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## GENERAL: OIL FIELD EQUIPMENT AND MATERIALS

### The API Composite List

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

(includes Errata 1 dated February 2014, Errata 2 dated March 2014, and Addendum 1 dated June 2016)

Establishes the minimum quality management system requirements for organizations that manufacture products or provide manufacturing-related processes under a product specification for use in the petroleum and natural gas industry. This specification specifies requirements of a quality management system for an organization to demonstrate its ability to consistently provide reliable products and manufacturing-related processes that meet customer and legal requirements. This specification specifies requirements of a quality management system for an organization to demonstrate its ability to consistently provide reliable products and manufacturing-related processes that meet customer and legal requirements. The quality management system requirements specified in this specification are in alignment with the clause requirements and format of document used for the provision of services and use of service-related product (API Q2). Pages: 47

9th Edition | June 2013 | Effective Date: June 1, 2014  
Product Number: GOQ109 | Price: \$120.00

You may access the 8th Edition of Spec Q1 in a read-only platform:  
[publications.api.org](http://publications.api.org)

### Spec Q1 \*

#### Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry—Chinese

Chinese translation of Spec Q1.

9th Edition | June 2013 | Product Number: GOQ109C | Price: \$84.00

### Spec Q1 \*

#### Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry—Portuguese

Portuguese translation of Spec Q1.

9th Edition | June 2013 | Product Number: GOQ109P | Price: \$120.00

### 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: GOQ109R | Price: \$96.00

### 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: GOQ109SP | Price: \$120.00

### Spec Q2 ♦

#### Specification for Quality Management System Requirements for Service Supply Organizations for the Petroleum and Natural Gas Industries

(includes Addendum 1 dated June 2016)

Defines the quality management system requirements for service supply organizations for the petroleum and natural gas industries. It is intended to apply to the provision of services during exploration, development, and production in the oil and gas industry. This includes activities involved in upstream oil and gas well construction, production, and abandonment. It is intended to apply when specified by the operator to the service provided. This document specifies requirements of a quality management system to demonstrate an organization's ability to consistently provide services that meet customer and applicable statutory and regulatory requirements, including processes for continual improvement of the system and the assurance of conformity to customer and applicable and regulatory requirements. Pages: 21

1st Edition | December 2011 | 2-Year Extension: August 2016  
Product Number: GOQ201 | Price: \$80.00

### 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: GOQ201C | Price: \$56.00

### Spec Q2 \*

#### Specification for Quality Management System Requirements for Service Supply Organization for the Petroleum and Natural Gas Industries—Portuguese

Portuguese translation of Spec Q2.

1st Edition | December 2011 | Product Number: GOQ201P | Price: \$80.00

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# Exploration and Production

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Phone Orders: +1 303 397 7956 (Local and International)

## Spec Q2 \*

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

Russian translation of Spec Q2.

1st Edition | December 2011 | Product Number: G0Q201R | Price: \$64.00

## Spec Q2 \*

**Specification for Quality Management System Requirements for Service Supply Organization for the Petroleum and Natural Gas Industries—Spanish**

Spanish translation of Q2.

1st Edition | December 2011 | Product Number: G0Q201SP | Price: \$80.00

## RP 1FSC

**Facilities Systems Completion Planning and Execution**

Applies to a wide variety of projects within the oil and gas industry excluding subsurface. Although intended for oil and gas industry, the process described in this document can be applied to other industries as well. It is intended that the processes and practices established herein can be adapted and applied from a single piece of tagged equipment to a complex petrochemical facility. The process described is intended to be applied at a system level. The systems completion process is the sequential activities within a project that verify and prove the construction, installation, integration, testing, and preparation of systems have been completed as designed, and thus, the facility is ready for start-up and operations. 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. Pages: 11

1st Edition | July 2013 | Product Number: G1FSC01 | Price: \$60.00

## TR 1PER15K-1

**Protocol for Verification and Validation of High-Pressure High-Temperature Equipment**

Focuses on an evaluation process for HPHT equipment in the petroleum and natural gas industries that includes design verification analysis, design validation, material selection considerations, and manufacturing process controls necessary to ensure the equipment is fit-for-service in the applicable HPHT environment where HPHT environments are intended to mean one or more of the following well conditions exist:

- the completion of the well requires completion equipment or well control equipment assigned a pressure rating greater than 15,000 psig or a temperature rating greater than 350 °F;
- the maximum anticipated surface pressure or shut-in tubing pressure is greater than 15,000 psig on the seafloor for a well with a subsea wellhead or at the surface for a well with a surface wellhead; or
- the flowing temperature is greater than 350 °F on the seafloor for a well with a subsea wellhead or on the surface for a well with a surface wellhead.

The design verification and validation protocols in this report should be used as a guide by the various API standards committees to develop future documents on equipment specifications for HPHT service. This report is not 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. This report is intended to apply to the following equipment: wellheads, tubing

heads, tubulars, packers, connections, seals, seal assemblies, production trees, chokes, and well control equipment. It may be used for other equipment in HPHT service. Pages: 90

1st Edition | March 2013 | Product Number: G1PER15K11 | Price: \$147.00

## TR 18TR1 ◆

**Guidance on Changes to API Q1, Ninth Edition**

Written for experienced quality professionals seeking to implement the new requirements of API Q1, 9th Edition and to gain a deeper understanding of the requirements with an overall view to improving their quality management system (QMS) and conformance to API Q1, 9th Edition. While API Q1, 9th Edition was created independently of ISO 9001:2008, the specification continues to satisfy those requirements and the supplemental requirements in API Q1, 8th Edition. The formatting of API Q1, 9th Edition was revised to align with API Q2, 1st Edition and to follow a chronological order in the production and delivery of the product. Pages: 22

1st Edition | June 2015 | Product Number: G18TR101 | Price: \$65.00

## OFFSHORE STRUCTURES

### API OSRC

**Proceedings of the 2014 Offshore Structural Reliability Conference**

The 2014 Offshore Structural Reliability Conference was hosted by API for the same purposes as similar past events such as the DIRT (Design-Inspect-Redundancy-Triangle) Conference in 1983, the series of Civil Engineering in the Oceans conferences by the American Society of Civil Engineers (ASCE), and the Reliability of Offshore Structures Workshop by the Association of Oil & Gas Producers (OGP) in 2012 [now the International Association of Oil & Gas Producers (IOGP)].

Practitioners and end-users of structural reliability methods were brought together 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. Pages: 602

1st Edition | December 2015 | Product Number: GOSRC01 | Price: Free\*

### RP 2A-WSD

**Planning, Designing, and Constructing Fixed Offshore Platforms—Working Stress Design**

Contains requirements for the design and construction of new fixed offshore platforms and for the relocation of existing platforms used for drilling, development, and storage of hydrocarbons in offshore areas. In addition, this document should be used in conjunction with RP 2SIM for the assessment of existing platforms in the event that it becomes necessary to make a determination of the fitness-for-purpose of the structure. Pages: 310

22nd Edition | November 2014

Product Number: G2AWS22 | Price: \$395.00

You may access the 21st Edition of RP 2A-WSD in a read-only platform: [publications.api.org](http://publications.api.org)

### Spec 2B ◆

**Specification for the Fabrication of Structural Steel Pipe**

Covers the fabrication of structural steel pipe formed from plate steel with longitudinal and circumferential butt-welded seams. Pipe is typically in sizes of 14 in. outside diameter and greater, with a wall thickness  $\frac{3}{8}$  in. and greater (up to a nominal 40 ft in length), and is suitable for use in construction of welded offshore structures. The use of the ERW process or spiral welded pipe is not included in this specification. Pipe fabricated under

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this specification is intended to be used primarily in piling and main structural members, including tubular truss connections, where internal stiffeners are not usually required. Pages: 8

6th Edition | July 2001 | Reaffirmed: January 2012  
Product Number: G02B06 | Price: \$83.00

## Spec 2B \*

### Specification for the Fabrication of Structural Steel Pipe—Chinese

Chinese translation of Spec 2B.

6th Edition | July 2001 | Product Number: G02B06C | Price: \$59.00

## Spec 2C ♦

### Offshore Pedestal-Mounted Cranes (includes Errata 1 dated March 2013)

Provides requirements for design, construction, and testing of offshore pedestal mounted cranes. Offshore cranes are defined in this specification as pedestal mounted elevating and rotating lift devices for transfer of materials or personnel to or from marine vessels and structures. Offshore cranes are typically mounted on a fixed (bottom supported) or floating platform structure used in drilling and production operations. Spec 2C is not intended to be used for the design, fabrication, and testing of davits and/or emergency escape devices. Spec 2C is also not intended to be used for shipboard cranes or heavy lift cranes. Pages: 124

7th Edition | March 2012 | Effective Date: October 1, 2012  
Product Number: G02C07 | Price: \$143.00

You may access the 6th and 7th Editions of Spec 2C in a read-only platform: [publications.api.org](http://publications.api.org)

## Spec 2C \*

### Offshore Pedestal-Mounted Cranes—Chinese

Chinese translation of Spec 2C.

7th Edition | March 2012 | Product Number: G02C07C | Price: \$101.00

## RP 2D

### Operation and Maintenance of Offshore Cranes (includes Errata 1 dated August 2015)

Intended to serve as a guide to crane owners and operators in developing operating and maintenance practices and procedures for use in the safe operation of pedestal-mounted revolving cranes on fixed or floating offshore platforms, jackup drilling rigs, semi-submersible drilling rigs and other types of mobile offshore drilling units (MODUs). Guidelines are also given for the pre-use inspection and testing of temporary cranes (also called self-erecting, leapfrog or bootstrap cranes) that are erected offshore.

Equipment (e.g. davits, launch frames) used only for launching life-saving appliances (life boats or life rafts) are not included in the scope of this document. Pages: 120

7th Edition | December 2014 | Product Number: G02D07 | Price: \$145.00

You may access the 6th Edition of RP 2D in a read-only platform: [publications.api.org](http://publications.api.org)

## RP 2EQ/ISO 19901-2:2004

### 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 ISO 19901-2. The intent of the modification is to map the requirements 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 also briefly discussed. The site-specific assessment of jack-ups in elevated condition is only covered to the extent that the requirements are applicable. 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

1st Edition | November 2014 | Product Number: GG2EQ01 | Price: \$125.00

## 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, derrick barges, and storage tankers. Pages: 16

6th Edition | June 1997 | Reaffirmed: June 2015  
Product Number: G02F06 | Price: \$89.00

## Spec 2F \*

### Specification for Mooring Chain—Chinese

Chinese translation of Spec 2F.

6th Edition | June 1997 | Product Number: G02F06C | Price: \$63.00

## 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 analysis 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: G2FB01 | Price: \$157.00

## 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-supporting 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: \$186.00

You may access the 1st and 2nd Editions of RP 2FPS in a read-only platform: [publications.api.org](http://publications.api.org)

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## 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: GG2GEO01 | Price: \$154.00

## 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 shipyard and offshore conditions. Pages: 24

9th Edition | July 2006 | Effective Date: February 1, 2007

Reaffirmed: January 2012 | Product Number: G02H09 | Price: \$94.00

## 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: \$83.00

## 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: \$148.00

You may access RP 2I in a read-only platform: [publications.api.org](http://publications.api.org)

## RP 2L

### Recommended Practice for Planning, Designing and Constructing Heliports for Fixed Offshore Platforms

Provides a guide for planning, designing, and constructing heliports for fixed offshore platforms. It includes operational consideration guidelines, design load criteria, heliport size and marking recommendations, and other heliport design recommendations. Pages: 14

4th Edition | May 1996 | Effective Date: June 1, 1996

Reaffirmed: January 2012 | Product Number: G02L04 | Price: \$83.00

## 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,
- 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: GG2MET01 | Price: \$200.00

## 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: GG2MOP1 | Price: \$243.00

## 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 "B" applications as defined 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-direction stresses are expected Pages: 6

2nd Edition | September 2001 | Effective Date: March 1, 2002  
Reaffirmed: January 2012 | Product Number: G2MT12 | Price: \$83.00

## 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-WSD, with Class C being for the least critical applications. For special critical applications, Class AAZ shapes may be specified, by agreement, using Supplement S101. Pages: 8

1st Edition | June 2002 | Effective Date: December 1, 2002  
Reaffirmed: June 2015 | Product Number: G2MT21 | Price: \$79.00

## 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: \$199.00

You may access the RP 2N in a read-only platform: [publications.api.org](http://publications.api.org)

## 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. Pages: 81

2nd Edition | September 2013 | Product Number: G2RD02 | Price: \$245.00

You may access the 1st Edition of RP 2RD in a read-only platform: [publications.api.org](http://publications.api.org)

## 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. Pages: 7

2nd Edition | November 1995 | Reaffirmed: January 2001  
Product Number: G02S02 | Price: \$76.00

## 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 spars), 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. Pages: 29

1st Edition | September 2009 | Effective Date: March 1, 2010  
Reaffirmed: June 2015 | Product Number: G2SC01 | Price: \$114.00

## Spec 2SF ◆

### Manufacture of Structural Steel Forgings for Primary Offshore Applications

Forgings 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 345 N/mm<sup>2</sup> to 586 N/mm<sup>2</sup> (50 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: \$85.00

## 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: \$170.00

## 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

3rd Edition | October 2005 | Reaffirmed: June 2015

Product Number: G2SK03 | Price: \$127.00

You may access the 1st Edition of RP 2SK in a read-only platform: [publications.api.org](http://publications.api.org)

## 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, FPSs);
- mobile offshore drilling units (MODUs);
- spar platforms;
- catenary anchor leg mooring (CALM) buoys;
- mobile offshore units. Pages: 108

2nd Edition | July 2014 | Product Number: G2SM02 | Price: \$185.00

You may access the 1st Edition of RP 2SM in a read-only platform: [publications.api.org](http://publications.api.org)

## 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: G02T03 | Price: \$227.00

You may access RP 2T in a read-only platform: [publications.api.org](http://publications.api.org)

## 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: G2TD01 | Price: \$51.00

## 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: \$191.00

## Bull 2V

### Design of Flat Plate Structures

(includes Errata 1 dated March 2008)

Provides guidance for the design of steel flat plate structures. Pages: 139

3rd Edition | June 2004 | Product Number: G02V03 | Price: \$191.00

## 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: \$94.00

## Spec 2W \*

### Specification for Steel Plates for Offshore Structures, Produced by Thermo-Mechanical Control Processing (TMCP)—Russian

Russian translation of Spec 2W.

5th Edition | December 2006 | Product Number: G02W05R | Price: \$76.00

## 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

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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

4th Edition | May 2004 | Reaffirmed: June 2015  
Product Number: G02X04 | Price: \$147.00

## 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: \$94.00

## 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

4th Edition | September 2005 | Reaffirmed: June 2015  
Product Number: G02Z04 | Price: \$119.00

## 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 workover 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

1st Edition | June 2006 | Reaffirmed: April 2013  
Product Number: G95J01 | Price: \$62.00

## DERRICKS AND MASTS

### Spec 4F ♦

#### Specification for Drilling and Well Servicing Structures (includes Errata 1 dated December 2016)

Covers the design, manufacture, and use of steel derricks, portable masts, crown block assemblies, and substructures suitable for drilling and well-servicing operations in the petroleum industry. It includes requirements for marking, inspection, a uniform method of rating, and design loading for the equipment. This specification provides two product specification levels (PSLs) that define two levels of technical and quality requirements. Pages: 52

4th Edition | January 2013 | Effective Date: August 1, 2013  
Product Number: G04G04 | Price: \$115.00

### Spec 4F \*

#### Specification for Drilling and Well Servicing Structures—Chinese

Chinese translation of Spec 4F.

4th Edition | January 2013 | Product Number: G04F04C | Price: \$81.00

## 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

4th Edition | April 2012 | 2-Year Extension: July 2016  
Product Number: G04G04 | Price: \$116.00

## 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: \$82.00

## TUBULAR GOODS

### RP 5A3/ISO 13678:2010

#### Recommended Practice on Thread Compounds for Casing, Tubing, Line Pipe, and Drill Stem Elements (includes Errata 1 dated April 2011)

Provides requirements, recommendations, and methods for the testing of thread compounds intended for use on threaded casing, tubing, and line pipe connections and for thread compounds intended for use on rotary shouldered connections. The tests outlined are used to evaluate the critical performance properties and physical and chemical characteristics of thread compounds under laboratory conditions.

This edition of RP 5A3 is the identical national adoption of ISO 13678:2010. Pages: 47

3rd Edition | November 2009 | Reaffirmed: April 2015  
Product Number: GX5A303 | Price: \$145.00

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## RP 5A5/ISO 15463:2003

Field Inspection of New Casing, Tubing, and Plain-End Drill Pipe  
(includes Errata 1 dated December 2009)

Specifies requirements and gives recommendations for field inspection and testing of oil country tubular goods (OCTG). This International Standard covers the practices and technology commonly used in field inspection; however, certain practices may also be suitable for mill inspections. Covers the qualification of inspection personnel, a description of inspection methods and apparatus calibration and standardization procedures for various inspection methods. The evaluation of imperfections and marking of inspected OCTG are included. Applicable to field inspection of OCTG and is not applicable for use as a basis for acceptance or rejection.

This edition of RP 5A5 is the identical national adoption of ISO 15463:2003. Pages: 118

7th Edition | June 2005 | Reaffirmed: April 2015

Product Number: GX5A507 | Price: \$157.00

## RP 5A5/ISO 15463:2003 \*

Field Inspection of New Casing, Tubing, and Plain-End Drill Pipe—Chinese

Chinese translation of RP 5A5.

7th Edition | June 2005 | Product Number: GX5A507C | Price: \$110.00

## Spec 5B ♦

Specification for Threading, Gauging, and Thread Inspection of Casing, Tubing, and Line Pipe Threads

Covers dimensions and marking requirements for API Master thread gauges. Additional product threads and thread gauges as well as instruments and methods for the inspection of threads for line pipe, round thread casing, buttress casing, and extreme-line casing connections are included. It is applicable when so stipulated in the API standard governing the product. The inspection procedures for measurements of taper, lead, height, and angle of thread are applicable to threads having 11<sup>1</sup>/<sub>2</sub> or less turns per in. (11<sup>1</sup>/<sub>2</sub> or less turns per 25.4 mm). All thread dimensions shown without tolerances are related to the basis for connection design and are not subject to measurement to determine acceptance or rejection of product. Pages: 125

15th Edition | April 2008 | Effective Date: October 1, 2008

Reaffirmed: April 2015 | Product Number: G5B015 | Price: \$118.00

## Spec 5B \*

Specification for Threading, Gauging, and Thread Inspection of Casing, Tubing, and Line Pipe Threads—Chinese

Chinese translation of Spec 5B.

15th Edition | April 2008 | Product Number: G05B15C | Price: \$83.00

## Spec 5B \*

Specification for Threading, Gauging, and Thread Inspection of Casing, Tubing, and Line Pipe Threads—Kazakh

Kazakh translation of Spec 5B.

15th Edition | April 2008 | Product Number: G05B15K | Price: \$95.00

## Spec 5B \*

Specification for Threading, Gauging and Thread Inspection of Casing, Tubing, and Line Pipe Threads—Russian

Russian translation of Spec 5B.

15th Edition | April 2008 | Product Number: G05B15R | Price: \$114.00

## RP 5B1

Gauging and Inspection of Casing, Tubing and Line Pipe Threads  
(includes Addendum 1 dated September 2004)

Covers threading, gauging, gauging 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

5th Edition | August 1999 | Reaffirmed: May 2015

Product Number: G05B105 | Price: \$142.00

## RP 5B1 \*

Gauging and Inspection of Casing, Tubing and Line Pipe Threads—Kazakh

Kazakh translation of RP 5B1.

5th Edition | August 1999 | Product Number: G05B15K | Price: \$114.00

## RP 5B1 \*

Gauging and Inspection of Casing, Tubing and Pipe Line Threads—Russian

Russian translation of RP 5B1.

5th Edition | October 1999 | Product Number: G05B15R | Price: \$114.00

## 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

18th Edition | May 1999 | Reaffirmed: May 2015

Product Number: G05C18 | Price: \$115.00

## 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: \$81.00

## TR 5C3/ISO 10400:2007

Technical Report on Equations and Calculations for Casing, Tubing, and Line Pipe used as Casing or Tubing; and Performance Properties Tables for Casing and Tubing  
(includes Addendum 1 dated October 2015)

Illustrates the equations and templates necessary to calculate the various pipe properties given in International Standards, 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.

This edition of TR 5C3 is the identical national adoption of ISO 10400:2007 and supersedes Bull 5C2 and Bull 5C3. Pages: 378

1st Edition | December 2008 | Product Number: G5C301 | Price: \$206.00

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## RP 5C5 ■

### Recommended Practice on 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 (buckling and/or wellbore deviation), and temperature variations. Pages: 180

4th Edition | January 2017 | Product Number: GX5C504 | Price: \$163.00

## RP 5C6

### Welding Connections to Pipe

Created to provide a standard industry practice for the shop or field welding of connectors to pipe. The technical content provides requirements for welding procedure qualification, welder performance qualification, materials, testing, production welding, and inspection. Additionally, suggestions for ordering are included. Pages: 7

2nd Edition | March 2006 | Reaffirmed: September 2012  
Product Number: G05C62 | Price: \$86.00

## RP 5C6 \*

### Welding Connections to Pipe—Chinese

Chinese translation of RP 5C6.

2nd Edition | March 2006 | Product Number: G05C62C | Price: \$61.00

## RP 5C8 ■

### Care, Maintenance, and Inspection of Coiled Tubing

Covers the care, maintenance, and inspection of used low 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: XX

1st Edition | January 2017 | Product Number: G05C81 | Price: \$120.00

## Spec 5CRA/ISO 13680:2008 ◆

### Specification for Corrosion Resistant Alloy Seamless Tubes for Use as Casing, Tubing and Coupling Stock (includes Errata 1 dated August 2011)

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: GG5CRA01 | Price: \$155.00

## Spec 5CT ◆

### Specification for Casing and Tubing

(includes Errata 1 dated September 2012 and Errata 2 dated October 2016)

Specifies the technical delivery conditions for steel pipes (casing, tubing, plain end casing liners, and pup joints) and accessories. This standard is applicable to the following connections in accordance with Spec 5B:

- short round thread casing (STC);
- long round thread casing (LC);
- buttress thread casing (BC);
- extreme-line casing (XC);
- non-upset tubing (NU);
- external upset tubing (EU);
- integral joint tubing (IJ).

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This standard specifies the technical delivery conditions for steel pipes (casing, tubing, and pup joints), coupling stock, coupling material, and accessory material and establishes requirements for three Product Specification Levels (PSL-1, PSL-2, PSL-3). The requirements for PSL-1 are the basis of this standard. The requirements that define different levels of standard technical requirements for PSL-2 and PSL-3, for all grades except H-40, L-80 9Cr, and C110, are contained in Annex H. This standard can also be applied to tubulars with connections not covered by API standards. This standard is not applicable to threading requirements. This standard is based on the 8th Edition of Spec 5CT. Pages: 269

9th Edition | July 2011 | Effective Date: January 1, 2012

2-Year Extension: July 2016 | Product Number: G5CT09 | Price: \$237.00

## Spec 5CT \*

### Specification for Casing and Tubing—Chinese

Chinese translation of Spec 5CT.

9th Edition | July 2011 | Product Number: G5CT09C | Price: \$166.00

## Spec 5CT \*

### Specification for Casing and Tubing—Portuguese

Portuguese translation of Spec 5CT.

9th Edition | July 2011 | Product Number: G5CT09P | Price: \$237.00

## Spec 5CT \*

### Specification for Casing and Tubing—Russian

Russian translation of Spec 5CT.

9th Edition | July 2011 | Product Number: G5CT09R | Price: \$190.00

## Spec 5CT \*

### Specification for Casing and Tubing—Spanish

Spanish translation of Spec 5CT.

9th Edition | July 2011 | Product Number: G5CT09SP | Price: \$237.00

## 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 tool joints 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 5D and Spec 7.

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: GX5DP01 | Price: \$181.00

## Spec 5DP/ISO 11961:2008 \*

### Specification for Drill Pipe—Chinese

Chinese translation of Spec 5DP

1st Edition | August 2009 | Product Number: GX5DP01C | Price: \$127.00

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## Spec 5L ◆

### Specification for Line Pipe

(includes Errata 1 dated April 2015)

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. Pages: 180

45th Edition | December 2012 | Effective Date: July 1, 2013

Product Number: G05L45 | Price: \$258.00

You may access the 44th and 45th Editions of Spec 5L in a read-only platform: [publications.api.org](http://publications.api.org)

## Spec 5L \*

### Specification for Line Pipe—Chinese

Chinese translation of Spec 5L.

45th Edition | December 2012

Product Number: G05L45C | Price: \$181.00

## Spec 5L \*

### Specification for Line Pipe—Portuguese

Portuguese translation of Spec 5L.

45th Edition | December 2012

Product Number: G05L45P | Price: \$258.00

## Spec 5L \*

### Specification for Line Pipe—Russian

Russian translation of Spec 5L.

45th Edition | December 2012

Product Number: G05L45R | Price: \$207.00

## Spec 5L \*

### Specification for Line Pipe—Spanish

Spanish translation of Spec 5L.

45th Edition | December 2012

Product Number: G05L45SP | Price: \$258.00

## RP 5L1

### Recommended Practice for Railroad Transportation of Line Pipe

Applies to the transportation on railcars of Spec 5L steel line pipe in sizes 2<sup>3</sup>/<sub>8</sub> 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

7th Edition | September 2009 | Reaffirmed: May 2015

Product Number: G5L107 | Price: \$59.00

You may access RP 5L1 in a read-only platform: [publications.api.org](http://publications.api.org)

## RP 5L2

### Recommended Practice for Internal Coating of Line Pipe for Non-Corrosive Gas Transmission Service

Provides for the internal coating of line pipe used for non-corrosive natural gas service. It is limited to the application of internal coatings on new pipe prior to installation. Pages: 21

4th Edition | July 2002 | Reaffirmed: May 2015

Product Number: G5L204 | Price: \$83.00

## RP 5L2 \*

### Recommended Practice for Internal Coating of Line Pipe for Non-Corrosive Gas Transmission Service—Chinese

Chinese translation of RP 5L2.

4th Edition | July 2002 | Product Number: G5L204C | Price: \$59.00

## RP 5L2 \*

### Recommended Practice for Internal Coating of Line Pipe for Non-Corrosive Gas Transmission Service—Kazakh

Kazakh translation of RP 5L2.

4th Edition | July 2002 | Product Number: G5L204K | Price: \$67.00

## RP 5L2 \*

### Recommended Practice for Internal Coating of Line Pipe for Non-Corrosive Gas Transmission Service—Russian

Russian translation of RP 5L2.

4th Edition | July 2002 | Product Number: G5L204R | Price: \$67.00

## RP 5L3

### Drop-Weight Tear Tests on Line Pipe

Describes procedures for a recommended method for conducting drop-weight tear tests to measure the fracture appearance or fracture ductility of line pipe as referenced in Spec 5L. Pages: 11

4th Edition | August 2014 | Product Number: G5I304 | Price: \$95.00

## RP 5L7

### Recommended Practice for Unprimed Internal Fusion Bonded Epoxy Coating of Line Pipe

Provides recommendations for materials, application, testing, and inspection of internal fusion bonded epoxy coatings on line pipe. Pages: 25

2nd Edition | June 1988 | Reaffirmed: May 2015

Product Number: G02906 | Price: \$89.00

## RP 5L7 \*

### Recommended Practice for Unprimed Internal Fusion Bonded Epoxy Coating of Line Pipe—Russian

Russian translation of RP 5L7.

2nd Edition | June 1988 | Product Number: G02906R | Price: \$72.00

## RP 5L8

### Recommended Practice for Field Inspection of New Line Pipe

Covers the qualification of inspection personnel, a description of inspection methods, and apparatus calibration and standardization procedures for various inspection methods. The evaluation of imperfections and marking of inspected new line pipe are included. Also included are recommended procedures for field inspection and testing of new plain-end line pipe. This document was prepared specifically to address the practices and technology used in field inspection of line pipe, and certain parts are not suitable or appropriate for mill inspections. Pages: 39

2nd Edition | December 1996 | Reaffirmed: May 2015

Product Number: G05L82 | Price: \$125.00

## RP 5L8 \*

### Recommended Practice for Field Inspection of New Line Pipe—Kazakh

Kazakh translation of RP 5L8.

2nd Edition | December 1996

Product Number: G05L82K | Price: \$100.00

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## RP 5L8 \*

### Recommended Practice for Field Inspection of New Line Pipe—Russian

Russian translation of RP 5L8.

2nd Edition | December 1996

Product Number: G05L82R | Price: \$100.00

## RP 5L9 ◆

### External Fusion Bonded Epoxy Coating of Line Pipe

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

1st Edition | December 2001 | Reaffirmed: May 2015

Product Number: G5L901 | Price: \$79.00

## RP 5L9 \*

### External Fusion Bonded Epoxy Coating of Line Pipe—Kazakh

Kazakh translation of RP 5L9.

1st Edition | December 2001 | Product Number: G5L901K | Price: \$64.00

## RP 5L9 \*

### External Fusion Bonded Epoxy Coating of Line Pipe—Russian

Russian translation of RP 5L9.

1st Edition | December 2001 | Product Number: G5L901R | Price: \$64.00

## Spec 5LC ◆

### CRA Line Pipe

(includes Errata 1 dated October 2015)

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

4th Edition | March 2015 | Effective Date: September 3, 2015

Product Number: G5LC04 | Price: \$175.00

## Spec 5LCP ◆

### Specification on Coiled Line Pipe

(includes Errata 1 dated July 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: \$146.00

## Spec 5LCP \*

### Specification on Coiled Line Pipe—Chinese

Chinese translation of Spec 5LCP.

2nd Edition | October 2006 | Product Number: G5LCP2C | Price: \$103.00

## Spec 5LD ◆

### CRA Clad or Lined Steel Pipe

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

4th Edition | March 2015 | Effective Date: September 3, 2015

Product Number: G5LD04 | Price: \$145.00

## RP 5LT

### Recommended Practice for Truck Transportation of Line Pipe

Applies to the transportation on railcars of Spec 5L steel line pipe in sizes 2<sup>3</sup>/<sub>8</sub> 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: 6

1st Edition | March 2012 | Product Number: G5LT01 | Price: \$59.00

You may access RP 5LT in a read-only platform: [publications.api.org](http://publications.api.org)

## RP 5LT \*

### Recommended Practice for Truck Transportation of Line Pipe—Chinese

Chinese translation of RP 5LT.

1st Edition | March 2012 | Product Number: G5LT01C | Price: \$42.00

## RP 5LW

### Recommended Practice for Transportation of Line Pipe on Barges and Marine Vessels

Applies to the transportation of Spec 5L steel line pipe by ship or barge. Covers both inland and marine waterways except in cases where the specific requirement of a paragraph references only marine or only inland-waterway transport. Pages: 5

3rd Edition | September 2009 | Reaffirmed: May 2015

Product Number: G5LW03 | Price: \$59.00

You may access RP 5LW in a read-only platform: [publications.api.org](http://publications.api.org)

## RP 5SI

### Recommended Practice for Purchaser Representative Surveillance and/or Inspection at the Supplier

Establishes a set of general guidelines addressing the protocol between purchasers, suppliers, and the purchaser representative for surveillance and/or inspection by the purchaser representative. It is a general document for use at the request of the purchaser of API products and is intended to provide only general guidance to the industry. Addresses the relationship and responsibility of the purchaser, suppliers, and purchaser representatives regarding surveillance and/or inspection of products from placement of the order or the pre-production meeting, as appropriate, through the point of title transfer from suppliers to purchasers. Pages: 7

1st Edition | January 2006 | Reaffirmed: September 2012

Product Number: G5SI01 | Price: \$57.00

## 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

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# Exploration and Production

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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

1st Edition | April 2010 | Reaffirmed: May 2015  
Product Number: G5ST01 | Price: \$134.00

## Spec 5ST \*

Specification for Coiled Tubing—U.S. Customary and SI Units—Chinese

Chinese translation of Spec 5ST.

1st Edition | April 2010 | Product Number: G5ST01C | Price: \$94.00

## Std 5T1

Standard on Imperfection Terminology

(includes Addendum 1 dated September 2003)

Provides definitions in English, French, German, Italian, Japanese, and Spanish for a number of defects that commonly occur in steel pipe. Pages: 44

10th Edition | September 2003 | Reaffirmed: August 2010  
Product Number: G05T10 | Price: \$115.00

## 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: \$115.00

## TR 5TRSR22

Technical Report in SR22 Supplementary Requirements for Enhanced Leak Resistance LTC

Covers the supplemental requirements for Enhanced Leak Resistance LTC (SC22) connections and the changes in Spec 5CT, Std 5B, 5B1, 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: GSR221 | Price: \$88.00

## 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

2nd Edition | June 2005 | Reaffirmed: May 2015  
Product Number: G5UE02 | Price: \$79.00

## VALVES AND WELLHEAD EQUIPMENT

### Spec 6A/ISO 10423:2009 ♦

Specification for Wellhead and Christmas Tree Equipment

(includes Errata 1 dated January 2011, Addendum 1 and Errata 2 dated November 2011, Addendum 2 dated November 2012, Addendum 3 dated March 2013, Errata 4 dated August 2013, Errata 5 dated November 2013, Errata 6 dated March 2014, Errata 7 dated December 2014, Errata 8 dated February 2016, Addendum 4 and Errata 9 dated June 2016, and Errata 10 dated August 2016)

Specifies requirements and gives recommendations for the performance, dimensional and functional interchangeability, design, materials, testing, inspection, welding, marking, handling, storing, shipment, purchasing, repair, and remanufacture of wellhead and christmas 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 (casing head housings, casing head spools, tubing head spools, cross-over spools, multi-stage head housings and spools); connectors and fittings (cross-over connectors, tubing head adapters, top connectors, tees and crosses, fluid-sampling devices, adapter and spacer spools); casing and tubing hangers (mandrel hangers, slip hangers); valves and chokes (single valves, multiple valves, actuated valves, valves prepared for actuators, check valves, chokes, surface and underwater safety valves and actuators, back-pressure valves); loose connectors (weld neck connectors, blind connectors, threaded connectors, adapter and spacer connectors, bullplugs, valve-removal plugs); and other equipment (actuators, hubs, pressure boundary penetrations, ring gaskets, running and testing tools, wear bushings). 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 five product specification levels (PSL). These five PSL designations define different levels of technical quality requirements.

This edition of Spec 6A is the modified national adoption of ISO 10423:2009. Pages: 436

20th Edition | October 2010 | Effective Date: April 1, 2011

2-Year Extension: October 2012

Product Number: GX06A20 | Price: \$260.00

You may access the 19th Edition of Spec 6A in a read-only platform: [publications.api.org](http://publications.api.org)

### Spec 6A/ISO 10423:2009 \*

Specification for Wellhead and Christmas Tree Equipment—Chinese

Chinese translation of Spec 6A.

20th Edition | October 2010 | Product Number: GX06A20C | Price: \$182.00

### Std 6ACRA

Age-Hardened Nickel-Based Alloys for Oil and Gas Drilling and Production Equipment

(includes Errata 1 dated October 2015)

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.

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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 6A718. With its issuance, it replaces Std 6A718, 2nd Edition in its entirety. Pages: 33

1st Edition | August 2015 | Product Number: G6ACRA1 | \$90.00

## TR 6AF

### Technical Report on Capabilities of API Flanges Under Combinations of Load

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: \$150.00

## 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 (PRAC 86-21) 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: \$157.00

## TR 6AF2

### Technical Report on Capabilities of API Integral Flanges Under Combination of Loading—Phase II

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: \$170.00

## 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: \$76.00

## Spec 6AV1 ♦

### Specification for Validation of Wellhead Surface Safety Valves and Underwater Safety Valves for Offshore Service

Establishes design validation requirements for Spec 6A surface safety valves/underwater safety valves (SSV/USV) and associated valve bore sealing mechanism(s) for Class II and Class III. These classes are intended for use if substances such as sand can be expected to cause an SSV/USV valve failure. Class III adds requirements for the validation of the valve bonnet assembly inclusive of stem seals and may be selected by the user/purchaser. Validation to Class III also validates the same SSV/USV for Class II in accordance with scaling limitations specified in the document. The validation requirements in this specification are not represented as duplicating actual well conditions.

Previous editions of this document included reference to and requirements for verification to PR1, standard service (Class I). Pages: 25

2nd Edition | February 2013 | Product Number: G6AV102 | Price: \$80.00

You may access the 1st Edition of Spec 6AV1 in a read-only platform: [publications.api.org](http://publications.api.org)

## Spec 6AV1 \*■

### Specification for Validation of Wellhead Surface Safety Valves and Underwater Safety Valves for Offshore Service—Russian

Russian translation of Spec 6AV1.

2nd Edition | February 2013 | Product Number: G6AV102R | Price: \$64.00

## 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 RP 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

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## Spec 6D ♦

### Specification for Pipeline and Piping Valves

(includes Errata 1 dated October 2014, Errata 2 dated December 2014, Errata 3 dated February 2015, Errata 4 dated June 2015, Errata 5 dated July 2015, Errata 6 dated September 2015, Addendum 1 dated March 2015, Addendum 2 and Errata 7 dated June 2016, and Errata 8 dated August 2016)

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: \$150.00

You may access the 23rd Edition of Spec 6D in a read-only platform:  
[publications.api.org](http://publications.api.org)

## Spec 6D \*

### Specification for Pipeline and Piping Valves—Chinese

Chinese translation of Spec 6D.

24th Edition | August 2014 | Product Number: G6D024C | Price: \$105.00

## Spec 6D \*

### Specification for Pipeline and Piping Valves—Russian

Russian translation of Spec 6D.

24th Edition | August 2014 | Product Number: G6D024R | Price: \$120.00

## 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: \$78.00

## 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: \$63.00

## Spec 6DSS/ISO 14723:2009 ♦

### Specification for Subsea Pipeline Valves

(includes Errata 1 dated August 2007 and Errata 2 dated November 2010)

Specifies requirements and gives recommendations for the design, manufacturing, testing, and documentation of ball, check, gate and plug valves for subsea application in offshore pipeline systems meeting the requirements of ISO 13623 for the petroleum and natural gas industries. This International Standard is not applicable to valves for pressure ratings exceeding PN 420 (Class 2500).

This edition of Spec 6DSS is the identical national adoption of ISO 14723:2009. Pages: 72

2nd Edition | December 2009 | Effective Date: June 1, 2010

2-Year Extension: June 2014 | Product Number: GX6DSS2 | Price: \$165.00

## Spec 6DSS/ISO 14723:2009 \*

### Specification for Subsea Pipeline Valves—Chinese

Chinese translation of Spec 6DSS.

2nd Edition | December 2009

Product Number: GX6DSS2C | Price: \$116.00

## 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: GG6DX01 | Price: \$131.00

## TR 6F1

### Technical Report on Performance of API and ANSI End Connections in a Fire Test According to API Specification 6FA

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 appendixes present the analytical procedures used to generate performance prediction. Pages: 29

3rd Edition | April 1999 | Product Number: G06F13 | Price: \$115.00

## 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: \$109.00

## Spec 6FA

### Specification for Fire Test for Valves

(includes Errata 1 dated December 2006 and Errata 2 dated December 2008)

Establishes the requirements for testing and evaluating the pressure-containing performance of Spec 6A and Spec 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 document establishes acceptable levels for 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. This standard covers the requirements for testing and evaluating the performance of Spec 6A and Spec 6D valves when exposed to specifically defined fire conditions. However, this standard is not intended to cover check valves or end connections. Pages: 7

3rd Edition | April 1999 | Reaffirmed: September 2011

2-Year Extension: July 2016 | Product Number: G06FA3 | Price: \$97.00

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## Spec 6FA \*

### Specification for Fire Test for Valves—Russian

Russian translation of Spec 6FA.

3rd Edition | April 1999 | Product Number: G06FA3R | Price: \$78.00

## Spec 6FB

### Specification for Fire Test for End Connections

(includes Errata/Supplement dated December 2008)

Establishes procedures for testing and evaluating the pressure-containing performance of API end connections when exposed to fire. Valves, wellhead seals, or other related equipment are not included in the scope of this document. The procedures are presented in two parts: Part I represents conditions in an onshore or open offshore location and Part II represents conditions in an offshore platform well bay. Background information on fire-resistance of API end connections is contained in Bull 6F1. Further background on fire-resistance improvements of API flanges is contained in Bull 6F2. This specification covers Spec 6A end connections, which include:

- API flanged end and outlet connections (6B, 6BX, and segmented),
- API threaded end and outlet connections, and
- other end connections (OECs). Pages: 20

3rd Edition | May 1998 | Effective Date: November 30, 1998

Reaffirmed: September 2011 | 2-Year Extension: July 2016

Product Number: G06FB3 | Price: \$109.00

## 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

1st Edition | February 1995 | Reaffirmed: October 2013

Product Number: G06FD1 | Price: \$89.00

## Spec 6FD \*

### Specification for Fire Test for Check Valves—Russian

Russian translation of Spec 6FD.

1st Edition | February 1995 | Product Number: G06FD1R | Price: \$72.00

## 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 more 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 insuring that the component has the required mechanical properties at the depth below the surface established by the manufacture at all critical locations.

The recommend 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 | Product Number: G6HT02 | Price: \$85.00

## 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: \$79.00

## 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: \$79.00

## TR 6MET

### Metallic Material Limits for Wellhead Equipment Used in High Temperature for API 6A and 17D Applications

Examines mechanical properties of metallic materials used for Spec 6A and Spec 17D wellhead equipment for service above 250 °F. A total of 11 different alloys meeting Spec 6A, PSL 3 conditions were supplied "in condition" by a variety of suppliers. 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 steels, and nickel alloys. Yield strength reduction ratios at temperatures of 300, 350, 400, and 450 °F are reported. As a result of testing, yield strength reduction ratios at 300 °F to 450 °F 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 Spec 6A, Appendix G. Pages: 32

1st Edition | October 2010 | Product Number: G6MET1 | Price: \$98.00

## Std 6X

### Design Calculations for Pressure-Containing Equipment (includes 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 defect-free, tough, and ductile material behavior. Pages: 8

1st Edition | March 2014 | Product Number: G06X01 | Price: \$60.00

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## DRILLING EQUIPMENT

### Spec 7-1/ISO 10424-1:2004 ◆

#### Specification for Rotary Drill Stem Elements

(includes Addendum 1 dated March 2007, Addendum 2 dated August 2009, and Addendum 3 dated April 2011)

Replaces, in part, Spec 7, 40th Edition. Spec 7, Addendum 2 removes the following products now covered by this standard.

- upper and lower kelly valves,
- square and hexagon kellys,
- drill stem subs,
- drill collars,
- drilling and coring bits.

Tool joints, rotary shouldered connections, and gauging will remain in Spec 7 until they are moved into ISO documents in the future. This edition of Spec 7-1 is the identical national adoption of ISO 10424-1:2004. Pages: 87

1st Edition | February 2006 | Effective Date: September 1, 2006  
Reaffirmed: April 2015 | Product Number: GX7101 | Price: \$162.00

### 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: \$114.00

### 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: \$162.00

### Spec 7-2 ◆■

#### Threading and Gauging of Rotary Shouldered Connections

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 both 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: XX

2nd Edition | January 2017 | Product Number: GX70202 | Price: \$190.00

### Std 7CW

#### Casing Wear Tests

Provides a method by which results will be reproducible, under a specified set of conditions, for conducting tests that determine casing wear due to rotation of drill stem elements.

This standard is intended to be used in a laboratory environment and is not intended for use in the field during operations. The testing requirements in this standard are not represented at well conditions. This standard is divided into four major areas: machine apparatus, procedures, materials, and reporting.

This standard will not address the significance of specific data values. It is the responsibility of the user of this standard to establish the appropriate test data values that are acceptable based on their respective application, operational limitations, and safety practices. Pages: 18

1st Edition | June 2015 | Product Number: G7CW01 | Price: \$85.00

### Spec 7F ◆

#### Oil Field Chain and Sprockets

(includes Errata 1 dated May 2013)

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: \$116.00

### Spec 7F \*

#### Oil Field Chain and Sprockets—Chinese

Chinese translation of Spec 7F.

8th Edition | November 2010 | Product Number: G7F008C | Price: \$82.00

### 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: \$194.00

### RP 7G \*

Recommended Practice for Drill Stem Design and Operating Limits—Kazakh

Kazakh translation of RP 7G.

16th Edition | August 1998 | Product Number: G07G6AK | Price: \$156.00

### RP 7G \*

Recommended Practice for Drill Stem Design and Operating Limits—Russian

Russian translation of RP 7G.

16th Edition | September 2009  
Product Number: G07G6AR | Price: \$155.00

### RP 7G-2/ISO 10407-2:2008

Recommended Practice for Inspection and Classification of Drill Stem Element Inspection

(includes Errata 1 dated October 2009)

Specifies the requirements for each level of inspection and procedures for the inspection and testing of used drill stem elements. This document has been prepared to address the practices and technology commonly used in inspection. This document also specifies the qualification of inspection

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personnel, a description of inspection methods, and apparatus calibration and standardization procedures for various inspection methods. The evaluation of imperfections and the marking of inspected drill stem elements is included.

This edition of RP 7G-2 is the identical national adoption of ISO 10407-2:2008. Pages: 213

1st Edition | August 2009 | Reaffirmed: April 2015

Product Number: GX7G201 | Price: \$140.00

## RP 7G-2/ISO 10407-2:2008 \*

### Recommended Practice for Inspection and Classification of Drill Stem Element Inspection—Spanish

Spanish translation of RP 7G-2.

1st Edition | August 2009 | Product Number: GX7G201SP | Price: \$140.00

## RP 7HU1

### Safe Use of 2-Inch Hammer Unions for Oilfield Applications

(includes Errata 1 dated February 2014)

Sets forth procedural recommendations as well as an engineering solution to the mismatching of a female 2-in. Figure 402, a female 2-in. Figure 602, or a female 2-in. Figure 1002 hammer union component (sub) with a male 2-in. Figure 1502 hammer union component (wing nut) as described in 3.2. The procedural recommendations described in this recommended practice should be implemented to reduce further incidents. The engineering solution, which makes impossible the mating of female 2-in. Figure 402, 2-in. Figure 602, and/or 2-in. Figure 1002 subs with the wing nut of the 2-in. Figure 1502 hammer union, applies to the manufacture of new hammer union components and should not be applied in the modification of existing hammer union components due to unknown factors caused by field wear. Pages: 12

1st Edition | May 2009 | Reaffirmed: April 2014

Product Number: H7HU11 | Price: \$37.00

## Spec 7K ♦

### Drilling and Well Servicing Equipment

(includes Errata 1 dated May 2016 and Errata 2 dated August 2016)

Provides general principles and specifies requirements for design, manufacture, and testing of new drilling and well-servicing equipment and of replacement primary load-carrying components manufactured subsequent to the publication of this specification. This specification is applicable to the following equipment:

- rotary tables;
- rotary bushings;
- high-pressure mud and cement hoses;
- piston mud-pump components;
- drawworks components;
- manual tongs;
- safety clamps not used as hoisting devices;
- blowout preventer (BOP) handling systems;
- pressure-relieving devices for high-pressure drilling fluid circulating systems;
- snub-lines for manual and power tongs;
- rotary slips, both manual and powered;
- slip bowls; and
- spiders, both manual and powered. Pages: 130

6th Edition | December 2015 | Product Number: G07K06 | Price: \$200.00

## RP 7L

### Procedures for Inspection, Maintenance, Repair, and Remanufacture of Drilling Equipment (includes Addendum 1 dated February 2006 and Addendum 2 dated March 2006)

Provides owners and users of drilling equipment with guidelines for inspection, maintenance, repair, and remanufacture procedures that may be utilized to maintain serviceability of the drilling equipment. Covers the following drilling equipment:

- rotary tables;
- rotary bushings;
- rotary slips;
- rotary hoses;
- slush pump connectors;
- drawworks components;
- spiders not used as elevators; manual tongs; and
- safety clamps not used as hoisting devices. Pages: 26

1st Edition | December 1995 | Effective Date: April 1, 1996

Reaffirmed: August 2012 | 2-Year Extension: July 2016

Product Number: G07L01 | Price: \$109.00

## 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. Pages: 19

1st Edition | July 2006 | Reaffirmed: December 2012

Product Number: G7NRV01 | Price: \$70.00

## Spec 7NRV \*

### Specification for Drill String Non-Return Valves—Chinese

Chinese translation of Spec 7NRV.

1st Edition | July 2006 | Product Number: G7NRV01C | Price: \$49.00

## HOISTING TOOLS

## RP 8B

### Recommended Practice for Procedures for Inspection, Maintenance, Repair, and Remanufacture of Hoisting Equipment

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;

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- rotary swivel-bail adapters;
- rotary swivels;
- power swivels;
- power subs;
- spiders, if capable of being used as elevators;
- dead-line tie-down/wireline anchors;
- drill-string motion compensators;
- kelly spinners, if capable of being used as hoisting equipment;
- riser-running tool components, if capable of being used as hoisting equipment;
- wellhead-running tool components, if capable of being used as hoisting equipment;
- safety clamps, capable of being used as hoisting equipment;
- top drives;
- casing running tools. Pages: 16

8th Edition | May 2014 | Product Number: G08B08 | Price: \$95.00

## Spec 8C ♦

### Drilling and Production Hoisting Equipment (PSL 1 and PSL 2) (includes Errata dated May 2014)

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: \$140.00

## Spec 8C \*

### Drilling and Production Hoisting Equipment (PSL 1 and PSL 2)— Chinese

Chinese translation of Spec 8C.

5th Edition | April 2012 | Product Number: GX08C05C | Price: \$98.00

## 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 tensioner lines, riser tensioner lines, and mooring and anchor lines. Ropes for lifting slings and cranes, and wire for well-measuring and strand for well-servicing, 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: G9A026 | Price: \$109.00

You may access the 25th Edition of Spec 9A in a read-only platform:  
[publications.api.org](http://publications.api.org)

## Spec 9A \*

### Specification for Wire Rope—Chinese

Chinese translation of Spec 9A.

26th Edition | May 2011 | Product Number: G9A026C | Price: \$77.00

## 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: \$120.00

## OIL WELL CEMENTS

## Spec 10A/ISO 10426-1:2009 ♦

### Specification for Cements and Materials for Well Cementing

Specifies requirements and gives recommendations for six classes of well cements, including their chemical and physical requirements and procedures for physical testing. This specification is applicable to well cement classes A, B, C, and D, which are the products obtained by grinding Portland cement clinker and, if needed, calcium sulfate as an interground additive. Processing additives can be used in the manufacture of cement of these classes. Suitable set-modifying agents can be interground or blended during manufacture of class D cement. This specification is also applicable to well cement classes G and H, which are the products obtained by grinding clinker with no additives other than one or more forms of calcium sulfate, water or chemical additives as required for chromium (VI) reduction.

This edition of Spec 10A is the identical national adoption of ISO 10426-1:2009 (includes ISO errata). Pages: 38

24th Edition | December 2010 | Reaffirmed: April 2015

Product Number: GX10A24 | Price: \$145.00

## RP 10B-2

### Recommended Practice for Testing Well Cements

(includes Errata 1 dated June 2006 and Errata 2 dated January 2007)  
(supersedes RP 10B)

Specifies methods and gives recommendations for the testing of cement slurries and related materials under simulated well conditions. Pages: 111

2nd Edition | April 2013 | Product Number: G10B202 | Price: \$220.00

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## 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 well temperatures exist. For the purposes of this document the term “deepwater” includes areas where low seafloor temperatures exist, independent of water depth.

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: \$95.00

## RP 10B-4

### Preparation and Testing of Foamed Cement Formulations at Atmospheric Pressure

Defines the test methods including the generation of unfoamed base and their corresponding foamed cement slurries at atmospheric pressure. These procedures are developed for foaming cement slurries with air, at atmospheric conditions, which could mimic a foam quality experienced with nitrogen at downhole conditions; they may be modified to accommodate other gases such as nitrogen. Slurries that are foamed with nitrogen, and their properties, will also be discussed within this standard as they are relevant to the scope of the standard.

This standard does not address testing at pressures above atmospheric conditions nor does this standard include or consider the effects of nitrogen solubility in the nitrogen fraction calculations. Pages: 40

2nd Edition | October 2015 | Product Number: G10B402 | Price: \$95.00

## RP 10B-5/ISO 10426-5:2004

### Recommended Practice on Determination of Shrinkage and Expansion of Well Cement Formulations at Atmospheric Pressure

Provides the methods for the testing of well cement formulations to determine the dimension changes during the curing process (cement hydration) at atmospheric pressure only. This is a base document, because under real well cementing conditions shrinkage and expansion take place under pressure and different boundary conditions.

This edition of RP 10B-5 is the identical national adoption of ISO 10426-5:2004. Pages: 13

1st Edition | April 2005 | Reaffirmed: April 2015

Product Number: GX10B501 | Price: \$80.00

## RP 10B-6/ISO 10426-6:2008

### Recommended Practice on Determining the Static Gel Strength of Cement Formulations

This document specifies requirements and provides test methods for the determination of static gel strength (SGS) of the cement slurries and related materials under simulated well conditions.

This edition of RP 10B-6 is the modified national adoption of ISO 10426-6:2008. Pages: 7

1st Edition | August 2010 | Reaffirmed: April 2015

Product Number: GG10B601 | Price: \$62.00

## 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. 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: \$89.00

## Spec 10D/ISO 10427-1:2001 \*

### Specification for Bow-Spring Casing Centralizers—Chinese

Chinese translation of Spec 10D.

6th Edition | March 2002 | Product Number: GX10D06C | Price: \$63.00

## RP 10D-2/ISO 10427-2:2004

### Recommended Practice for Centralizer Placement and Stop Collar Testing

Provides calculations for determining centralizer spacing, based on centralizer performance and desired standoff, in deviated and dogleg holes in wells for the petroleum and natural gas industries. It also provides a procedure for testing stop collars and reporting test results.

This edition of RP 10D-2 is the identical national adoption of ISO 10427-2:2004. Pages: 14

1st Edition | August 2004 | Reaffirmed: April 2015

Product Number: GG10D21 | Price: \$77.00

## RP 10F/ISO 10427-3:2003

### Recommended Practice for Performance Testing of Cementing Float Equipment

(includes Errata 1 dated September 2003)

Describes testing practices to evaluate the performance of cementing float equipment for the petroleum and natural gas industries. This recommended practice is applicable to float equipment that will be in contact with water-based fluids used for drilling and cementing wells. It is not applicable to float equipment performance in non-water-based fluids.

This edition of RP 10F is the identical national adoption of ISO 10427:2003. Pages: 12

3rd Edition | April 2002 | Reaffirmed: April 2015

Product Number: GX10F03 | Price: \$64.00

## TR 10TR1

### Cement Sheath Evaluation

Provides the current principles and practices regarding the evaluation and repair of primary cementations of casing strings in oil and gas wells. Cement bond logs, compensated logging tools, ultrasonic cement logging tools, and borehole fluid-compensated logging tools are covered. Pages: 124

2nd Edition | September 2008

Product Number: G10TR12 | Price: \$145.00

## TR 10TR1 \*

### Cement Sheath Evaluation—Kazakh

Kazakh translation of TR 10TR1.

2nd Edition | September 2008

Product Number: G10TR12K | Price: \$116.00

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## TR 10TR1 \*

### Cement Sheath Evaluation—Russian

Russian translation of TR 10TR1.

2nd Edition | September 2008

Product Number: G10TR12R | Price: \$116.00

## TR 10TR2

### Shrinkage and Expansion in Oilwell Cements

Presents the results of research into shrinkage and expansion of oilwell cements in the wellbore as well as a series of test methods and procedures developed to measure these phenomena. Pages: 57

1st Edition | July 1997 | Reaffirmed: September 2002

Product Number: G10TR2 | Price: \$122.00

## TR 10TR2 \*

### Shrinkage and Expansion in Oilwell Cements—Russian

Russian translation of TR 10TR2.

1st Edition | July 1997 | Product Number: G10TR2R | Price: \$97.00

## TR 10TR3

### Technical Report on Temperatures for API Cement Operating Thickening Time Tests

Summarizes work performed by the 1984-91 API Task Group on Cementing Temperature Schedules to update the temperatures in API well-simulation test schedules found in RP 10B. The Task Group reviewed the largest set of temperature data available to the industry to date, resulting in significant improvements to the temperatures in the well-simulation test schedules. Pages: 97

1st Edition | May 1999 | Reaffirmed: May 2005

Product Number: G10TR3 | Price: \$157.00

## TR 10TR3 \*

### Technical Report on Temperatures for API Cement Operating Thickening Time Tests—Russian

Russian translation of TR 10TR3.

1st Edition | May 1999 | Product Number: G10TR3R | Price: \$125.00

## TR 10TR4

### Selection of Centralizers for Primary Cementing Operations

Provides the petroleum industry with information for three types of centralizers, their selection and application, and their advantages and limitations. Pages: 23

1st Edition | May 2008 | Product Number: G10TR40 | Price: \$61.00

## TR 10TR4 \*

### Selection of Centralizers for Primary Cementing Operations—Kazakh

Kazakh translation of TR 10TR4.

1st Edition | May 2008 | Product Number: G10TR40K | Price: \$49.00

## TR 10TR4 \*

### Selection of Centralizers for Primary Cementing Operations—Russian

Russian translation of TR 10TR4.

1st Edition | May 2008 | Product Number: G10TR40R | Price: \$48.00

## TR 10TR5

### Methods for Testing of Solid and Rigid Centralizers

Provides the industry with methods for testing rigid and solid centralizers. Pages: 16

1st Edition | May 2008 | Product Number: G10TR50 | Price: \$61.00

## TR 10TR5 \*

### Methods for Testing of Solid and Rigid Centralizers—Kazakh

Kazakh translation of TR 10TR5.

1st Edition | May 2008 | Product Number: G10TR50K | Price: \$49.00

## TR 10TR5 \*

### Methods for Testing of Solid and Rigid Centralizers—Russian

Russian translation of TR 10TR5.

1st Edition | May 2008 | Product Number: G10TR50R | Price: \$48.00

## TR 10TR6

### Evaluation and Testing of Mechanical Cement Wiper Plugs

Provides recommended testing, evaluation, and performance requirements for mechanical cement wiper plugs.

Mechanical cementing wiper plugs are used in most application including casing, liners, drill pipe, and tubing for primary and remedial cementing operations where they serve multiple functions in well operations, such as the following:

- separation of fluids inside of pipe,
- wiping of materials from the inner surface of pipe,
- operation of a downhole tool,
- surface indication of a downhole event, and
- formation of a temporary pressure barrier. Pages: 46

1st Edition | July 2015 | Product Number: G10TR601 | Price: \$90.00

## RP 65

### Cementing Shallow Water Flow Zones in Deepwater Wells (includes Errata 1 dated August 2003)

Contains a compilation of technology and practices used by many operators drilling wells in deep water. It is meant to highlight key parameters for increasing the chance of successfully drilling and cementing casings where there is a risk of shallow water flow and to discuss options that are available. Pages: 44

1st Edition | September 2002 | Reaffirmed: January 2012

Product Number: G56001 | Price: \$121.00

You may access RP 65 in a read-only platform: [publications.api.org](http://publications.api.org)

## RP 65 \*

### Cementing Shallow Water Flow Zones in Deepwater Wells—Kazakh

Kazakh translation of RP 65.

1st Edition | September 2002 | Product Number: G56001K | Price: \$97.00

## RP 65 \*

### Cementing Shallow Water Flow Zones in Deepwater Wells—Russian

Russian translation of RP 65.

1st Edition | September 2002 | Product Number: G56001R | Price: \$96.00

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## 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

2nd Edition | December 2010 | Reaffirmed: November 2016

Product Number: G65202 | Price: \$130.00

You may download a PDF of this document from the Policy & Issues/ Hydraulic Fracturing section of the API website.

## PRODUCTION 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

4th Edition | June 2000 | Reaffirmed: January 2014

Product Number: G11AR4 | Price: \$124.00

### 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

13th Edition | May 2015 | Effective Date: November 4, 2015

Product Number: G11AX13 | Price: \$175.00

### 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: \$155.00

### 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.

27th Edition | May 2010 | Product Number: G11B27C | Price: \$109.00

### 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

9th Edition | August 2008 | Reaffirmed: April 2015

Product Number: G11BR09 | Price: \$105.00

### 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: \$74.00

### Std 11D3/ISO 15136-2:2006

#### 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 for use 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

1st Edition | June 2008 | Reaffirmed: March 2015

Product Number: G11D301 | Price: \$106.00

### Spec 11E ♦

#### Specification for Pumping Units

(includes Errata 1 dated August 2015)

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 gearing. 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

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any stage does not exceed 5,000 ft/min and the speed of any shaft does not exceed 3,600 r/min. 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: \$170.00

## Spec 11E \*

### Specification for Pumping Units—Chinese

Chinese translation of Spec 11E.

19th Edition | November 2013  
Product Number: G11E019C | Price: \$119.00

## 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: \$80.00

## RP 11G

### Recommended Practice for Installation, Maintenance and Lubrication of Pumping Units

Provides guidance related to the proper installation, care, and maintenance of surface mounted beam pumping units, varieties of which are described in Spec 11E. Information provided in this document is of a general nature and is not intended to replace specific instruction provided by the pumping unit manufacturer. This document further establishes certain minimum requirements intended to promote the safe installation, operation, and servicing of pumping unit equipment. Pages: 26

5th Edition | November 2013 | Product Number: G11G05 | Price: \$85.00

## TR 11L

### Design Calculations for Sucker Rod Pumping Systems (Conventional Units)

Covers recommendations for design calculations for conventional unit sucker rod pumping systems based on test data submitted to API by Sucker Rod Pumping Research, Inc. The topics include vibration characteristics of sucker rod strings, physical characteristics of sucker rods, and dimensional analysis of sucker rod pumping systems. The calculations apply to the broad category of average, normal pumping wells fitting the assumed conditions defined therein. Unusual or out-of-the-ordinary conditions will cause deviations from calculated performance. Pages: 24

5th Edition | June 2008 | Product Number: G11L05 | Price: \$106.00

## Bull 11L2

### Bulletin on Catalog of Analog Computer Dynamometer Cards

Contains over 1100 polished rod dynamometer cards taken with the electronic analog simulator and arranged in convenient form for comparison with field tests. Pages: 77

1st Edition | December 1969 | Reaffirmed: September 1999  
Product Number: G05700 | Price: \$122.00

## Bull 11L3

### Sucker Rod Pumping System Design Book

(includes Errata 1 dated November 1973 and Supplement 1 dated February 1977)

Contains print-out tables of computer calculated values for selecting sucker rod systems. Values are included for depths of 200 ft to 12,000 ft in increments of 500 feet, and production rates of 100 barrels per day to over 1,500 barrels per day in varying increments. Various rod string pump stroke, pump size, and pumping speed combinations that will do the job within the limiting parameters are listed. Pages: 574

1st Edition | May 1970 | Product Number: G05800 | Price: \$132.00

## TR 11L6

### Technical Report on Electric Motor Prime Mover for Beam Pumping Unit Service

Covers polyphase, squirrel-cage, induction motors for use as the prime mover for beam pumping units (size range of 200 hp and below). Motors to be operated from solid-state or other types of variable frequency/variable voltage power supplies for adjustable speed applications will require individual consideration to provide satisfactory performance and are beyond the scope of this document. Motors conforming to this document are suitable for operation in accordance with their full load rating under ambient temperature at a maximum altitude of 1000 m (3300 ft) above sea level with outdoor sever duty application, including blowing dust or snow, corrosive atmospheres, high humidity, and cyclic loading. Pages: 13

2nd Edition | May 2008 | Product Number: G11L602 | Price: \$86.00

## TR 11L6 \*

### Technical Report on Electric Motor Prime Mover for Beam Pumping Unit Service—Chinese

Chinese translation of TR 11L6.

2nd Edition | May 2008 | Product Number: G11L602C | Price: \$61.00

## RP 11S

### Recommended Practice for the Operation, Maintenance and Troubleshooting of Electric Submersible Pump Installations

Covers all of the major components that comprise a standard electric submersible pumping system, their operation, maintenance, and troubleshooting. It is specifically prepared for installations in oil and water producing wells where the equipment is installed on tubing. It is not prepared for equipment selection or application. Pages: 18

3rd Edition | November 1994 | Reaffirmed: October 2013  
Product Number: G11S03 | Price: \$83.00

## RP 11S1

### Recommended Practice for Electrical Submersible Pump Teardown Report

Covers a recommended electrical submersible pump teardown report form. It also includes equipment schematic drawings that may provide assistance in identifying equipment components. These schematics are for generic equipment components, and there may be differences between manufacturers on the exact description or configuration of the assemblies. Pages: 36

3rd Edition | September 1997 | Effective Date: December 15, 1997  
Reaffirmed: October 2013 | Product Number: G11S13 | Price: \$122.00

## RP 11S2

### Recommended Practice for Electric Submersible Pump Testing

Provides guidelines and procedures covering electric submersible pump performance testing intended to establish product consistency. These practices are generally considered appropriate for the majority of pump

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applications. This document covers the acceptance testing of electric submersible pumps (sold as new) by manufacturers, vendors, or users to the prescribed minimum specifications. Pages: 12

2nd Edition | August 1997 | Effective Date: October 1, 1997

Reaffirmed: October 2013 | Product Number: G11S22 | Price: \$83.00

## RP 11S2 \*

### Recommended Practice for Electric Submersible Pump Testing—Russian

Russian translation of RP 11S2.

2nd Edition | August 1997 | Product Number: G11S22R | Price: \$67.00

## RP 11S3

### Recommended Practice for Electrical Submersible Pump Installations

Addresses the installation and replacement of all major components comprising an electrical submersible pumping system. Specifically, it addresses equipment installation on tubing in oil and gas production operations. Pages: 11

2nd Edition | March 1999 | Reaffirmed: October 2013

Product Number: G11S32 | Price: \$89.00

## RP 11S3 \*

### Recommended Practice for Electrical Submersible Pump Installations—Russian

Russian translation of RP 11S3.

2nd Edition | March 1999 | Product Number: G11S32R | Price: \$72.00

## RP 11S4

### Recommended Practice for Sizing and Selection of Electric Submersible Pump Installations

Discusses in some detail each component of the ESP system (pump, motor, intake, seal or protector, cable, switchboard, etc.) as far as what must be considered for the best selection at a desired rate and well conditions. Examples are given to illustrate the basic design procedure and illustrate how PVT correlations, multiphase flow correlations, and inflow performance relationships are used. Summary designs and computer examples using the detailed design principles are presented that show how design considerations fit together and how tools such as computer programs allow faster solutions resulting in easier trial and error calculations for optimization of designs and study of existing installations. Topics such as PVT correlations, multiphase flow correlations, and inflow performance relationships are discussed in the appendices. Pages: 31

3rd Edition | July 2002 | Reaffirmed: October 2013

Product Number: G11S43 | Price: \$79.00

## RP 11S5

### Recommended Practice for the Application of Electrical Submersible Cable Systems

Covers the application (size and configuration) of electrical submersible cable systems by manufacturers, vendors, or users. The document addresses the various uses of different cable insulation systems, including jackets, braids, armor, and related coverings, as well as auxiliary cable components for cable conductors. The document also addresses splicing and terminating cables including splicing, lengthening, and repairs. Pages: 38

2nd Edition | April 2008 | Reaffirmed: October 2013

Product Number: G11S52 | Price: \$109.00

## RP 11S6

### Recommended Practice for Testing of Electric Submersible Pump Cable Systems

Covers field testing of electric submersible pump cable systems. This document is organized into three major topic categories. The first category provides general definitions and an overview of terms, safety considerations, and cable system preparation guidelines. The second category identifies various situations under which testing is performed. The third category identifies test methods and procedures. Pages: 18

1st Edition | December 1995 | Reaffirmed: October 2013

Product Number: G11S61 | Price: \$89.00

## RP 11S7

### Recommended Practice on Application and Testing of Electric Submersible Pump Seal Chamber Sections

Applies to the seal chamber section used in support of an electric submersible motor. The recommended practice contains tutorial, testing, and failure evaluation information on the seal chamber section used in support of an electric submersible motor. The document provides a general understanding of construction and functioning of seal chamber sections, identification of well conditions, system requirements, and characteristics that influence component section and application. Pages: 28

1st Edition | July 1993 | Reaffirmed: October 2013

Product Number: G05947 | Price: \$89.00

## RP 11S8

### Recommended Practice on Electric Submersible System Vibrations

Provides guidelines to establish consistency in the control and analysis of electric submersible pump (ESP) system vibrations. This document is considered appropriate for the testing of ESP systems and subsystems for the majority of ESP applications. This RP covers the vibration limits, testing, and analysis of ESP systems and subsystems. Pages: 18

2nd Edition | October 2012 | Product Number: G11S802 | Price: \$78.00

## LEASE PRODUCTION VESSELS

### 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: \$120.00

You may access the 15th Edition of Spec 12B in a read-only platform: [publications.api.org](http://publications.api.org)

### 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. 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

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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: 27

11th Edition | October 2008 | Effective Date: April 1, 2009

2-Year Extension: November 2015

Product Number: G12D11 | Price: \$97.00

You may access Spec 12D in a read-only platform: [publications.api.org](http://publications.api.org)

## Spec 12D \*

### Specification for Field Welded Tanks for Storage of Production Liquids—Chinese

Chinese translation of Spec 12D.

11th Edition | October 2008 | Product Number: G12D11C | Price: \$68.00

## 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: \$97.00

You may access Spec 12F in a read-only platform: [publications.api.org](http://publications.api.org)

## 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: \$68.00

## Spec 12J ♦

### Specification for Oil and Gas Separators

Covers minimum requirements for the design, fabrication, and plant 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: \$97.00

## Spec 12J \*

### Specification for Oil and Gas Separators—Chinese

Chinese translation of Spec 12J.

8th Edition | October 2008 | Product Number: G12J08C | Price: \$68.00

## Spec 12J \*

### Specification for Oil and Gas Separators—Russian

Russian translation of Spec 12J.

8th Edition | October 2008 | Product Number: G12J08R | Price: \$78.00

## 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: \$115.00

## Spec 12K \*

### Specification for Indirect Type Oilfield Heaters—Chinese

Chinese translation of Spec 12K.

8th Edition | October 2008 | Product Number: G12K08C | Price: \$81.00

## 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: \$97.00

## 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

2nd Edition | November 1994 | Reaffirmed: April 2008

Product Number: G12N02 | Price: \$83.00

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## 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: \$108.00

You may access Spec 12P in a read-only platform at [publications.api.org](http://publications.api.org)

## RP 12R1

### Recommended Practice for Setting, Maintenance, Inspection, Operation, and Repair of Tanks in Production Service

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, 12E, 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: 49

5th Edition | August 1997 | Reaffirmed: April 2008

2-Year Extension: November 2015 | Product Number: G12R15

Price: \$132.00

## DRILLING FLUID MATERIALS

## Spec 13A/ISO 13500:2009 ◆

### Specification for Drilling Fluid Materials

(includes Errata 1 dated August 2014, Errata 2 dated May 2015, Errata 3 dated July 2015, and Errata 4 dated October 2016)

Covers physical properties and test procedures for materials manufactured for use in oil- and gas-well drilling fluids. The materials covered are barite, haematite, bentonite, nontreated bentonite, OCMA-grade bentonite, attapulgite, sepiolite, technical-grade low-viscosity carboxymethylcellulose (CMC LVT), technical-grade high-viscosity carboxymethylcellulose (CMC-HVT), starch, low-viscosity polyanionic cellulose (PAC-LV), high-viscosity polyanionic cellulose (PAC-HV), drilling-grade Xanthan gum, and barite 4.1. This International Standard is intended for the use of manufacturers of named products.

This edition of Spec 13A is the identical national adoption of ISO 13500:2009. Pages: 109

18th Edition | February 2010 | Reaffirmed: July 2015

Effective Date: August 1, 2010

Product Number: GX13A018 | Price: \$181.00

## Spec 13A/ISO 13500:2009 \*

### Specification for Drilling Fluid Materials—Chinese

Chinese translation of Spec 13A.

18th Edition | February 2010

Product Number: GX13A018C | Price: \$127.00

## 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

4th Edition | March 2009 | Reaffirmed: March 2016

Product Number: GX13B14 | Price: \$165.00

## RP 13B-2

### Recommended Practice for Field Testing Oil-Based Drilling Fluids (includes Errata 1 dated August 2014)

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);

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- 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: \$205.00

You may access the 3rd Edition of RP 13B-2 in a read-only platform:  
publications.api.org

## 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: \$135.00

## RP 13D

### Rheology and Hydraulics of Oil-Well Fluids

Provides a basic understanding of and guidance about drilling fluid rheology and hydraulics, and their application to drilling operations. For this RP, 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: 79

6th Edition | May 2010 | 2-Year Extension: June 2015  
Product Number: G13D06 | Price: \$134.00

## RP 13D \*

### Rheology and Hydraulics of Oil-Well Fluids—Kazakh

Kazakh translation of RP 13D.

6th Edition | May 2010 | Product Number: G13D06K | Price: \$108.00

## RP 13D \*■

### Rheology and Hydraulics of Oil-Well Fluids—Russian

Russian translation of RP 13D.

6th Edition | May 2010 | Product Number: G13D06R | Price: \$178.00

## 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 have a profound effect on drilling fluid properties.

This edition of RP 13I is the identical national adoption of ISO 10416:2008. Pages: 108

8th Edition | March 2009 | Reaffirmed: March 2016  
Product Number: GX1318 | Price: \$186.00

## 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: \$130.00

## 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

3rd Edition | May 2011 | Reaffirmed: May 2016

Product Number: G13K03 | Price: \$107.00

## RP 13K \*

### Recommended Practice for Chemical Analysis of Barite—Kazakh

Kazakh translation of RP 13K.

3rd Edition | May 2011 | Product Number: G13K03K | Price: \$86.00

## RP 13K \*■

### Recommended Practice for Chemical Analysis of Barite—Russian

Russian translation of RP 13K.

3rd Edition | May 2011 | Product Number: G13K03R | Price: \$113.00

## RP 13L

### Recommended Practice for Training and Qualification of Drilling Fluid Technologists

Summarizes basic training and knowledge that an employee or contractor shall possess to be identifiable as a drilling fluids technologist. This recommended practice (RP) seeks to formalize the specific knowledge base, professional skills, and application skills needed to ensure the competency and professionalism of individuals working in the drilling fluids industry. Drilling fluids technologists should use this RP as an outline to self-determine any gaps in learning and seek to improve their skills. A company contracting the service of a drilling fluids technologist should use this RP as a checklist of knowledge that a technologist should be able to demonstrate proficiency in applying. Pages: 7

1st Edition | February 2003 | Reaffirmed: October 2010

2-Year Extension: June 2015 | Product Number: G13L01 | Price: \$53.00

## RP 13M/ISO 13503-1:2003

### Recommended Practice for the Measurement of Viscous Properties of Completion Fluids

(RP 13M replaces RP 39)

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. Pages: 21

1st Edition | July 2004 | Reaffirmed: October 2010

2-Year Extension: June 2015 | Product Number: GX13M01 | Price: \$98.00

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## RP 13M-4/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. Pages: 14

1st Edition | December 2006 | Reaffirmed: July 2015

Product Number: GG13M41 | Price: \$57.00

## OFFSHORE SAFETY AND ANTIPOLLUTION

### Spec 14A ◆

#### Specification for Subsurface Safety Valve Equipment (includes Errata 1 dated July 2015)

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

12th Edition | January 2015 | Effective Date: January 15, 2016

Product Number: G14A12 | Price: \$225.00

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[publications.api.org](http://publications.api.org)

### RP 14B

#### Design, Installation, Operation, Test, and Redress of Subsurface Safety Valve Systems

Establishes requirements and provides guidelines for subsurface safety valve (SSSV) system equipment. This includes requirements for SSSV system design, installation, operation, testing, redress, support activities, documentation, and failure reporting. SSSV system equipment addressed by this document includes control systems, control lines, SSSVs, and secondary tools as defined herein. SSSV types including surface controlled (SCSSV), sub-surface controlled (SSCSV), and sub-surface injection safety valves (SSISV) are included. Requirements for testing of SSSVs including frequency and acceptance criteria are included. Alternate technology SSSV equipment and systems are included in these requirements.

This document is not applicable to design, qualification, or repair activities for SSSVs. This document does not specify when a SSSV is required.

NOTE Spec 14A provides requirements for SSSV equipment design, qualification, and repair. Pages: 37

6th Edition | September 2015 | Product Number: G14B06 | Price: \$126.00

You may access the 5th Edition of RP 14B in a read-only platform:  
[publications.api.org](http://publications.api.org)

### RP 14C

#### Recommended Practice for Analysis, Design, Installation, and Testing of Basic Surface Safety Systems for Offshore Production Platforms

Presents a standardized method to design, install, and test surface safety systems on offshore production platforms. Uses recognized systems analysis methods to develop requirements for a safety system and includes procedures to document the safety system and verify conformance. Pages: 110

7th Edition | March 2001 | Reaffirmed: March 2007

Product Number: G14C07 | Price: \$201.00

You may access the 6th and 7th Editions of RP 14C in a read-only platform:  
[publications.api.org](http://publications.api.org)

### RP 14E

#### Recommended Practice for Design and Installation of Offshore Production Platform Piping Systems

Recommends minimum requirements and guidelines for the design and installation of new piping systems on offshore production platforms. Includes general recommendations on design and application of pipe, valves, and fittings for typical processes; general information on installation, quality control, and items related to piping systems such as insulation; and specific recommendations for the design of particular piping systems. Pages: 61

5th Edition | October 1991 | Reaffirmed: January 2013

Product Number: G07185 | Price: \$149.00

You may access RP 14E in a read-only platform: [publications.api.org](http://publications.api.org)

### RP 14E \*■

#### Recommended Practice for Design and Installation of Offshore Production Platform Piping Systems—Chinese

Chinese translation of RP 14E.

5th Edition | October 1991

Product Number: 811-07185 CN940 | Price: \$105.00

### RP 14F

#### Design, Installation, and Maintenance of Electrical Systems for Fixed and Floating Offshore Petroleum Facilities for Unclassified and Class I, Division 1, and Division 2 Locations

Recommends minimum requirements and guidelines for the design, installation, and maintenance of electrical systems on fixed and floating petroleum facilities located offshore. For facilities classified as Zone 0, Zone 1, or Zone 2, reference RP 14FZ. These facilities include drilling, producing, and pipeline transportation facilities associated with oil and gas exploration and production. 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. Pages: 150

5th Edition | July 2008 | Reaffirmed: April 2013

Product Number: G14F05 | Price: \$119.00

You may access RP 14F in a read-only platform: [publications.api.org](http://publications.api.org)

### 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

Recommends minimum requirements and guidelines for the design, installation, and maintenance of electrical systems on fixed and floating petroleum facilities located offshore. For facilities classified as Division 1 or Division 2, reference RP 14F. These facilities include drilling, producing, and pipeline transportation facilities associated with oil and gas exploration and production. 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;

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· motion and buoyancy concerns associated with floating facilities.  
Pages: 177

2nd Edition | May 2013 | Product Number: G14FZ02 | Price: \$280.00

You may access the 1st Edition of RP 14FZ in a read-only platform:  
publications.api.org

## RP 14G

### Recommended Practice for Fire Prevention and Control on Fixed Open-Type Offshore Production Platforms

Presents recommendations for minimizing the likelihood of an accidental fire, and for designing, inspecting, and maintaining fire control systems. It emphasizes the need to train personnel in firefighting, to conduct routine drills, and to establish methods and procedures for safe evacuation. The fire control systems discussed are intended to provide an early response to incipient fires and prevent their growth. Applicable to fixed open-type offshore production platforms that are generally installed in moderate climates and that have sufficient natural ventilation to minimize the accumulation of vapors. Enclosed areas, such as quarters, buildings, and equipment enclosures, normally installed on this type platform, are addressed. Pages: 38

4th Edition | April 2007 | Reaffirmed: January 2013

Product Number: G14G04 | Price: \$124.00

You may access RP 14G in a read-only platform: publications.api.org

## 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

2nd Edition | May 2001 | Reaffirmed: January 2013

Product Number: G14J02 | Price: \$117.00

You may access RP 14J in a read-only platform: publications.api.org

## 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

2nd Edition | July 2007 | Reaffirmed: August 2012

Product Number: GG14L02 | Price: \$119.00

## 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: \$84.00

## 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: \$61.00

## FIBERGLASS AND PLASTIC PIPE

## RP 15CLT

### 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 systems 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 2013

Product Number: G15CLT1 | Price: \$83.00

## Spec 15HR ◆■

### High-Pressure Fiberglass Line Pipe

(includes Errata 1 dated August 2016)

Formulated to provide for the availability of safe, dimensionally, and functionally inter-changeable high-pressure fiberglass line pipe with a pressure rating from 500 lbf/in.<sup>2</sup> to 5000 lbf/in.<sup>2</sup> (3.45 MPa to 34.5 MPa), inclusive, in 250 lbf/in.<sup>2</sup> (1.72 MPa) increments for pipes ≤ than NPS 12 in. and 100 lbf/in.<sup>2</sup> (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: \$110.00

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## Spec 15LE ♦

### Specification for Polyethylene Line Pipe (PE)

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 2013 | Product Number: G15LE4 | Price: \$101.00

## Spec 15LE \*

### Specification for Polyethylene Line Pipe (PE)—Chinese

Chinese translation of Spec 15LE.

4th Edition | January 2008 | Product Number: G15LE4C | Price: \$71.00

## Spec 15LR ♦

### Specification for Low Pressure Fiberglass Line Pipe

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 2013 | Product Number: G15LR7 | Price: \$97.00

## Spec 15LR \*

### Specification for Low Pressure Fiberglass Line Pipe—Chinese

Chinese translation of Spec 15LR.

7th Edition | August 2001 | Product Number: G15LR7C | Price: \$68.00

## 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: \$125.00

## RP 15TL4

### 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: October 2013

Product Number: G15TL4 | Price: \$97.00

## DRILLING WELL CONTROL SYSTEMS

## Spec 16A/ISO 13533:2001 ♦

### Specification for Drill-Through Equipment

(includes Supplement/Errata 1 dated November 2004)

Provides 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. It also defines service conditions in terms of pressure, temperature, and wellbore fluids for which the equipment will be designed. This specification is applicable to and establishes requirements for the following specific equipment:

- ram blowout preventers;
- ram blocks, packers, and top seals;
- annular blowout preventers;
- annular packing units;
- hydraulic connectors;
- drilling spools;
- adapters;
- loose connections;
- clamps.

This International Standard does not apply to field use or field testing of drill-through equipment.

This edition of RP 16A is the modified national adoption of ISO 13533:2001. Pages: 109

3rd Edition | June 2004 | Effective Date: December 1, 2004

Reaffirmed: August 2010 and August 2016

Product Number: GX16A03 | Price: \$165.00

You may access the Spec 16A in a read-only platform: [publications.api.org](http://publications.api.org)

## Spec 16A/ISO 13533:2001 \*

### Specification for Drill-Through Equipment—Chinese

Chinese translation of Spec 16A.

3rd Edition | June 2004 | Product Number: GX16A03C | Price: \$116.00

## 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;

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- 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: \$150.00

You may access the 1st Edition of Spec 16C in a read-only platform: [publications.api.org](http://publications.api.org)

## Spec 16D ♦

### Specification for Control Systems for Drilling Well Control Equipment and Control Systems for Diverter Equipment

Establishes design standards for systems used to control blowout preventers (BOPs) and associated valves that control well pressure during drilling operations. The design standards applicable to subsystems and components do not include material selection and manufacturing process details but may serve as an aid to the purchaser. Although diverters are not considered well control devices, their controls are often incorporated as part of the BOP control system and therefore are included in this specification. The requirements provided in this specification apply to the following control system categories:

- control systems for surface mounted BOP stacks;
- control systems for subsea BOP stacks (common elements);
- discrete hydraulic control systems for subsea BOP stacks;
- electro-hydraulic/multiplex control systems for subsea BOP stacks;
- control systems for diverter equipment;
- auxiliary equipment control systems and interfaces;
- emergency disconnect sequenced systems;
- backup systems;
- special deepwater/harsh environment features. Pages: 97

2nd Edition | July 2004 | Effective Date: January 1, 2005

Reaffirmed: August 2013 | Under Revision

Product Number: G16D02 | Price: \$177.00

You may access Spec 16D in a read-only platform: [publications.api.org](http://publications.api.org)

## Spec 16D \*

### Specification for Control Systems for Drilling Well Control Equipment and Control Systems for Diverter Equipment—Chinese

Chinese translation of Spec 16D.

2nd Edition | July 2004 | Product Number: G16D02C | Price: \$124.00

## Spec 16D \*

### Specification for Control Systems for Drilling Well Control Equipment and Control Systems for Diverter Equipment—Kazakh

Kazakh translation of Spec 16D.

2nd Edition | July 2004 | Product Number: G16D02K | Price: \$142.00

## Spec 16D \*

### Specification for Control Systems for Drilling Well Control Equipment and Control Systems for Diverter Equipment—Russian

Russian translation of Spec 16D.

2nd Edition | July 2004 | Product Number: G16D02R | Price: \$141.00

## Spec 16F ♦

### Specification for Marine Drilling Riser Equipment

(includes Addendum 1 dated September 2014)

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 covers the following major subsystems in the marine drilling riser system:

- riser tensioner equipment;
- flex/ball joints;
- choke, kill, and auxiliary lines;
- drape hoses and jumper lines for flex/ball joints;
- telescopic joint (slip joint) and tensioner ring riser joints;
- buoyancy equipment;
- riser running equipment;
- special riser system components;
- lower riser adapter. Pages: 43

1st Edition | August 2004 | Effective Date: February 1, 2005

Reaffirmed: August 2010 | 2-Year Extension: June 2015

Product Number: G16F01 | Price: \$119.00

## RP 16Q

### Recommended Practice for Design, Selection, Operation and Maintenance of Marine Drilling Riser Systems (formerly RP 2Q and RP 2K)

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 upper flex/ball joint and the bottom connection of the lower flex/ball joint. It specifically excludes the diverter, LMRP, BOP stack, and hydraulic connectors. Pages: 48

1st Edition | November 1993 | Reaffirmed: August 2010

2-Year Extension: June 2015 | Product Number: G07249 | Price: \$109.00

## Spec 16R ♦

### Specification for Marine Drilling Riser Couplings

(replaces RP 2R)

Covers the design, rating, manufacturing, and testing of marine drilling riser couplings. Coupling capacity ratings are established to enable the grouping of coupling models according to their maximum stresses developed under specific levels of loading, regardless of manufacturer or method of make-up. This specification relates directly to RP 16Q, which covers the design, selection, and operation of the marine drilling riser system as a whole. Pages: 18

1st Edition | January 1997 | Effective Date: June 1, 1997

Reaffirmed: August 2010 | 2-Year Extension: June 2015

Product Number: G16R01 | Price: \$97.00

## Spec 16R \*

### Specification for Marine Drilling Riser Couplings—Chinese (replaces RP 2R)

Chinese translation of Spec 16R.

1st Edition | January 1997 | Product Number: G16R01C | Price: \$68.00

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## 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: \$155.00

## 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 11IW;
- 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

1st Edition | March 2009 | Reaffirmed: December 2014

Product Number: G16ST01 | Price: \$145.00

## Std 53

### Blowout Prevention Equipment Systems for Drilling Wells (includes Addendum 1 dated July 2016)

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. Diverter and rotating head systems (rotating control devices) are not addressed in this standard (see RP 64 and Spec 16RCD, respectively); their primary purpose is to safely divert or direct flow rather than to confine fluids to the wellbore. Procedures and techniques for well control are not included in this standard. Pages: 112

4th Edition | November 2012 | Product Number: G05304 | Price: \$155.00

You may access the 3rd and 4th Editions of Std 53 in a read-only platform: [publications.api.org](http://publications.api.org)

## Std 53 \*

### Blowout Prevention Equipment Systems for Drilling Wells—Kazakh

Kazakh translation of Std 53.

4th Edition | November 2012 | Product Number: G05304K | Price: \$124.00

## 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: January 2012

Product Number: G59002 | Price: \$122.00

You may access RP 59 in a read-only platform: [publications.api.org](http://publications.api.org)

## RP 59 \*

### Recommended Practice for Well Control Operations—Kazakh

Kazakh translation of RP 59.

2nd Edition | May 2006 | Product Number: G59002K | Price: \$98.00

## RP 59 \*

### Recommended Practice for Well Control Operations—Russian

Russian translation of RP 59.

2nd Edition | May 2006 | Product Number: G59002R | Price: \$97.00

## RP 64

### Recommended Practice for Diverter Systems Equipment and Operations

Covers the selection, installation, testing, and operation of diverter equipment systems on land and marine drilling rigs (barge, platform, bottom-supported, and floating). Diverter systems are composed of all subsystems required to operate the diverter under varying rig and well conditions. A general description of operational procedures is presented with suggestions for the training of rig personnel in the proper use, care, and maintenance of diverter systems. Equipment installations, arrangements, and operations as set forth in this publication are deemed adequate to meet specified well conditions and intended uses. Examples presented in this document are simplified embodiments and are not intended to be limiting or absolute. Pages: 61

2nd Edition | October 2001 | Reaffirmed: January 2012

Product Number: G64002 | Price: \$107.00

## RP 64 \*

### Recommended Practice for Diverter Systems Equipment and Operations—Kazakh

Kazakh translation of RP 64.

2nd Edition | October 2001 | Product Number: G64002K | Price: \$86.00

## RP 64 \*

### Recommended Practice for Diverter Systems Equipment and Operations—Russian

Russian translation of RP 64.

2nd Edition | November 2001 | Product Number: G64002R | Price: \$85.00

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## SUBSEA PRODUCTION SYSTEMS

### RP 17A/ISO 13628-1:2005

#### Design and Operation of Subsea Production Systems—General Requirements and Recommendations (includes Addendum 1 dated December 2010)

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 riser (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.

This edition of RP 17A is the identical national adoption of ISO 13628:2005. Pages: 232

4th Edition | January 2006 | Reaffirmed: April 2011

2-Year Extension: June 2016 | Product Number: GX17A04 | Price: \$182.00

### 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: \$230.00

### Spec 17D/ISO 13628-4 ♦

#### Design and Operation of Subsea Production Systems—Subsea Wellhead and Tree Equipment

(includes Addendum 1 dated September 2015, 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, 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.

This edition of Spec 17D is the identical national adoption of 13628-4. 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]

2-Year Extension: July 2016 | Product Number: GX17D02 | Price: \$186.00

You may access Spec 17D in a read-only platform: [publications.api.org](http://publications.api.org)

### Spec 17D \*

#### 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: \$131.00

### Spec 17E/ISO 13628-5:2009 ♦ Specification for Subsea Umbilicals

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.

This edition of Spec 17E is the identical national adoption of ISO 13628-5:2009. Pages: 167

4th Edition | October 2010 | 2-Year Extension: October 2012

Product Number: GX17E04 | Price: \$194.00

### Spec 17F ♦

#### Standard for Subsea Production Control Systems

Applies to design, fabrication, testing, installation, and operation of subsea production control systems. Spec 17F covers surface control system equipment, subsea-installed control system equipment, and control fluids. This equipment is utilized for control of subsea production of oil and gas and for subsea water and gas injection services. Where applicable, this specification 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 system; 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. In view of the diverse nature of the data provided, control system purchasers and specifiers are advised to select from this document only the provisions needed for the application at hand. Rework and repair of used equipment are beyond the scope of this specification. Pages: 114

3rd Edition | May 2014 | Product Number: G017F03 | Price: \$220.00

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## 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

2nd Edition | July 2006 | Reaffirmed: April 2011 and September 2016

Product Number: GX17G02 | Price: \$182.00

## 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/remotely operated tool (ROV/ROT) interfaces are covered by this standard. It is applicable to the selection, design, and operation of ROTs and ROVs 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: \$160.00

You may access the 1st Edition of RP 17H in a read-only platform:

[publications.api.org](http://publications.api.org)

## Spec 17J ◆

### Specification for Unbonded Flexible Pipe

(includes Errata 1 dated September 2016)

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: 90

4th Edition | May 2014 | Effective Date: November 1, 2014

Product Number: G017J04 | Price: \$135.00

You may access the 3rd Edition of Spec 17J in a read-only platform:

[publications.api.org](http://publications.api.org)

## Spec 17K/ISO 13628-10:2005 ◆

### 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 bonded flexible pipes, with reference to existing codes and standards where applicable. This document applies to bonded flexible pipe assemblies, consisting of segments of flexible pipe body with end fittings attached to both ends. It does not cover flexible pipes of unbonded structure or to flexible pipe ancillary components. This document can be applied to flexible pipes that include non-metallic reinforcing layers, though no effort was made to address the specific and unique technological aspects of this product.

This edition of Spec 17K is the identical national adoption of ISO 13628-10:2005. Pages: 74

2nd Edition | November 2005 | Effective Date: May 1, 2006

Reaffirmed: September 2016 | Product Number: GX17K02 | Price: \$151.00

## 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 I-tubes and J-tubes, 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 may also refer 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: \$170.00

## RP 17L2

### Recommended Practice for Flexible Pipe Ancillary Equipment

Provides guidelines for the design, materials selection, analysis, testing, manufacture, handling, transportation, installation, and integrity management of flexible pipe ancillary equipment. It presents the current best practice for design and procurement of ancillary equipment and gives guidance on the implementation of the specification for standard flexible pipe products. In addition, this document presents guidelines on the qualification of prototype products. The applicability relating to a specific

item of ancillary equipment within this recommended practice is stated at the beginning of the clause dedicated to that item of ancillary equipment. 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. Where relevant, the applicability of recommendations to umbilicals is indicated in the Applicability subclause for the ancillary equipment in question. 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 I-tubes and J-tubes, for example. In addition, it does not cover flexible pipe storage devices, for example reels. This recommended practice is intended to cover ancillary equipment made from several material types, including metallic, polymer, and composite materials. It may also refer to material types for particular ancillary components that are not commonly used for such components currently, but may be adopted in the future. Pages: 275

1st Edition | March 2013 | Product Number: G17L201 | Price: \$170.00

## RP 17N

### Recommended Practice for Subsea Production System Reliability and Technical Risk Management

Provides a structured approach that organizations can adopt to manage this 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 API recommended practice aims to provide operators, contractors, and suppliers with guidance in the application of reliability techniques to subsea projects within their scope of work and supply only. It is applicable to: standard and non-standard equipment and all phases of projects from feasibility studies to operation. This API recommended practice does not prescribe the use of any specific equipment or limit the use of any existing installed equipment or indeed 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 sections of the annex may only be of interest to the 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: 99

1st Edition | March 2009 | 2-Year Extension: March 2011  
Product Number: G17N01 | Price: \$178.00

## 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 autonomously 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: \$120.00

## RP 17P/ISO 13628-15:2011

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

Addresses specific requirements and recommendations for subsea structures and manifolds, 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 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 (SSIV); 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: GG17P01 | Price: \$150.00

## RP 17Q

### Subsea Equipment Qualification—Standardized Process for Documentation

Provides guidance on relevant qualification methods that may be applied to facilitate subsea project execution. Qualification of subsea equipment is based on a breakdown of individual subsea components and categorization of those individual components based on classes of equipment and component functionality. A comprehensive component-level breakdown can cater to wide flexibility for field-specific configurations. The qualification process presented in this recommended practice is governed by component-level evaluation and referencing using two separate forms of documentation: failure mode assessments (FMAs) and product qualification sheets (PQSs). Detailed documentation resources related to the proactive qualification methodology presented in this recommended practice are provided in the annexes. These resources include an index of components and individual PQS documents. Documents relating to manufacturing inspection and Factory Acceptance Testing are outside the scope of this document.

The templates in Annex B (FMA Templates) and Annex C (PQS Templates) may be purchased separately in a Microsoft® Excel format for \$59.00—Single User, or \$308.00—Intranet Licensing. Pages: 65

1st Edition | June 2010 | 2-Year Extension: June 2012  
Product Number: G17Q01 | Price: \$134.00

## 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: \$120.00

## 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: \$85.00

## 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 an 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: \$132.00

## 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: \$101.00

## 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: \$132.00

## 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: \$65.00

## TR 17TR5

### Avoidance of Blockages in Subsea Production Control and Chemical Injection Systems

Addresses the avoidance of blockages in subsea production control and chemical injection systems (CISs). It includes requirements and gives recommendations for the design and operation of subsea production systems (SPSs) with the aim of preventing blockages in control and production chemical fluid (PCF) conduits and associated connectors/fittings. In the context of design, this covers not only installed subsea hardware (trees, manifolds, etc.) and the connecting linkages (jumper arrangements, 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

1st Edition | March 2012 | Product Number: G17TR501 | Price: \$98.00

## TR 17TR6

### Attributes of Production Chemicals in Subsea Production Systems

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: \$98.00

## TR 17TR8

### High-Pressure High-Temperature Design Guidelines

Provides design guidelines for oil and gas subsea equipment utilized in high-pressure high-temperature (HPHT) environments. For the purpose of the technical report, HPHT environments are intended to be one or a combination of the following well conditions.

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- the completion of the well requires completion equipment or well control equipment assigned a pressure rating greater than 15,000 psia (15 ksi, 103.43 MPa) or a temperature rating greater than 350 °F (177 °C);
- the maximum anticipated surface pressure including shut-in tubing pressure is greater than 15,000 psia (15 ksi, 103.43 MPa) on the seafloor for a well with a subsea wellhead or tied back to the surface and terminated with surface operated equipment; or
- the flowing temperature is greater than 350 °F (177 °C) on the seafloor for a well with a subsea wellhead or tied back to the surface and terminated with surface operated equipment.

Service temperature ratings above 550 °F (288 °C) are outside the scope of this technical report.

This technical report is intended to serve as a general design guideline for HPHT application. Other subsea task groups and subcommittees may elect to adopt a portion or all of the presented guidelines for HPHT application, subject to their component hardware and application-related design constraints. Pages: 74

1st Edition | February 2015 | Product Number: G17TR81 | Price: \$120.00

## TR 17TR10

### Subsea Umbilical Termination (SUT) Design Recommendations

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: \$104.00

## TR 17TR11

### Pressure Effects on Subsea Hardware During Flowline Pressure Testing in Deep Water

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: \$80.00

## 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 properly account for external pressure (or in some cases, 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 from jurisdictional authority that may impose additional or different requirements to the consideration of external pressure or differential pressure in equipment designs. Pages: 28

1st Edition | March 2015 | Product Number: G17TR121 | Price: \$95.00

## 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: \$120.00

## 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: \$75.00

## 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 RP 14C, which provides guidance for topsides safety systems on offshore production facilities. Some sections of this document refer to RP 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 RP 14C and adopted in this recommended practice. Pages: 63

1st Edition | February 2015 | Product Number: G17V01 | Price: \$140.00

## 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 to 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: \$125.00

## 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 the following annexes:

- Annex A: Use of API Monogram by Licensees;
- Annex B: Requirements for HPHT Environment Equipment;
- Annex C: Requirements for HPHT Environment Operational Tools;
- Annex D: External Flow Testing Requirements.

\*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.

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: \$115.00

You may access the 2nd Edition of Spec 11D1 in a read-only platform: [publications.api.org](http://publications.api.org)

## 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

3rd Edition | June 2008 | Reaffirmed: March 2015

Product Number: G11V53 | Price: \$155.00

## 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

2nd Edition | July 1999 | Reaffirmed: March 2015

Product Number: G11V62 | Price: \$149.00

## 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

1st Edition | September 2003 | Reaffirmed: March 2015

Product Number: G11V81 | Price: \$119.00

## 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, nonpressure-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 liner/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.

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This edition of Spec 19AC is the modified national adoption of ISO 14998:2013. Pages: 63

1st Edition | September 2016

Product Number: G19AC01 | Price: \$112.00

## RP 19B ◆

### Recommended Practice for Evaluation of Well Perforators

(formerly RP 43)

(includes Addendum 1 dated April 2014 and Addendum 2 dated December 2014)

Describes standard procedures for evaluating the performance of perforating equipment so that representations of this performance may be made to the industry under a standard practice. Also contains tests to gauge performance under the following conditions:

- ambient temperature and pressure,
- simulated wellbore (stressed Berea sandstone),
- elevated temperature.

This edition also introduces a procedure to quantify the amount of debris that comes out of the perforating gun during detonation. Pages: 42

2nd Edition | September 2006 | Reaffirmed: April 2011

Product Number: G019B2 | Price: \$122.00

## RP 19B \*

### Recommended Practice for Evaluation of Well Perforators—Chinese

(formerly RP 43)

Chinese translation of RP 19B.

2nd Edition | September 2006

Product Number: G019B2C | Price: \$86.00

## RP 19B \*

### Recommended Practice for Evaluation of Well Perforators—Kazakh

(formerly RP 43)

Kazakh translation of RP 19B.

2nd Edition | September 2006

Product Number: G019B2K | Price: \$98.00

## RP 19B \*

### Recommended Practices for Evaluation of Well Perforators—Russian

Russian translation of RP 19B.

2nd Edition | September 2006

Product Number: G019B2R | Price: \$97.00

## RP 19C/ISO 13503-2:2006

### Measurement of Properties of Proppants Used in Hydraulic Fracturing and Gravel-Packing Operations

Provides standard testing procedures for evaluating proppants used in hydraulic fracturing and gravel packing operations. The objective of this recommended practice is to provide a consistent methodology for testing performed on hydraulic fracturing and/or gravel packing proppants. These procedures have been developed to improve the quality of proppants delivered to the well site. They are for use in evaluating certain physical properties used in hydraulic fracturing and gravel packing operations. These tests should enable users to compare the physical characteristics of various proppants tested under the described conditions and to select materials useful for hydraulic fracturing and gravel packing operations.

This edition of RP 19C is the identical national adoption of ISO 13503-2:2006 and replaces RP 56 and RP 58. Pages: 30

1st Edition | May 2008 | Reaffirmed: June 2016

Product Number: GX19C01 | Price: \$113.00

## RP 19D/ISO 13503-5:2006

### Measuring the Long-Term Conductivity of Proppants

(includes Errata 1 dated July 2008)

Provides standard testing procedures for evaluating proppants used in hydraulic fracturing and gravel-packing operations. The proppants mentioned in this publication refer to sand, ceramic media, resin coated proppants, gravel packing media, and other materials used for hydraulic fracturing and gravel-packing operations. The objective of RP 19D is to provide consistent methodology for testing performed on hydraulic-fracturing and/or gravel-packing proppants. It is not intended for use in obtaining absolute values of proppant pack conductivities under downhole reservoir conditions. The tests and test apparatus herein have been developed to establish standard procedures and conditions for use in evaluating the long-term conductivity of various hydraulic fracture proppant materials under laboratory conditions. This procedure enables users to compare the conductivity characteristics under the specifically described test conditions. The test results can aid users in comparing proppant materials for use in hydraulic fracturing operations.

This edition of RP 19D is the identical national adoption of ISO 13503-5:2006 and replaces RP 61. Pages: 24

1st Edition | May 2008 | Reaffirmed: May 2015

Product Number: GX19D01 | Price: \$107.00

## Spec 19G1/ISO 17078-1:2004 ◆

### Side-Pocket Mandrels

(includes Errata 1 dated December 2014)

Provides requirements for side-pocket mandrels used in the petroleum and natural gas industry. This document includes specifying, selecting, designing, manufacturing, quality control, testing, and preparation for shipping of side-pocket mandrels. This specification does not address nor include requirements for end connections between the side-pocket mandrels and the well conduit. The installation and retrieval of side-pocket mandrels is outside the scope of this part of ISO 17078. Additionally, this International Standard does not include specifications for center-set mandrels, or mandrels that employ or support tubing-retrievable flow control devices.

This specification does not include gas-lift or any other flow-control valves or devices, latches, and/or associated wire line equipment that may or may not be covered in other ISO specifications.

The side-pocket mandrels to which this specification refers are independent devices that can accept installation of flow control or other devices down-hole.

This edition of Spec 19G1 is the modified national adoption of ISO 17078-1:2004. Pages: 43

1st Edition | May 2010 | 2-Year Extension: February 2015

Product Number: GG19G11 | Price: \$103.00

## Spec 19G1/ISO 17078-1:2004 \*

### Side-Pocket Mandrels—Chinese

Chinese translation of Spec 19G1

1st Edition | May 2010 | Product Number: GG19G101C | Price: \$73.00

## Spec 19G2/ISO 17078-2:2007 ◆

### Flow-Control Devices for Side-Pocket Mandrels

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.

\*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.

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: 132

1st Edition | June 2010 | 2-Year Extension: February 2015

Product Number: GX19G21 | Price: \$155.00

## Spec 19G3/ISO 17078-3:2009 ◆

### Running Tools, Pulling Tools and Kick-Over Tools and Latches for Side-Pocket Mandrels

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

1st Edition | June 2011 | Product Number: GG19G301 | Price: \$145.00

## RP 19G4/ISO 17078-4:2010

### Practices for Side-Pocket Mandrels and Related Equipment

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 | Price: \$155.00

## 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: G19G92 | Price: \$165.00

## Spec 19TT ■

### Specification for Downhole Well Test Tools and Related Equipment

Provides the requirements for downhole well test tools and related equipment as they are defined herein for use in the petroleum and natural gas industries. Included are the requirements for design, design validation, manufacturing, functional evaluation, quality, handling, storage, and service centers. Tools utilized in downhole well test operations include tester valves, circulating valves, well testing packers, safety joints, well testing safety valves, testing surface safety valves (TSSVs), slip joints, jars, work string tester valves, sampler carriers, gauge carriers, drain valves, related equipment, and tool end connections. This specification does not cover open hole well test tools, downhole gauges, samplers, surface equipment, subsea safety equipment, perforating equipment and accessories, pup joints external to well test tool assemblies, work string and its connections, conveyance or intervention systems, installation, control and monitoring conduits, and surface control systems. A downhole well test is an operation deploying a temporary completion in a well to safely acquire dynamic rates, formation pressure/temperature, and formation fluid data. Downhole well test tools are also used in operations of well perforating, well shut-ins, circulation control of fluids, and stimulation activities. This document covers the downhole tools used to perform these operations; however, the operational requirements of performing these operations are not included. Pages: 94

1st Edition | October 2016 | Product Number: G19TT01 | Price: \$132.00

## 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, design validation, manufacturing, functional evaluation, repair, redress, handling, and storage. Subsurface barrier valves provide a means of isolating the formation or creating a barrier in the tubular to facilitate the performance of pre- and/or post-production/injection operational activities in the well.

The subsurface barrier valve is not designed as an emergency or fail-safe flow controlling safety device.

This International Standard does not cover installation and maintenance, control systems such as computer systems, and control conduits not integral to the barrier valve. Also not included are products covered under ISO 17078, ISO 16070, ISO 14310, ISO 10432, and ISO 10423 and the following products: downhole chokes, wellhead plugs, sliding sleeves, casing-mounted flow-control valves, injection valves, well-condition-activated valves or drill-stem test tools. This International Standard does not cover the connections to the well conduit.

This edition of Spec 19V is the modified national adoption of ISO 28781:2010. Pages: 58

1st Edition | May 2013 | Product Number: GG19V01 | Price: \$150.00

## SUPPLY CHAIN MANAGEMENT

### Spec 20A ◆

#### Carbon Steel, Alloy Steel, Stainless Steel, and Nickel Base Alloy Castings for Use in the Petroleum and Natural Gas Industry (includes Addendum 1 dated October 2013, Addendum 2 dated April 2015, and Errata 1 dated August 2015)

Specifies requirements for the design, qualification, production, marking, and documentation of steel and nickel base alloy castings used in the petroleum and natural gas industries. This standard applies to castings used in the manufacture of pressure containing, pressure controlling, and primary load bearing components. This standard establishes requirements for four casting specification levels (CSL) that define different levels of cast product technical, quality and qualification requirements. Pages: 29

1st Edition | March 2012 | Product Number: G20A01 | Price: \$73.00

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## Spec 20B ♦

### Open Die Shaped Forgings for Use in the Petroleum and Natural Gas Industry

(includes Errata dated December 2013)

Specifies requirements for the qualification and production of open die shaped forgings for use in API service components in the petroleum and natural gas industries when referenced by an applicable equipment standard or otherwise specified as a requirement for compliance.

This API standard is applicable to equipment used in the oil and natural gas industries where service conditions warrant the use of individually shaped open die forgings, including rolled rings. Examples include pressure containing or load bearing components. Forged bar, rolled bar, and forgings from which multiple parts are removed are beyond the scope of this specification.

This API standard establishes requirements for four forging specification levels (FSL). These four FSL designations define different levels of forged product technical, quality and qualification requirements. Pages: 20

1st Edition | April 2013 | Product Number: G20B01 | Price: \$85.00

## Spec 20C ♦

### Closed Die Forgings for Use in the Petroleum and Natural Gas Industry

Specifies requirements and gives recommendations for the design, qualification, and production of closed-die forgings for use in API service components in the petroleum and natural gas industries when referenced by an applicable equipment standard or otherwise specified as a requirement for compliance. Spec 20C is applicable to equipment used in the oil and natural gas industries where service conditions warrant the use of closed die forgings. Examples include pressure containing or load-bearing components. 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: G20C02 | Price: \$81.00

## Std 20D

### Nondestructive Examination Services for Equipment Used in the Petroleum and Natural Gas Industry

(includes Addendum 1 dated October 2016)

Specifies requirements for the design, development and qualification of nondestructive examination methods used in the manufacturer of equipment for the petroleum and natural gas industries. This is applicable to suppliers providing nondestructive examination (NDE) services for equipment used in the oil and natural gas industries. The requirements of this standard apply to magnetic particle, liquid penetrant, radiographic, and ultrasonic methods of nondestructive examination. Pages: 21

1st Edition | September 2013 | Product Number: G20D01 | Price: \$85.00

## Spec 20E ♦

### Alloy and Carbon Steel Bolting for Use in the Petroleum and Natural Gas Industries

(includes Errata dated October 2014)

Specifies requirements for the qualification, production, and documentation of alloy and carbon steel bolting used in the petroleum and natural gas industries. This standard applies to bolting used in pressure-containing and primary load-bearing oil and gas equipment. This standard establishes requirements for three bolting specification levels (BSL) that define different levels of technical, quality, and qualification requirements. Pages: 19

1st Edition | August 2012 | Product Number: G20E01 | Price: \$74.00

## Spec 20F ♦

### Corrosion Resistant Bolting for Use in the Petroleum and Natural Gas Industries

Establishes requirements for two bolting specification levels (BSLs). These two BSL designations define different levels of technical, quality, and qualification requirements. The levels are designated as BSL-2 and BSL-3. BSL-2 includes requirements in addition to those stated in the ASTM A453 and Std 6A718. BSL-3 adds technical, quality and qualification criteria to BSL-2. BSL-2 and BSL-3 are intended to be comparable to BSL-2 and BSL-3 as found in Spec 20E. BSL-1 is omitted from this specification.

This specification covers the following product forms, processes, and sizes:

- machined studs;
- machined bolts, screws, and nuts;
- cold headed bolts, screws, and nuts;
- 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;
- roll threaded studs, bolts, and screws <1.5 in. (38.1 mm) diameter;
- roll 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: 16

1st Edition | June 2015 | Product Number: G20F01 | Price: \$75.00

## Std 20H

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

Specifies requirements for the qualification of suppliers of heat treatment services used in the manufacture of equipment for the petroleum and natural gas industries.

This standard is applicable to suppliers providing heat treatment services where API product standards require such services or otherwise specified as a requirement for conformance. 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: \$65.00

## DRILLING AND PRODUCTION OPERATIONS

### RP 31A

#### Standard Form for Hardcopy Presentation of Downhole Well Log Data

Provides an improved standard format for hardcopy presentation of downhole well log data. Standardizing the log form and data presentation allows the user to more easily combine a broad range of log data in order to interpret well status and performance. Pages: 18

1st Edition | August 1997 | Reaffirmed: February 2014

Product Number: G31A01 | Price: \$97.00

### RP 45

#### Recommended Practice for Analysis of Oilfield Waters

Provides analysis methods for the determination of dissolved and dispersed components in oilfield waters (produced water, injected water, aqueous workover fluids, and stimulation fluids). Also includes the applications of oilfield water analyses; the proper collection, preservation, and labeling of field samples; a description of the various analytical methods available,

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including information regarding interferences, precision, accuracy, and detection limits; as well as the appropriate reporting formats for analytical results. Pages: 60

3rd Edition | August 1998 | Reaffirmed: February 2014

Product Number: G45003 | Price: \$142.00

## RP 50

### Natural Gas Processing Plant Practices for Protection of the Environment

Assists gas plant operators in understanding their environmental responsibilities. It is intended to be used primarily by environmental, engineering, and operations personnel and by management involved in building, maintaining, modifying, and operating gas processing plants. Operations within the scope of this standard include natural gas processing and associated gas compression facilities. This publication begins with initial plant planning, permitting, and construction and ends with plant closure and site restoration procedures. General guidelines are provided to be used at gas plant locations to develop site-specific environmental programs. Pages: 23

2nd Edition | December 1995 | Reaffirmed: January 2013

Product Number: G50002 | Price: \$109.00

## RP 51

### Onshore Oil and Gas Production Practices for Protection of the Environment

Provides environmentally sound practices to promote protection of the environment in domestic onshore oil and gas production operations. Production facilities, including produced water handling facilities, are covered. Coverage begins with design and construction of access roads and well locations and carries through to abandonment and site restoration activities. Pages: 17

3rd Edition | March 2001 | Reaffirmed: January 2013

Product Number: G51003 | Price: \$51.00

## RP 51R

### 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

1st Edition | July 2009 | Reaffirmed: December 2015

Product Number: G51R01 | Price: \$76.00

You may download a PDF of this document from the Policy & Issues/Hydraulic Fracturing section of the API website.

## RP 52

### Land Drilling Practices for Protection of the Environment

Provides guidelines to promote the protection of the environment in land drilling operations. Pages: 40

2nd Edition | July 1995 | Reaffirmed: September 2010

Product Number: G52002 | Price: \$115.00

## RP 68

### Recommended Practice for Oil and Gas Well Servicing and Workover Operations Involving Hydrogen Sulfide

Addresses personnel training, personnel protective equipment, contingency planning, and emergency procedures. Also included are classification of locations, materials and equipment, operations, rig practices, special operations, offshore operations, characteristics of hydrogen sulfide and sulfur dioxide, and evaluation and selection of hydrogen sulfide monitoring equipment. Pages: 54

1st Edition | January 1998 | Reaffirmed: September 2010

Product Number: G68001 | Price: \$76.00

## RP 80

### Guidelines for the Definition of Onshore Gas Gathering Lines

Developed by an industry coalition that included representatives from over 20 petroleum industry associations, provides a functional description of onshore gas gathering pipelines for the sole purpose of providing users with a practical guide for determining the application of the definition of gas gathering in the federal Gas Pipeline Safety Standards, 49 CFR Part 192, and state programs implementing these standards. Pages: 53

1st Edition | April 2000 | Reaffirmed: January 2013

Product Number: G80001 | Price: \$125.00

You may access RP 80 in a read-only platform: [publications.api.org](http://publications.api.org)

## RP 90

### Annular Casing Pressure Management for Offshore Wells

Serves as a guide for managing annular casing pressure in offshore wells. This guide is meant to be used for offshore wells that exhibit annular casing pressure, including thermal casing pressure, sustained casing pressure (SCP), and operator-imposed pressure. Covers monitoring, diagnostic testing, the establishment of a maximum allowable wellhead operating pressure (MAWOP), and documentation of annular casing pressure for the various types of wells that occur offshore. Included also is a discussion of risk assessment methodologies that can be used for the evaluation of individual well situations where the annular casing pressure is not within the MAWOP guidelines. Provides guidelines in which a broad range of casing annuli that exhibit annular pressure can be managed in a routine fashion while maintaining an acceptable level of risk. Pages: 84

1st Edition | August 2006 | Reaffirmed: January 2012

Product Number: G09001 | Price: \$182.00

You may access RP 90 in a read-only platform: [publications.api.org](http://publications.api.org)

## RP 90-2 ■

### Annular Casing Pressure Management for Onshore Wells

Serves as a guide to monitor and manage annular casing pressure (ACP) in onshore wells, including production, injection, observation/monitoring, and storage wells. This document applies to wells that exhibit thermally induced, operator-imposed, or sustained ACP. It includes criteria for establishing diagnostic thresholds (DTs), monitoring, diagnostic testing, and documentation of ACP for onshore wells. Also included is a discussion of risk management considerations that can be used for the evaluation of individual well situations where the annular casing pressure falls outside the established diagnostic thresholds.

This document recognizes that an ACP outside of the established DTs can result in a risk to well integrity. The level of risk presented by ACP depends on many factors, including the design of the well, the performance of barrier systems within the well, the source of the annular casing pressure, and whether there is an indication of annular flow exists. This document provides guidelines in which a broad range of casing annuli that exhibit annular casing pressure can be managed while maintaining well integrity. Pages: 60

1st Edition | April 2016 | Product Number: G090201 | Price: 182.00

## 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. Pages: 14

1st Edition | August 2015 | Product Number: G92L01 | Price: \$70.00

You may access Bull 92L in a read-only platform at [publications.api.org](http://publications.api.org)

## 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

1st Edition | November 2008 | Reaffirmed: April 2013

Product Number: G92U01 | Price: \$105.00

## 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 buildup. 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: \$175.00

## 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: \$65.00

## RP 98

### 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

1st Edition | August 2013 | Product Number: G09801 | Price: \$130.00

## RP 99

### 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

1st Edition | April 2014 | Product Number: G09901 | Price: \$80.00

## DRILLING AND PRODUCTION OPERATIONS: TRAINING

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5th Edition | June 1996 | Reaffirmed: March 2007

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3rd Edition | January 1995 | Reaffirmed: March 2007

Product Number: GVT033 | Price: \$97.00

### 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

3rd Edition | January 1994 | Reaffirmed: March 2007

Product Number: GVT053 | Price: \$122.00

### 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

5th Edition | November 2016 | Product Number: GT1005 | Price: \$65.00

### 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: GT7002 | Price: \$59.00

### 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: \$59.00

### 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: \$59.00

### 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

2nd Edition | October 1995 | Reaffirmed: January 2013

Product Number: GT7002 | Price: \$57.00

## SPECIAL PUBLICATIONS

### 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: \$83.00

### RP 100-1

#### 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

# Exploration and Production

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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

1st Edition | October 2015 | Product Number: G100101 | Price: \$90.00

You may access RP 100-1 in a read-only platform: [publications.api.org](http://publications.api.org)

## RP 100-2

### 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

1st Edition | August 2015 | Product Number: G100201 | Price: \$90.00

You may access RP 100-2 in a read-only platform: [publications.api.org](http://publications.api.org)

## 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 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.

1st Edition | July 2014 | Product Number: G100301 | Price: \$60.00

You may download a PDF of this document from the Policy & Issues/ Hydraulic Fracturing section of the API website.

## VOLUNTARY OPERATING AGREEMENTS AND BULLETINS

### 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; Bulletin D16, the Plan Template, and a CD-ROM with the Microsoft® Word version of the Plan Template.

5th Edition | April 2011 | Product Number: GD1605

Price: \$258.00 | Template Only: Price: \$95.00

## HEALTH, ENVIRONMENT, AND SAFETY: EXPLORATION AND PRODUCTION SAFETY STANDARDS

### API HF1

#### Hydraulic Fracturing Operations—Well Construction and Integrity Guidelines

Provides guidance and highlights industry recommended practices for well construction and integrity for wells that will be hydraulically fractured. The guidance provided here will help to ensure that shallow groundwater aquifers and the environment will be protected, while also enabling economically viable development of oil and natural gas resources. This document is intended to apply equally to wells in either vertical, directional, or horizontal configurations. Maintaining well integrity is a key design principle and design feature of all oil and gas production wells. Maintaining well integrity is essential for the two following reasons.

- To isolate the internal conduit of the well from the surface and subsurface environment. This is critical in protecting the environment, including the groundwater, and in enabling well drilling and production.
- To isolate and contain the well's produced fluid to a production conduit within the well.

Although there is some variability in the details of well construction because of varying geologic, environmental, and operational settings, the basic practices in constructing a reliable well are similar. These practices are the result of operators gaining knowledge based on years of experience and technology development and improvement. These experiences and practices are communicated and shared via academic training, professional and trade associations, extensive literature and documents, and very importantly, industry standards and recommended practices. Pages: 24

1st Edition | October 2009 | Product Number: GHF101 | Price: \$42.00

You may download a PDF of this document from the Policy & Issues/ Hydraulic Fracturing section of the API website.

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## API HF2

### Water Management Associated with Hydraulic Fracturing

Identifies and describes many of the current industry best practices used to minimize environmental and societal impacts associated with the acquisition, use, management, treatment, and disposal of water and other fluids associated with the process of hydraulic fracturing. While this document focuses primarily on issues associated with hydraulic fracturing pursued in deep shale gas development, it also describes the important distinctions related to hydraulic fracturing in other applications. Moreover, this guidance document focuses on areas associated with the water used for purposes of hydraulic fracturing and does not address other water management issues and considerations associated with oil and gas exploration, drilling, and production. These topics will be addressed in future API documents. Pages: 26

1st Edition | June 2010 | Product Number: GHF201 | Price: \$42.00

You may download a PDF of this document from the Policy & Issues/ Hydraulic Fracturing section of the API website.

## API HF3

### Practices for Mitigating Surface Impacts Associated with Hydraulic Fracturing

Identifies and describes practices currently used in the oil and natural gas industry to minimize surface environmental impacts—potential impacts on surface water, soils, wildlife, other surface ecosystems, and nearby communities—associated with hydraulic fracturing operations. While this document focuses primarily on issues associated with operations in deep shale gas developments, it also describes the important distinctions related to hydraulic fracturing in other applications. Pages: 18

1st Edition | January 2011 | Product Number: GHF301 | Price: 42.00

You may download a PDF of this document from the Policy & Issues/ Hydraulic Fracturing section of the API website.

## RP 49

### Recommended Practice for Drilling and Well Service 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: \$88.00

## RP 49 \*

### Recommended Practice for Drilling and Well Service Operations Involving Hydrogen Sulfide—Kazakh

Kazakh translation of RP 49.

3rd Edition | May 2001 | Product Number: G4903K | Price: \$71.00

## RP 49 \*

### 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: \$68.00

## RP 51R

### 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

1st Edition | July 2009 | Reaffirmed: December 2015

Product Number: G51R01 | Price: \$76.00

You may download a PDF of this document from the Policy & Issues/ Hydraulic Fracturing section of the API website.

## RP 54

### 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: \$125.00

## RP 54 \*

### Recommended Practice for Occupational Safety for Oil and Gas Well Drilling and Servicing Operations—Kazakh

Kazakh translation of RP 54.

3rd Edition | August 1999 | Product Number: G54003K | Price: \$100.00

## RP 54 \*

### Recommended Practice for Occupational Safety for Oil and Gas Well Drilling and Servicing Operations—Russian

Russian translation of RP 54.

3rd Edition | August 1999 | Product Number: G54003R | Price: \$100.00

## RP 55

### Recommended Practice for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide

Covers recommendations for protection of employees and the public, as well as conducting oil and gas producing and gas processing plant operations where hydrogen sulfide is present in the fluids being produced. Pages: 40

2nd Edition | February 1995 | Reaffirmed: January 2013

Product Number: G55002 | Price: \$115.00

## RP 67

### Recommended Practice for Oilfield Explosives Safety

Applies to explosives used in oil and gas well operations, more specifically, explosives used inside the wellbore. Guidance is provided for explosives transportation, on-site explosives loading and unloading operations, electrical wireline operations, tubing conveyed operations, self-contained activating tools, setting tools, sidewall sample taker tools, select fire perforating guns, and bullet perforating guns. Recommendations are presented regarding surface equipment and downhole equipment.

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Recommended training and minimum qualifications are presented for personnel who participate in handling and using explosives at the well site. Pages: 18

2nd Edition | May 2007 | Reaffirmed: January 2015

Product Number: G06702 | Price: \$85.00

## RP 67 \*

### Recommended Practice for Oilfield Explosives Safety—Kazakh

Kazakh translation of RP 67.

2nd Edition | May 2007 | Product Number: G09308K | Price: \$68.00

## RP 67 \*

### Recommended Practice for Oilfield Explosives Safety—Russian

Russian translation of RP 67.

2nd Edition | May 2007 | Product Number: G09309R | Price: \$69.00

## RP 74

### Recommended Practice for Occupational Safety for Onshore Oil and Gas Production Operation

Recommends practices and procedures for promoting and maintaining safe working conditions for personnel engaged in onshore oil and gas production operations, including special services. Pages: 23

1st Edition | October 2001 | Reaffirmed: January 2013

Product Number: G74001 | Price: \$61.00

## 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

3rd Edition | May 2004 | Reaffirmed: April 2013

Product Number: G07503 | Price: \$89.00

You may access RP 75 in a read-only platform at [publications.api.org](http://publications.api.org)

## RP 75 \*

### Recommended Practice for Development of a Safety and Environmental Management Program for Offshore Operations and Facilities—Chinese

Chinese translation of RP 75.

3rd Edition | May 2004 | Product Number: G07503C | Price: \$63.00

## 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 these and especially other operators 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: \$34.00

## 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 and 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: \$57.00

## 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\*

## Bull E1

### Generic Hazardous Chemical Category List and Inventory for the Oil and Gas Exploration and Production Industry (Superfund Amendments and Reauthorization Act of 1986, Emergency Planning and Community Right-to-Know Act) (includes Errata 1 dated September 1991)

Under Sections 311 and 312 of the Superfund Amendments and Reauthorization Act of 1986, owners and operators of oil and gas exploration and production facilities must provide to state and local emergency response agencies information on hazardous chemicals they produce or use. This bulletin provides a simplified means of compliance with these regulations. Pages: 86

2nd Edition | December 1990 | Reaffirmed: June 2000

Product Number: G11000 | Price: \$142.00

## Bull E3

### Well Abandonment and Inactive Well Practices for U.S. Exploration and Production Operations, Environmental Guidance Document

Addresses the environmental concerns related to well abandonment and inactive well practices. The primary environmental concerns are protection of freshwater 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: 52

1st Edition | January 1993 | Reaffirmed: June 2000

Product Number: G11007 | Price: \$142.00

## 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

2nd Edition | May 2003 | Product Number: GE4002 | Price: \$169.00

## 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: \$122.00

## HEALTH, ENVIRONMENT, AND SAFETY: NATURALLY OCCURRING RADIOACTIVE MATERIALS

### Bull E2

#### Management of Naturally Occurring Radioactive Materials (NORM) in Oil and Gas Production

Naturally occurring radioactive materials (NORM) are present in oil and gas operations at some locations and can deposit in well tubulars, surface piping, vessels, pumps, and other producing and processing equipment. The purpose of this document is to inform oil and gas operators of the possible presence of NORM and to provide relevant information on protecting workers, the public, and the environment. The objective of this document is to provide general information to users so that they have an understanding of the fundamental radiation issues associated with the management of NORM. Issues where the advice of a professional health physicist, industrial hygienist, or other technical expert may be useful are identified and guidance provided. Readers are advised to contact their state regulatory office and work very closely with that office on all NORM issues. Pages: 50

2nd Edition | March 2006 | Product Number: GE2002 | Price: \$122.00

## 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: \$115.00

## 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: \$115.00

## 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: \$115.00

## 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: \$115.00

## 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: \$115.00

## 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: \$115.00

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### HEALTH, ENVIRONMENT, AND SAFETY: WASTE

#### Guidelines for Commercial Exploration and Production Waste Management

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

March 2001 | Product Number: G00004 | For a free copy of this document, please visit [ww.api.org/environment-health-and-safety/environmental-performance/environmental-stewardship/waste-management-facilities.aspx](http://ww.api.org/environment-health-and-safety/environmental-performance/environmental-stewardship/waste-management-facilities.aspx)

#### 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: IOPL06 | For a free copy, please visit [www.api.org/aboutoilgas/sectors/explore/livestock.cfm](http://www.api.org/aboutoilgas/sectors/explore/livestock.cfm)

#### 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: \$125.00

### SECURITY

#### API Standard for Third Party Network Connectivity

Provides guidance for implementing secure third-party connections between the information technology systems and a network of two companies that have a business relationship and a common objective. The standard provides suggestions for companies to follow to establish third-party network connections, while protecting their individual systems and data from unauthorized access or manipulation. Pages: 36

1st Edition | November 2007 | Product Number: TSTP01 | Price: \$90.00

#### Security Guidelines for the Petroleum Industry

API's 3rd Edition of this document is now in use at oil and gas facilities around the world to help managers decide how to deter terrorist attacks. Covering all segments of the industry (production, refining, transportation, pipeline, and marketing), this guidance builds on the existing solid foundation of design and operational regulations, standards, and recommended practices, which relate to facility design and safety, environmental protection, emergency response, and protection from theft and vandalism. Produced in close collaboration with the U.S. Department of Homeland Security and other federal agencies, these guidelines, viewed as a living document, are broadly applicable to facility security in light of September 11, 2001 and provide the starting point for developing security plans at oil and natural gas facilities and operations. Pages: 58

3rd Edition | April 2005 | Product Number: OS0002 | Price: \$191.00

You may access this document in a read-only platform: [publications.api.org](http://publications.api.org)

### Security Vulnerability Assessment Methodology for the Petroleum and Petrochemical Industries

The American Petroleum Institute and the National Petrochemical & Refiners Association jointly developed a new methodology for evaluating the likelihood and consequences of terrorist attacks against refineries and petrochemical facilities. *Security Vulnerability Assessment Methodology for Petroleum and Petrochemical Facilities* is designed for companies to use in assessing vulnerabilities and potential damages from different kinds of terrorist attacks. In the post September 11 era, companies have reevaluated and enhanced security at their facilities. The methodology will provide officials with a new analytical tool to determine "the likelihood of an adversary successfully exploiting vulnerability and the resulting degree of damage or impact." This vulnerability assessment methodology was produced in close collaboration with the U.S. Department of Homeland Security and other federal agencies. Pages: 155

October 2004 | Product Number: OSVA02 | Price: \$191.00

You may access this in a read-only platform: [publications.api.org](http://publications.api.org)

#### 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: \$57.00

#### 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: \$61.00