scope of Spec 19G3. Center-set and tubing retrievable mandrel applications are not covered.

This edition of Spec 19G3 is the identical national adoption of ISO 17078-3:2009. Pages: 43

Product Number: G19G301 | Price: $160.00

Provides informative documentation to assist the user/purchaser and the supplier/manufacturer in specification, design, selection, testing, calibration, reconditioning, installation, and use of side-pocket mandrels, flow-control devices, and associated latches and installation tools. The product-design and manufacturing-related requirements for these products are included within the other parts of ISO 17078. The content and coverage of several industry documents are compiled and refined within RP 19G4 (all parts).

This edition of RP 19G4 is the identical national adoption of ISO 17078-4:2010. Pages: 48

1st Edition | June 2011 | Product Number: GG19G401
Reaffirmed: May 2017 | Price: $160.00

RP 19G9 • Design, Operation, and Troubleshooting of Dual Gas-Lift Wells
Provides recommended practices for the selection, design, operation, surveillance, optimization, automation, and troubleshooting of dual gas-lift wells. The purpose of this document is to present recommended practices, guidelines, and tools to help obtain optimum production from dual gas-lift wells. This document also contains practices that should be avoided to minimize problems, inefficiencies, and poor economics that may be associated with ineffective dual gas-lift operations. Compared to single completions, dual completions typically have a higher initial cost, have more operating problems, are more difficult and expensive to work over, and may produce less efficiently.

It is not the purpose of this document to recommend the practice of dual gas-lift. In some cases, dual gas-lift is problematic and often ineffective. Often it is difficult or even impossible to effectively produce both completions in a dual well using gas-lift, over the long term. Where there are other feasible alternatives to produce dual wells, they should be considered. However, many dually completed oil wells should be artificially lifted—initially, or after reservoir pressures have declined and/or water cuts have increased. In many cases, the only practical method of artificial lift for these wells is gas-lift. Therefore, every effort should be made to design and operate dual gas-lift systems as effectively as possible. Pages: 90

2nd Edition | April 2015 | Product Number: G19G901 | Price: $170.00

RP 19G10 • Design and Operation of Intermittent Gas-Lift Systems
Covers the design and operation of intermittent gas-lift systems, including designs with chamber and plunger lift equipment. Included are the background and theory of each of these systems, as well as considerations for system design and operation. This information is intended for well engineers who seek to gain a general understanding of the theory and practices of intermittent gas-lift systems. Not addressed in this recommended practice are absolutes in the development of an intermittent gas-lift system design or operation because of the range of variables for each well and field combination.

This document also contains three annexes. Annex A contains mathematical derivations and models of some of the most pertinent intermittent gas-lift calculations. Annex B contains a comprehensive example of an intermittent gas-lift design. Annex C describes how to use the Field (U.S. Customary) Units Calculator and SI Units Calculator. Pages: 120

1st Edition | September 2018 | Product Number: G19G101 | Price: $162.00

RP 19G11 • Dynamic Simulation of Gas-Lift Wells and Systems
Provides guidance and background for the application and use of dynamic simulation of gas-lift wells and their related systems. Discussion is included for use of steady-state, pseudo-steady-state, and dynamic numerical models. Also presented are guidelines to facilitate the application of these techniques to optimize well/system integrity, operations, life cycle design, and production. Additionally, a range of artificial lift and natural flowing systems and topics (e.g. gas well liquid loading) are addressed. The dynamic simulation recommendations (e.g. stable flow, hydrates, waxes, corrosion, liquid loading, and complex wells) can be implemented in other production systems (e.g. natural flowing wells). Not included are technical requirements for the hardware of the dynamic simulation system, the specifics of the system calculations, the responses to the output of the dynamic simulation data output, and specifics of what actions are required after the provided data is considered. Pages: 90

1st Edition | October 2018 | Product Number: G19G101 | Price: $156.00

Spec 19OH • Openhole Isolation Equipment
Covers requirements and guidelines for openhole isolation equipment and bridge plugs as defined herein. Openhole isolation equipment includes swimmable packers, inflatable packers, expandable packers, and openhole packers that are designed for use in the petroleum and natural gas industries. This specification provides requirements for design verification, design validation, manufacturing, quality, shipping, handling, storage, and related supporting topics. Requirements for the end connections to the well conduit are not included in this specification. Also not covered are downhole anchoring devices (see API 11D1); cup-style packers; and requirements for the application, installation, and use of openhole isolation equipment. Equipment and technology covered by other API specifications and standards are exempted from this specification, such as:
- production packers
- liner hanger systems
- service tools
- test tool packers
Spec 19SS/ISO 17824:2009
Sand Screens
(includes Errata 1 dated November 2018)
Provides the requirements and guidelines for sand screens for use in the petroleum and natural gas industry. Included are the requirements for design, function, operational performance, and service centers. The requirements of this International Standard are applicable to wire-wrap screens, pre-pack screens, and metal-mesh screens.

Spec 19V/ISO 28781:2010
Subsurface Barrier Valves and Related Equipment
Provides the requirements for subsurface barrier valves and related equipment as they are defined herein for use in the petroleum and natural gas industries. Included are the requirements for design, function, operational performance, and service centers. The subsurface barrier valve is not designed as an emergency or fail-safe device.

Spec 20A
Carbon Steel, Alloy Steel, Stainless Steel, and Nickel Base Alloy Castings for Use in the Petroleum and Natural Gas Industry
Provides the requirements for the foundry qualification, production, design, marking, and documentation of carbon steel, alloy steel, stainless steel, and nickel-base alloy castings used in the petroleum and natural gas industries when referenced by an applicable API product standard or otherwise specified as a requirement for compliance.

Spec 20B
Open Die Shaped Forgings for Use in the Petroleum and Natural Gas Industry
Provides the requirements for the foundry qualification, production, design, marking, and documentation of carbon steel, alloy steel, stainless steel, and nickel-base alloy castings used in the petroleum and natural gas industries when referenced by an applicable API product standard or otherwise specified as a requirement for compliance.
This standard establishes requirements for four forging specification levels (FSL). These FSL designations define different levels of forged product technical, quality and qualification requirements. Pages: 30

2nd Edition | October 2015 | Effective Date: November 1, 2016
Product Number: G20C01 | Price: $83.00

Spec 20E ◆
Alloy and Carbon Steel Bolting for Use in the Petroleum and Natural Gas Industries
(includes Addendum 1 dated September 2018)

This standard applies when referenced by an applicable API equipment standard or otherwise specified as a requirement for compliance. This standard establishes requirements for three bolting specification levels (BSL). These three BSL designations define different levels of technical, quality and qualification requirements, BSL-1, BSL-2, and BSL-3. The BSLs are numbered in increasing levels of requirements in order to reflect increasing technical, quality, and qualification criteria. This standard covers the following finished product forms, processes, and sizes:
- machined studs;
- machined bolts, screws, and nuts;
- cold formed bolts, screws, and nuts with cut or cold formed threads (BSL-1 only);
- hot formed bolts and screws < 1.5 in. (38.1 mm) nominal diameter;
- hot formed bolts and screws ≥ 1.5 in. (38.1 mm) nominal diameter;
- roller threaded studs, bolts, and screws < 1.5 in. (38.1 mm) diameter;
- roller threaded studs, bolts, and screws ≥ 1.5 in. (38.1 mm) diameter;
- hot formed nuts < 1.5 in. (38.1 mm) nominal diameter;
- hot formed nuts ≥ 1.5 in. (38.1 mm) nominal diameter. Pages: 21

1st Edition | September 2013 | Product Number: G20D01 | Price: $88.00

Std 20F
Corrosion-Resistant Bolting for Use in the Petroleum and Natural Gas Industries

This standard applies when referenced by an applicable API equipment standard or otherwise specified as a requirement for compliance. This standard establishes requirements for two bolting specification levels (BSLs). These two BSL designations define different levels of technical, quality, and qualification requirements: BSL-2 and BSL-3. The BSLs are numbered in increasing levels of requirements in order to reflect increasing technical, quality, and qualification criteria. BSL-2 and BSL-3 are intended to be comparable to BSL-2 and BSL-3 as found in API 20E. BSL-1 is omitted from this standard. Pages: 32

2nd Edition | April 2018 | Product Number: G20F02 | Price: $89.00

Std 20H
Heat Treatment Services—Batch Type for Equipment Used in the Petroleum and Natural Gas Industry

This standard applies to suppliers providing heat treatment services where API product standards require such services or otherwise specified as a requirement for compliance. The requirements of this standard apply to batch heat treatment operations that establish or affect the final mechanical properties and include stress relief operations. This standard applies to carbon steel, low-alloy steel, stainless steel, and nickel-base alloys. Case hardening, induction hardening, and flame hardening are not covered by this standard. This standard establishes the requirements for three heat treatment specification levels (HSLs). These HSL designations define different levels of heat treatment technical, quality, and qualification requirements. Pages: 24

1st Edition | October 2015 | Product Number: G20H01 | Price: $67.00

Std 20J
Qualification of Distributors of Metallic Materials for Use in the Petroleum and Natural Gas Industries

This standard applies when specified by the customer or applicable to distributors of metallic bar, plate, and tubular products where API product standards require such services or are otherwise specified as a requirement for compliance. For organizations that manufacture and distribute metallic material, this standard only addresses the distribution portion of their processes. Pages: 36

1st Edition | May 2017 | Product Number: G20J01 | Price: $89.00

Std 20L
Qualification of Polymeric Seal Manufacturers for Use in the Petroleum and Natural Gas Industries

This standard applies to the manufacturers of polymeric seals where API product standards require such services or are otherwise specified as a requirement for compliance. This standard does not consider entities that solely perform assembly of outside manufactured parts as a polymeric seal manufacturer. Pages: 28

1st Edition | April 2018 | Product Number: G20L01 | Price: $67.00

Std 20M
Qualification of Suppliers of Machining Services for Use in the Petroleum and Natural Gas Industries

This standard applies when specified by the customer or voluntarily followed by the machining services supplier. Pages: 27

1st Edition | October 2017 | Product Number: G20M01 | Price: $74.00
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Bull 92L
Drilling Ahead Safely with Lost Circulation in the Gulf of Mexico

Identifies items that should be considered to safely address lost circulation challenges when the equivalent circulating density (ECD) exceeds the fracture gradient. It addresses drilling margins and drilling ahead with mud losses, which are not addressed in Std 65-2. It provides guidance when lost circulation is experienced with either surface or subsea stack operations (excluding diverter operations). These practices may apply to other Outer Continental Shelf (OCS) environments such as offshore California and Florida.

Lost circulation during drilling operations, in the form of both seepage and fracture losses, is a common occurrence in the Gulf of Mexico and other OCS environments. Through extensive practical experience, operators and drilling contractors have learned that with proper information, planning, and execution, lost circulation can be safely managed to allow well construction goals to be met. The methods used to repair or manage lost circulation are based on well location, geology, pore and fracture pressures, drilling depth, well design, hydraulics, mud properties, and available contingencies.

1st Edition | August 2015 | Product Number: G92L01 | Price: $72.00

RP 92M
Managed Pressure Drilling Operations with Surface Back-Pressure

Provides information for planning, installation, testing, and operation of wells drilled with surface backpressure managed pressure drilling (MPD). This document applies only to drilling rigs with surface blowout preventers (BOPs).

This document considers situations where the total drilling operation is performed balanced or underbalanced, including both hydrostatically overbalanced (no supplemental surface pressure needed to control inflow) and hydrostatically underbalanced (supplemental surface pressure needed to control inflow) systems. For underbalanced operations, refer to API 92U.

This document does not cover MPD operations with subsea BOP stacks. Pages: 33

1st Edition | September 2017 | Product Number: G92M01 | Price: $101.00

RP 92S • Managed Pressure Drilling Operations—Surface Back-Pressure with a Subsea Blowout Preventer

Provides information for planning, installation, testing, and operation of wells drilled with surface back-pressure (SBP) managed pressure drilling (MPD). This document applies only to drilling rigs with subsea blowout preventers (BOPs).

This document considers situations where the total drilling operation is performed balanced or overbalanced, including both hydrostatically overbalanced (no supplemental surface pressure needed to control inflow) and hydrostatically underbalanced (supplemental surface pressure needed to control inflow) systems. Pages: 64

1st Edition | September 2018 | Product Number: G92S01 | Price: $126.00

RP 92U
Underbalanced Drilling Operations
(includes Addendum 1 dated November 2015)

Provides information that can serve as a guide for planning, installation, operation, and testing of underbalanced drilling equipment systems on land and offshore drilling rigs [barge, platform, bottom-supported, and floating with surface blowout preventers (BOP) installed] thereby ensuring consideration of personnel safety, public safety, integrity of the underbalanced drilling (UBD) equipment, and preservation of the environment for onshore and offshore UBD operations (including tripping of drill string). Pages: 72


RP 96
Deepwater Well Design and Construction

Provides engineers a reference for deepwater (DW) well design as well as drilling and completion operations. This recommended practice (RP) will also be useful to support internal reviews, internal approvals, contractor engagements, and regulatory approvals.

The scope of this RP is to discuss DW drilling and completion activities performed on wells that are constructed using subsea blowout preventers (BOPs) with a subsea wellhead. This document addresses the following:

• Identifies the appropriate barrier and load case considerations to maintain well control during DW well operations (drilling, suspension, completion, production, and abandonment).
• Supplements barrier documentation in Std 65-2 with a more detailed description of barriers and discussion of the philosophy, number, type, testing, and management required to maintain well control. This document also supplements the barrier documentation in RP 90 in regard to annular pressure build up. Abandonment barrier requirements are described for use when designing the well.
• Discusses load assumptions, resistance assumptions, and methodologies commonly used to achieve well designs with high reliability. The load case discussion includes less obvious events that can arise when unexpected circumstances are combined.
• Describes the risk assessment and mitigation practices commonly implemented during DW casing and equipment installation operations.

The purpose of this document is to enhance safety and minimize the likelihood of loss of well control or damage to the environment. These practices are generally intended to apply to subsea wells drilled with subsea BOPs in any water depth. Some of the descriptions of rig hardware and operations, such as remotely operated vehicles, are less relevant in shallower water depths [e.g., less than 500 ft (152 m)]. In these shallower water depths the operator may substitute alternative hardware or operations that maintain safety and system reliability.

The following aspects of DW well design and construction are outside the scope of this document:

• Detailed casing design load case definitions (does not include specific casing designs or design factors). Individual companies combine differing severities of loads and resistances or differing calculation methods to achieve designs with similar high levels of reliability.
• Wells drilled and/or completed with a surface BOP and high pressure riser from a floating production system; however, considerations for wells predrilled with floating rigs to be completed to a floating production system are included.
• Well control procedures (refer to RP 59 for well control information).
• Managed pressure drilling operations (including dual gradient drilling).
• Production operations and fluids handling downstream of the tree (subsea facilities/subsea architecture and surface facilities/offloading hydrocarbons).
• Intervention operations.
• Quality assurance programs. Pages: 158

1st Edition | March 2013 | Product Number: G09601 | Price: $180.00

Bull 97
Well Construction Interface Document Guidelines

Contains the structure and contents of a well control interface document (WCID) that links the drilling contractor’s safety case with the lease operator’s safety management system. It includes well-specific information such as the basis of design, the well execution plan, and critical well activity risk assessment. This document exhibits how management of change and risk assessment processes will apply during well construction activities and assure personnel competency. A WCID also aligns all parties to assure their health, safety, and environment (HSE) standards are not compromised and all applicable regulatory requirements are met while undertaking shared activities. A WCID will assign or delineate specific responsibilities for the lease operator’s personnel as well as provide a vehicle for the drilling contractor to intervene in the case that unsafe acts are identified. Pages: 18

1st Edition | December 2013 | Product Number: G09701 | Price: $67.00
Personal Protective Equipment Selection for Oil Spill Responders

Provides general information and guidance for the development of oil spill responder Personal Protective Equipment (PPE) control measures. Although an extensive amount of information has been developed on the topic of PPE for emergency responders, this document focuses on the PPE selection process as well as its technical evaluation based on the hazards present.

The purpose of this recommended practice is to assist users in developing effective PPE control measures for oil spill responses using a systematic approach. This recommended practice is intended for any company, organization, or agency that oversees or responds to oil spills. It is not a comprehensive “how-to” guide to selecting PPE for every type of situation that may be encountered; rather, it is a guidance document that discusses how proper PPE selection may be a useful control measure for responders when engineering and administrative controls may not be feasible or effective in reducing exposure to acceptable levels. Pages: 79

Flash Fire Risk Assessment for the Upstream Oil and Gas Industry

Provides guidance for the upstream oil and gas industry on hazard identification and risk assessment exercises to assess and mitigate the risk of human injury caused by exposure to a flash fire. The scope of this document is limited to personnel exposed to the risk of hydrocarbon based flash fires in the upstream Exploration and Production (E&P) sector of the oil and gas industry. In general, this group includes oil and gas production, drilling, well bore (well servicing) operations, and gas processing prior to interstate pipeline transportation. Pages: 30

Hydraulic Fracturing—Well Integrity and Fracture Containment

Contains recommended practices for onshore well construction and fracture stimulation design and execution as it relates to well integrity and fracture containment. These practices cover the design and installation of well equipment that protects and isolates ground water aquifers, delivery, and execution of the hydraulic fracture treatment and contains and isolates the produced fluids. This document also addresses the design and execution of hydraulic fracturing treatments to contain the resulting fracture within a prescribed geologic interval. Fracture containment combines those parameters that are existing, those that can be established at installation, and those that can be controlled during execution. Pages: 29

Managing Environmental Aspects Associated with Exploration and Production Operations Including Hydraulic Fracturing

Provides recommended practices applicable to the planning and operation of wells, and hydraulically fractured wells. Topics covered include recommendations for managing environmental aspects during planning; site selection; logistics; mobilization, rig-up, and demobilization; and stimulation operations. Also, this document includes guidance for managing environmental aspects during well construction; however, guidance for well construction and fracture stimulation design and execution for onshore wells that can be hydraulically fractured are described in RP 100-1. This document provides recommendations for the following topics:

- baseline groundwater sampling;
- source water management;
- material selection;
- transportation of materials and equipment;
- storage and management of fluids and chemicals;
- management of solid and liquid wastes;
- air emissions. Pages: 53

Community Engagement Guidelines

These guidelines outline what local communities and other key stakeholders can expect from operators. Oil and gas operators acknowledge the challenges associated with industry activities, which can include challenges important to a community. Principles of integrity, transparency and consideration for community concerns underpin responsible operations. Conscientious operators are committed to helping communities achieve positive and long-lasting benefits.

Both local stakeholders and operators can use this guidance. It is designed to acknowledge challenges and impacts that occur during the industry’s presence in a given region. It provides flexible and adaptable strategies, recognizing that application will vary from operator to operator and community to community. Many operators already apply similar guidelines or processes within their operations. These suggested guidelines are typical and reasonable and generally apply under normal operating circumstances. The use of these guidelines is at each individual operator’s discretion.

Operators recognize that stakeholders within the community can have different interests, issues and levels of concern. Some of these interests can be in direct conflict with one another. Working together with stakeholders to seek mutually agreeable solutions is an important aspect of community engagement. Operators can have different approaches to addressing the concerns and issues.

These guidelines are intended primarily to support onshore oil and gas projects in the United States for shale developments; however, they can be adapted to any oil and gas projects in the United States.

This document provides non-technical guidance only, and practices included herein cannot be applicable in all regions and/or circumstances. This document does not constitute legal advice regarding compliance with legal or contractual requirements or risk mitigation. It is not intended to be all-inclusive. The operator is responsible for determining compliance with applicable legal and regulatory requirements.

Gas Lift

(Footnote: Book 6 in the Vocational Training Series)

Familiarizes field personnel with basic gas lift principles; operating procedures for adjusting, regulating, operating, and troubleshooting gas-lift equipment; and well conditions. Covers conventional practices and concepts. Illustrated with drawings of typical gas-lift installations and related equipment, as well as actual charts illustrating operation and problems encountered in gas-lift wells. Pages: 143

Introduction to Oil and Gas Production

(Book 1 in the Vocational Training Series)

Serves as a primer for oil and gas operations. It covers the origins and accumulation of oil and gas, the well, well treatment and wellhead, artificial lift, well testing, separation, treatment and storage, gauging and metering, production, offshore production and structures, corrosion, enhanced recovery, production personnel, tools and equipment, pipe, valves and fittings, reports and records, state and federal regulations, environmental, health, and safety concerns, economic considerations, and future trends. Pages: 120
Subsurface Salt Water Injection and Disposal (Book 3 in the Vocational Training Series)
A handbook for the planning, installation, operation, and maintenance of subsurface disposal systems. Design criteria and formulas are given for gathering systems, treating plants, and injection facilities. Alternative equipment and methods are discussed and illustrated. Economic considerations are presented. Pages: 47
Product Number: GVT033 | Price: $100.00

Wireline Operations and Procedures (Book 5 in the Vocational Training Series)
A handbook outlining to operators of oil and gas wells what applications are possible with wireline tools and equipment. Also a guide for field personnel. Surface equipment, service tools (standard and special), and subsurface equipment (both permanent and removable) are described and illustrated. Their various applications are included. Also presented is a general discussion of special problems that wireline operations and procedures may serve to eliminate, minimize, or control, and methods by which this may be accomplished. Pages: 60
Product Number: GVT053 | Price: $126.00

RP T-1
Creating Orientation Programs for Personnel Going Offshore
Serves as a guide to develop orientation materials for personnel and visitors prior to their first trip offshore. The scope and applicability of this document concludes after check-in at the offshore facility and receipt of the facility-specific orientation. Pages: 18

RP T-2 ✦
Recommended Practice for Qualification Programs for Offshore Production Personnel Who Work with Safety Devices
Provides guidelines for the qualification of personnel engaged in installing, inspecting, testing, and routinely maintaining surface and subsurface devices that are used to insure safety and to prevent pollution during the production of oil and gas on offshore platforms. The guidelines provide expected candidate performance levels, instructional content, and recommendations for testing. The guidelines are divided into instructional and testing phases. Pages: 3
2nd Edition | December 2001 | Reaffirmed: January 2013
Product Number: GT2002 | Price: $61.00

RP T-4
Training of Offshore Personnel in Nonoperating Emergencies
Represents an industry guide for the training of workers who work offshore. It presents recommendations for training these personnel in handling nonoperating emergencies, such as fires, transportation emergencies, platform abandonment procedures, use of survival crafts, and water survival guidelines. Pages: 3
2nd Edition | October 1995 | Reaffirmed: June 2010
Product Number: GT4002 | Price: $61.00

RP T-6
Recommended Practice for Training and Qualification of Personnel in Well Control Equipment and Techniques for Wireline Operations on Offshore Locations
Provides criteria for the qualification of wireline personnel in well control equipment operations and techniques. Although it does include recommendations for training wireline personnel on general rig well control equipment and theory, it should be noted that the main focus for training should be those operations using a lubricator as the primary well control mechanism. Wireline personnel classifications to which this RP is applicable are the Helper/Assistant and Operator/Supervisor. Pages: 2
1st Edition | October 2002 | Reaffirmed: January 2013
Product Number: GT0601 | Price: $61.00

RP T-7
Training of Personnel in Rescue of Persons in Water
Applies to personnel who work offshore. It represents an industry guide for training personnel in techniques for rescuing persons from the water and using survival devices. It broadly identifies rescue devices, describes their operations, and presents recommendations for training personnel. Training recommendations are designed to develop personnel rescue proficiency while minimizing an individual’s exposure to injury or loss of life. Pages: 8
Product Number: GT7002 | Price: $59.00

COMMUNITY ENGAGEMENT

Community Matters: Community Outreach Guidance Manual for Exploration and Production Facilities
This manual provides a model community outreach program to help oil and natural gas industry E&P facilities improve their ties to their local communities. Community Matters offers a step-by-step guide for implementing a community outreach program and provides information on how to tailor outreach efforts to meet the needs of the facility and local community. Pages: 111
1st Edition | November 2000 | Product Number: G13660 | Price: $85.00

Bull 100-3
Community Engagement Guidelines
These guidelines outline what local communities and other key stakeholders can expect from operators. Oil and gas operators acknowledge the challenges associated with industry activities, which can include challenges important to a community. Principles of integrity, transparency and consideration for community concerns underpin responsible operations. Conscientious operators are committed to helping communities achieve positive and lasting benefits.
Both local stakeholders and operators can use this guidance. It is designed to acknowledge challenges and impacts that occur during the industry’s presence in a given region. It provides flexible and adaptable strategies, recognizing that application will vary from operator to operator and community to community. Many operators already apply similar guidelines or processes within their operations. These suggested guidelines are typical and generally apply under normal operating circumstances. The use of these guidelines is at each individual operator’s discretion.
Operators recognize that stakeholders within the community can have different interests, issues and levels of concern. Some of these interests can be in direct conflict with one another. Working together with stakeholders to seek mutually agreeable solutions is an important aspect of community engagement. Operators can have different approaches to addressing the concerns and issues.
These guidelines are intended primarily to support onshore oil and gas projects in the United States for shale developments; however, they can be adapted to any oil and gas projects in the United States.
This document provides non-technical guidance only, and practices included herein cannot be applicable in all regions and/or circumstances. This document does not constitute legal advice regarding compliance with legal or contractual requirements or risk mitigation. It is not intended to be all-inclusive. The operator is responsible for determining compliance with applicable legal and regulatory requirements.
**Recommended Practice for Drilling and Well Servicing Operations Involving Hydrogen Sulfide**

Provides recommendations that apply to oil and gas well drilling and servicing operations involving hydrogen sulfide. These operations include well drilling, completion, servicing, workover, downhole maintenance, and plug and abandonment procedures conducted with hydrogen sulfide present in the fluids being handled. Coverage of this publication is applicable to operations confined to the original wellbore or original total depth and applies to the selection of materials for installation or use in the well and in the well drilling or servicing operation(s). The presence of hydrogen sulfide in these operations also presents the possibility of exposure to sulfur dioxide from the combustion of hydrogen sulfide. Pages: 29

3rd Edition | May 2001 | Reaffirmed: January 2013
Product Number: G49003 | Price: $91.00

**Recommended Practice for Drilling and Well Servicing Operations Involving Hydrogen Sulfide—Kazakh**

Kazakh translation of RP 49.

3rd Edition | May 2001 | Product Number: G4903K | Price: $73.00

**Recommended Practice for Drilling and Well Servicing Operations Involving Hydrogen Sulfide—Russian**

Russian translation of RP 49.

3rd Edition | May 2001 | Product Number: G04903R | Price: $70.00

**Environmental Protection for Onshore Oil and Gas Production Operations and Leases**

Provides environmentally sound practices, including reclamation guidelines, for domestic onshore oil and gas production operations. It is intended to be applicable to contractors as well as operators. Facilities within the scope of this document include all production facilities, including produced water handling facilities. Offshore and arctic areas are beyond the scope of this document. Operational coverage begins with the design and construction of access roads and well locations and includes reclamation, abandonment, and restoration operations. Gas compression for transmission purposes or production operations, such as gas lift, pressure maintenance, or enhanced oil recovery (EOR), is included. Annex A provides guidance for a company to consider as a “good neighbor.” Pages: 35

Product Number: G51R01 | Price: $78.00

**Recommended Practice for Occupational Safety for Oil and Gas Well Drilling and Servicing Operations**

Includes procedures for promotion and maintenance of safe working conditions for employees engaged in rotary drilling operations and well servicing operations, including special services. Applies to rotary drilling rigs, well servicing rigs, and special services as they relate to operations on locations. Pages: 35

3rd Edition | August 1999 | Reaffirmed: January 2013
Product Number: G54003 | Price: $129.00

*These translated versions are provided for the convenience of our customers and are not officially endorsed by API. The translated versions shall neither replace nor supersed the English-language versions, which remain the official standards. API shall not be responsible for any discrepancies or interpretations of these translations. Translations may not include any addenda or errata to the document. Please check the English-language versions for any updates to the documents.*
**RP 75**  
Recommended Practice for Development of a Safety and Environmental Management Program for Offshore Operations and Facilities

Provides guidance for use in preparing safety and environmental management programs (SEMP) for oil, gas, and sulphur operations and facilities located on the outer continental shelf (OCS). These guidelines are applicable to well drilling, servicing, and production; and pipeline facilities and operations that have the potential for creating a safety or environmental hazard at OCS platform sites. Eleven major program elements are included for application to these facilities and operations. Identification and management of safety and environmental hazards are addressed in design, construction, startup, operation, inspection, and maintenance of new, existing, and modified facilities. Pages: 41

Product Number: G07503 | Price: $92.00

**Bull 75L**  
Guidance Document for the Development of a Safety and Environmental Management System for Onshore Oil and Natural Gas Production Operations and Associated Activities

Provides general information and guidance for the development of a safety and environmental management system (SEMS) for onshore oil and natural gas operations, including drilling, production, and well servicing activities. Although there is an extensive amount of information that has been developed on the topic of safety and environmental management systems, this document focuses on this industry sector to help foster continuous improvement in our industry’s safety and environmental performance. It is recognized that many onshore oil and natural gas companies have effective SEMS in place; however, the intent of this document is to provide an additional tool that can assist operators and contractors in taking the next step toward implementing a complete system at a pace that complements their business plan. For those who already have a mature SEMS in place, this document can be used for continuous improvement of the system. Pages: 12

1st Edition | November 2007 | Product Number: G75L01 | Price: $35.00

**RP 76**  
Contractor Safety Management for Oil and Gas Drilling and Production Operations

Intended to assist operators, contractors, and subcontractors (third parties) in the implementation of a contractor safety program and improve the overall safety performance while preserving the independent contractor relationship. It is intended for the Upstream Segment of the petroleum industry; however, since the operator requirements and the contracted work are diverse, this publication may not be applicable to all operations at each company or to all contract work performed in those operations. Many oil and gas exploration and production companies contract for equipment and personnel services for a wide range of activities, including drilling production, well servicing, equipment repair, maintenance, and construction. Certain activities of contractors have the potential to take place either contractor and/or operator personnel and/or equipment at risk. It is important that operations are carried out in a safe manner. Operators and contractors need to provide safe work places to protect the safety of their work places and to protect the safety of their workforces and the general public. When they work together to improve safety, both benefit. Pages: 60

2nd Edition | November 2007 | Reaffirmed: January 2013  
Product Number: G07602 | Price: $59.00

**RP 77**  
Risk-Based Approach for Managing Hydrocarbon Vapor Exposure During Tank Gauging, Sampling, and Maintenance of Onshore Production Facilities

Covers recommended risk assessment and risk management practices to reduce the potential for acute worker hydrocarbon exposures and related atmospheric risks (i.e., potential oxygen deficiency). Specifically, this recommended practice is limited to onshore production tanks (including flowback tanks) during gauging and sampling, open-top tank sampling, and select tank maintenance activities involving removal or opening of tank apertures. While the tools and practices recommended in this document can be useful in other operations, this recommended practice does not specifically apply to downstream, refining, or offshore tank applications. Pages: 30

1st Edition | June 2018 | Product Number: G07701 | Price: $88.00

**Bull D16**  
Suggested Procedure for Development of a Spill Prevention Control and Countermeasure Plan

Assists the petroleum industry in understanding the SPCC regulation in light of the latest rule (40 CFR Part 112) and to offer guidance for developing SPCC Plans wherever they are needed. Included is a template for developing SPCC plans (i.e., onshore excluding production; onshore oil production, oil drilling or workover; or offshore oil drilling, production, or workover) in accordance with the regulation and guidance, instruction, and clarification for completing each section of the template. The purpose of this rulemaking was to establish procedures, methods, and equipment to prevent and contain discharges of oil from non-transportation-related onshore and offshore facilities, thus preventing pollution of navigable waters of the United States. The development of this bulletin was commissioned by API and performed by O’Brien’s Response Management Inc. The purchase of D16 includes a template and a CD-ROM with the Microsoft® Word version of the Plan Template.  
5th Edition | April 2011 | Product Number: GD1605  
Price: $266.00 | Template Only: Price: $98.00

**HEALTH, ENVIRONMENT, AND SAFETY: GENERAL**

**Achieving Common Sense Environmental Regulation: Oil and Gas Exploration & Production**

Discusses proposals to achieve a balanced approach to environmental regulation of the oil and gas exploration and production industry that protects the environment as well or better than the current system and does the job more efficiently. Pages: 36

May 1996 | Product Number: G13715 | Price: Free*

**Exploration and Production: Protecting the Environment**

Discusses work the E&P industry does to protect the environment while exploring for and producing oil and natural gas. Describes a number of innovative and socially responsible actions taken by exploration and production companies to minimize impacts to air, water, land, and wildlife. This document is only available in a PDF format. Pages: 24

September 1997 | Product Number: G13650 | Price: Free*
Although plans prepared or modified using this RP can be used to replace stakeholders, and the general public. This RP may be informative for any coastal/marine assets, both in the U.S. and international locations.

2nd Edition | May 2003 | Product Number: G11000 | Price: $146.00

Bull E4
Environmental Guidance Document: Release Reporting for the Oil and Gas Exploration and Production Industry as Required by the Clean Water Act, the Comprehensive Environmental Response, Compensation and Liability Act, and the Emergency Planning and Community

Developed to provide the oil and gas production industry guidance on reporting releases of hazardous substances and petroleum to water as required by the Clean Water Act (CWA) and reporting releases of hazardous substances into the environment as required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Emergency Planning and Community Right-to-Know Act (EPCRA). Also covers the reporting of what most in the industry consider “emergency” releases, which are unplanned and typically are not covered under a permit issued by a government agency. Pages: 106

Product Number: GI1000 | Price: $126.00

RP 1145
Preparation of Response Plans for Oil Spills from Offshore Facilities
Provides information and guidance for the development of Oil Spill Response Plans for the offshore U.S. oil and gas exploration, production, and transportation (pipeline) industry. The general plan concepts, layout, and content recommended in this document are also applicable to other types of coastal/marine assets, both in the U.S. and international locations.

This RP is intended to provide plan developers and writers with information and guidance for effective and functional Oil Spill Response Plans that fulfill the expectations of plan holders, responders, regulators, response officials, stakeholders, and the general public. This RP may be informative for any company, organization, or public agency that oversees or responds to oil spills.

Although plans prepared or modified using this RP can be used to replace existing response plans required by regulation, the RP is not intended to be a regulatory compliance guideline or to supersede current regulations. Pages: 140

2nd Edition | May 2003 | Product Number: GE4002 | Price: $174.00

Publ 4702
Technologies to Reduce Oil and Grease Content of Well Treatment, Well Completion, and Workover Fluids for Overboard Disposal

Technologies to reduce oil and grease content of well treatment, well completion, and workover fluids for overboard disposal. Pages: 54

March 2001 | Product Number: I47020 | Price: $126.00

Publ 7100
A Naturally Occurring Radioactive Material (NORM) Disposal Cost Study
Details the reported quantities of NORM that have accumulated over the years and the annual rate of NORM production for 1993 from U.S. oil and gas condensate production. The document also determines the 1992 cost of available NORM disposal options and the annual costs of complying with existing and proposed NORM regulations. Pages: 59

1st Edition | November 1996 | Product Number: G71001 | Price: $118.00

Publ 7101
A National Survey on Naturally Occurring Radioactive Material (NORM) in Petroleum Producing and Gas Processing Facilities
Defines the general occurrence of NORM in the United States based on statistical analysis of gamma measurements taken external to certain petroleum producing and gas processing equipment. Pages: 265

October 1997 | Product Number: G71011 | Price: $118.00

Publ 7102
Methods for Measuring Naturally Occurring Radioactive Materials (NORM) in Petroleum Production Equipment

The use and capabilities of common field-survey equipment are characterized for measuring NORM in sludges and scales accumulated in oil and gas production equipment. A correlation between radium concentrations in accumulated scales and sludges and measured external radiation is presented. Pages: 85

October 1997 | Product Number: G71021 | Price: $118.00

Publ 7103
Management and Disposal Alternatives for Naturally Occurring Radioactive Material (NORM) Wastes in Oil Production and Gas Plant Equipment

Presents radiological analyses of disposal alternatives that will protect against elevated radiation exposures and facilitate cost-effective precautions that are proportionate to any hazards posed by the NORM. Four waste forms and 12 waste disposal alternatives were analyzed. Pages: 65

October 1997 | Product Number: G71031 | Price: $118.00
**Publ 7104**
Proceedings of the 1995 API and GRI Naturally Occurring Radioactive Material (NORM) Conference
A compilation of 17 papers presented at the 1995 API/GRI NORM Conference. Subjects include measurement and survey; regulatory issues and activities; management and disposal; and scale prediction and control. Pages: 225
October 1997 | Product Number: G71041 | Price: $118.00

**Publ 7105**
Probabilistic Estimates of Dose and Indoor Radon Concentrations Attributable to Remediated Oilfield Naturally Occurring Radioactive Material (NORM)
Evaluates the concentration limit of 30 pCi/g Ra-226 in pipe scale and sludge left near the surface of remediated oilfield sites and returned to unrestricted public use. Includes an extensive bibliography of NORM research. Pages: 97
October 1997 | Product Number: G71051 | Price: $118.00

**HEALTH, ENVIRONMENT, AND SAFETY:**

**WASTE**

Guidelines for Commercial Exploration and Production Waste Management Facilities
Provides guidelines for the design and operations of commercial E&P waste management facilities to allow operators to identify areas where their facility could have impacts on the surrounding community and environment, and gives options for preventing/reducing those impacts. The guidelines are not meant to supersede any applicable local, state, or federal requirements. Pages: 80

Protecting Livestock: Answers to Frequently Asked Questions about Livestock Exposure to Crude Oil in Oilfield Operations
Describes ways livestock might be significantly exposed to petroleum hydrocarbons via a conceptual site model and outlines how to make a screening level determination of whether or not livestock are at risk from the exposure.
2006 | Product Number: I0PL06 | For a free copy, please visit http://www.api.org/~/media/Files/EHS/Environmental_Performance/LIVESTOCK_EXPOSURE_BROCHURE_FINAL.pdf

**API E5**
Environmental Guidance Document: Waste Management in Exploration and Production Operations
Includes recommendations for the environmentally sound management of solid waste resulting from the exploration and production of oil and gas. Guidance is provided for the management of drilling fluids, produced waters, and other wastes associated with the operation of gas plants, field facilities, drilling, and workover. Pages: 84
2nd Edition | February 1997 | Product Number: GE5002 | Price: $129.00

**SECURITY**

**RP 70**
Security for Offshore Oil and Natural Gas Operations
Intended to assist the offshore oil and natural gas drilling and producing operators and contractors in assessing security needs during the performance of oil and natural gas operations. It includes information on security awareness, conducting security vulnerability assessments when warranted, and developing security plans for offshore facilities. Pages: 16
1st Edition | March 2003 | Reaffirmed: September 2010
Product Number: G07001 | Price: $59.00

**RP 70I**
Security for Worldwide Offshore Oil and Natural Gas Operations
Intended to assist the offshore oil and natural gas drilling and producing operators and contractors in assessing security needs during the performance of oil and natural gas operations worldwide. Pages: 14
1st Edition | April 2004 | Reaffirmed: January 2012
Product Number: G70I03 | Price: $63.00