If you have any questions or comments regarding API standards, please visit https://www.api.org/standards.

NOTE  Free publications with an asterisk are subject to a $10.00 handling charge for each total order, plus actual shipping charges.

**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 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 approved by API. 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, Addendum 1 dated June 2016, and Addendum 2 dated June 2018)

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: G0Q109 | Price: $124.00

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: G0Q109C | Price: $87.00

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: G0Q109P | Price: $124.00

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

Product Number: G0Q201 | Price: $82.00

Spec Q2  

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

Chinese translation of Spec Q2.  

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

Spec Q2  

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

Portuguese translation of Spec Q2.  

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

Spec Q2  

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

Russian translation of Spec Q2.  

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

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This publication is a new entry in this catalog.  ◆ This publication is related to an API licensing, certification, or accreditation program.
mean one or more of the following well conditions exist:
• the completion of the well requires completion equipment or well control
  equipment necessary to ensure the equipment is fit-for-service in the
  validation, material selection considerations, and manufacturing process
  natural gas industries that includes design verification analysis, design
  Temperature Equipment
Focuses on an evaluation process for HPHT equipment in the petroleum and
Protocol for Verification and Validation of High-Pressure High-
wellhead.
• 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: $151.00
TR 18TR4 Evaluation of Welding Requirements as Applicable to API Product
Specifications
A result of an evaluation of the consistency of welding requirements between
API Product Specifications that are primarily used in exploration and
production. The intent of the evaluation was to identify a means to standardize
welding requirements across API Product Specifications. Pages: 117
1st Edition | December 2017 | Product Number: G18TR401 | Price: $124.00
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: $67.00
TR 18TR2 Guidance to API Specification Q2
Provides guidance on the intent and use of API Q2. This document is not
intended to provide training on the development and implementation of a
quality management system.
This document will not provide guidance to each section of the API Q2.
Pages: 13
1st Edition | December 2017 | Product Number: G18TR201 | Price: $62.00
TR 18TR1 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
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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: 11
1st Edition | December 2011 | Product Number: G0Q201SP | Price: $82.00
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
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: $62.00
TR 18TR4 Evaluation of Welding Requirements as Applicable to API Product
Specifications
A result of an evaluation of the consistency of welding requirements between
API Product Specifications that are primarily used in exploration and
production. The intent of the evaluation was to identify a means to standardize
welding requirements across API Product Specifications. Pages: 117
1st Edition | December 2017 | Product Number: G18TR401 | Price: $124.00
RP 1FSC * Facilities Systems Completion Planning and Execution
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subsurface. Although intended for oil and gas industry, the process
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systems completion process is designed to help prepare and manage the
transfer of care, custody, and control of facilities under construction through
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
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documents on equipment specifications for HPHT service. This report is not
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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: 11
1st Edition | December 2011 | Product Number: G0Q201SP | Price: $82.00
Spec Q2 * Specification for Quality Management System Requirements for
Service Supply Organizations for the Petroleum and Natural Gas
Industries—Spanish
Spanish translation of Q2.
1st Edition | December 2011 | Product Number: G0Q201SP | Price: $82.00
Std 18LCM ◆ Product Life Cycle Management System Requirements for the
Petroleum and Natural Gas Industries
Defines the requirements of a management system for service providers
performing lifecycle management of products for organizations in the
petroleum and natural gas industry. The document identifies requirements
for service providers of lifecycle management and the activities required to
perform product lifecycle management including determination of product
lifecycle management status, actions required to maintain a status, and
development of the lifecycle management plan.
Multiple products used together as part of a system application may be
included in the scope of this document, but only as individual products. This
document was developed for upstream activities application. This document
is intended for pressure-containing and/or pressure-controlling products for
wellbore fluids but may also be applied to other equipment that is specified
by the product owner or customer. While this document and/or portions
thereof could be applicable to other industry segments, it is recommended
that other segments carefully review these requirements in order to
determine their applicability and, if necessary, to develop an applicable
annex identifying any segment-specific requirements.
This document does not include technical requirements for products and
does not include requirements for determination of fitness-for-service for a
particular product. In addition, this document does not include requirements
for original design and manufacture of product. Pages: 14
1st Edition | April 2017 | Product Number: G18LCM1 | Price: $80.00
This publication is related to an API licensing, certification, or accreditation program.
OFFSHORE STRUCTURES

API OSRC

Proceedings of the 2014 Offshore Structural Reliability Conference

The 2014 Offshore Structural Reliability Conference was hosted by API for the second time as part of the Offshore Technology Conference (OTC). The conference, held in Houston, Texas, was co-sponsored by the American Society of Civil Engineers (ASCE), the International Association of Oil & Gas Producers (IOGP), and the Offshore Technology Conference (OTC). The conference included papers on a wide range of topics related to offshore structures, including design, fabrication, operation, and maintenance. The conference was open to anyone interested in offshore structures, and it provided a forum for the exchange of ideas and knowledge. The conference was a great success, with over 1,000 attendees and 100 exhibitors. The proceedings of the conference will be published in a special issue of the Journal of Offshore Structures and a conference proceedings book.

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 12 in. outside diameter and greater, with a wall thickness of ⅝ 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 this specification is intended to be used primarily in piling and main structures, including tubular truss connections, where internal stiffeners are not usually required. Pages: 8

Product Number: G02B08 | Price: $85.00

Spec 2B *

Specification for the Fabrication of Structural Steel Pipe—Chinese

Chinese translation of Spec 2B.

6th Edition | July 2001 | Product Number: G02B06C | Price: $61.00

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 revolving lifting devices transferred by crane of materials or personnel 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: $147.00

Spec 2C *

Offshore Pedestal-Mounted Cranes—Chinese

Chinese translation of Spec 2C.

7th Edition | March 2012 | Product Number: G02C07C | Price: $104.00

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: $149.00

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 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: $129.00

Spec 2F ◆

Specification for Mooring Chain

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

Product Number: G02F06 | Price: $92.00

Spec 2F *

Specification for Mooring Chain—Chinese

Chinese translation of Spec 2F.

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

*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.
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 14, 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: $162.00

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

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

2nd Edition | October 2011 | Product Number: G2FPS02 | Price: $192.00

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

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

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

This edition of RP 2GEO is the modified national adoption of ISO 19901-4:2003. Pages: 103

1st Edition | April 2011 | Product Number: G2GEO01 | Price: $159.00

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

Covers two grades of intermediate strength steel plates up to 4 in. thick for use in welded construction of offshore structures, in selected critical portions that must resist impact, plastic fatigue loading, and lamellar tearing. These steels are intended for fabrication primarily by cold forming and welding as per Spec 2B. The welding procedure is of fundamental importance and it is presumed that procedures will be suitable for the steels and their intended service. Conversely, the steels should be amenable to fabrication and welding under shipyard and offshore conditions. Pages: 24

9th Edition | July 2006 | Effective Date: February 1, 2007
Reaffirmed: January 2012 | Product Number: G02H09 | Price: $97.00

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

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

1st Edition | May 2009 | Product Number: G2HINS01 | Price: $85.00

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

Provides guidelines for inspecting mooring components of mobile offshore drilling units (MODUs) and permanent floating installations. This edition includes:

- inspection guidelines for steel permanent moorings on permanent floating installations are added;
- inspection guidelines for fiber ropes used for permanent and MODU moorings are included;
- special guidance for MODU mooring inspection in the areas of tropical cyclone is provided.

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

3rd Edition | April 2008 | Reaffirmed: June 2015
Product Number: G02I03 | Price: $152.00

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

Contains general requirements for the determination 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,
offshore drilling units, the procedures relating to ice actions and ice management contained herein are applicable to the assessment of such units. This standard does not apply to mechanical, process, and electrical equipment or any specialized process equipment associated with arctic and cold region offshore operations except in so far as it is necessary for the structure to sustain safely the actions imposed by the installation, housing, and operation of such equipment.

This edition of RP 2N is the modified national adoption of ISO 19906:2010. Pages: 458

3rd Edition | April 2015 | Product Number: G02N03 | Price: $205.00

Std 2RD

Dynamic Risers for Floating Production Systems

Addresses structural analysis procedures, design guidelines, component selection criteria, and typical designs for all new riser systems used on FPSs. Guidance is also given for developing load information for the equipment attached to the ends of the risers. The recommended practice for structural design of risers, as reflected in this document, is generally based on the principles of limiting stresses in the risers and related components under normal, extreme, and accidental conditions. This document assumes that the risers will be made of steel or titanium pipe or unbonded flexible pipe. However, other materials, such as aluminum, are not excluded if risers built using these materials can be shown to be fit for purpose. Design considerations for unbonded flexible pipe are included primarily by reference to RP 17B and Spec 171. Pages: 81

2nd Edition | September 2013 | Product Number: G2RD02 | Price: $252.00

Bull 2S

Design of Windlass Wildcats for Floating Offshore Structures

Covers the design of windlass wildcats to ensure proper fit and function between wildcat and mooring chain. Wildcats are of the five-wheelp 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

Product Number: G02S02 | Price: $78.00

Spec 2SC

Manufacture of Structural Steel Castings for Primary Offshore Applications

Casts 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 applications, 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: $117.00
Catenary moorings for both permanent and temporary offshore installations

- monohull-based floating production, storage, and offloading units such as:
  - monohull-based floating production, storage units (FPSOs, FSUs);
  - monohull or semi-submersible based floating production units (FPUs, FPSOs);
- catenary anchor leg mooring (CALM) buoys;
- mobile offshore units.

This document applies to synthetic fiber ropes used in the form of taut leg or Catenary Anchor Leg Mooring (CALM) buoys.

- monohull-based floating production, storage units (FPSOs);
- monohull or semi-submersible based floating production units (FPUs, FPSOs);
- mobile offshore units.

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

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

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

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

RP 95J
Gulf of Mexico Jackup Operations for Hurricane Season
Presents an interim approach to siting jackup mobile offshore drilling units (MODUs) and to recommend certain operational procedures to enhance jackup survivability and stationkeeping during hurricane season in the Gulf of Mexico during drilling and 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
Product Number: G95J01 | Price: $64.00

DERRICKS AND MASTS

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

RP 4G
Operation, Inspection, Maintenance, and Repair of Drilling and Well Servicing Structures
(includes Addendum 1 dated August 2016)
Provides guidelines and establishes recommended procedures for inspection, maintenance, and repair of items for drilling and well servicing 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: $118.00

RP 4G *
Operation, Inspection, Maintenance, and Repair of Drilling and Well Servicing Structures—Chinese
Chinese translation of RP 4G.
Product Number: G04G04C | Price: $119.00

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This publication is a new entry in this catalog. ◆ This publication is related to an API licensing, certification, or accreditation program.
Covers dimensions, tolerances, and marking requirements for API threads and the gauges that control the acceptance criteria for the threads. Thread element gauges, instruments, and requirements for the inspection of threads for line pipe, round thread casing, round thread tubing, and buttress casing connections are included. Pages: 116

16th Edition | December 2017 | Product Number: G5B016 | Price: $155.00

Spec 5B *
Threading, Gauging, and Inspection of Casing, Tubing, and Line Pipe Threads—Russian

Russian translation of Spec 5B.

16th Edition | December 2017 | Product Number: G5B016R | Price: $124.00

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

Product Number: G05B105 | Price: $146.00

RP 5B1 *
Gauging and Inspection of Casing, Tubing and Pipe Line Threads—Kazakh

Kazakh translation of RP 5B1.

5th Edition | August 1999 | Product Number: G05B15K | Price: $117.00

RP 5C1
Recommended Practice for Care and Use of Casing and Tubing

Covers use, transportation, storage, handling, and reconditioning of casing and tubing. Pages: 31

Product Number: G05C18 | Price: $118.00

RP 5C1 *
Recommended Practice for Care and Use of Casing and Tubing—Chinese

Chinese translation of RP 5C1.

18th Edition | May 1999 | Product Number: G05C18C | Price: $83.00

TR 5C3
Calculating Performance Properties of Pipe Used as Casing or Tubing

Illustrates the equations and templates necessary to calculate the various pipe properties, including:

• pipe performance properties, such as axial strength, internal pressure resistance, and collapse resistance;
• minimum physical properties;
• product assembly force (torque);
• product test pressures;
• critical product dimensions related to testing criteria;
• critical dimensions of testing equipment; and
• critical dimensions of test samples.

For equations related to performance properties, extensive background information is also provided regarding their development and use. Pages: 400

7th Edition | June 2018 | Product Number: G5C307 | Price: $234.00

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The requirements that define different levels of standard technical specification levels (PSL-1, PSL-2, and PSL-3). This International Standard covers the following grades of drill-pipe:
- grade D 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: G5DPO01 | Price: $186.00

Chinese translation of Spec 5DP.
1st Edition | August 2009 | Product Number: G5DPO01C | Price: $131.00

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

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

Spec 5L *
Line Pipe
(includes Errata 1 dated May 2018)
Specifies requirements for the manufacture of two product specification levels (PSL 1 and PSL 2) of seamless and welded steel pipes for use in pipeline transportation systems in the petroleum and natural gas industries. This specification is not applicable to cast pipe. Pages: 210

46th Edition | April 2018 | Effective Date: November 1, 2018
Product Number: G05L46 | Price: $294.00

Spec 5L * Line Pipe—Russian
Russian translation of Spec 5L.
46th Edition | April 2018 | Product Number: G05L46R | Price: $235.00
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 3/8 and larger in lengths longer than single random. These recommendations cover coated or uncoated pipe, but they do not encompass loading practices designed to protect pipe coating from damage. Pages: 5
Product Number: G5L107 | Price: $61.00

RP 5L1 *
Recommended Practice for Railroad Transportation of Line Pipe—Russian
Russian translation of RP 5L1.
7th Edition | September 2009 | Product Number: G5L107R | Price: $47.00

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
Product Number: G5L204 | Price: $85.00

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: $61.00

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: $69.00

RP 5L2 *
Recommended Practice for Internal Coating of Line Pipe for Non-Corrosive Gas Transmission Service—Russian
Russian translation of RP 5L2.

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

RP 5L3 *
Drop-Weight Tear Tests on Line Pipe—Russian
Russian translation of RP 5L3.

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
Product Number: G02906 | Price: $92.00

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: $74.00

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
Product Number: G05L82 | Price: $129.00

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: $103.00

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: $103.00

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
Product Number: G5L901 | Price: $81.00

RP 5L9 *
External Fusion Bonded Epoxy Coating of Line Pipe—Kazakh
1st Edition | December 2001 | Product Number: G5L901K | Price: $66.00

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RP 5L9 *
External Fusion Bonded Epoxy Coating of Line Pipe—Russian
Russian translation of RP 5L9.
1st Edition | December 2001 | Product Number: G5L901R | Price: $66.00

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
Product Number: G5LC04 | Price: $180.00

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: $150.00

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

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

Spec 5LD ◆
CRA Clad or Lined Steel Pipe
(includes Errata 1 dated June 2017)
Covers seamless, centrifugal cast, and welded clad steel line pipe, and lined steel pipe with improved corrosion-resistant properties. The clad and lined steel line pipe specified in this document shall be composed of a base metal outside and CRA layer inside the pipe. The base material shall conform to Spec 5L, except as modified in the 5LC document. Provides standards for pipe with improved corrosion resistance suitable for use in conveying gas, water, and oil in both the oil and natural gas industries. Pages: 38
Product Number: G5L04 | Price: $149.00

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

RP 5LT
Recommended Practice for Truck Transportation of Line Pipe
Applies to the transportation on railcars of Spec 5L steel line pipe in sizes 23/8 in 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: $61.00

RP 5LT *
Recommended Practice for Truck Transportation of Line Pipe—Chinese
Chinese translation of RP 5LT.
1st Edition | March 2012 | Product Number: G5LT01C | Price: $43.00

RP 5LT *
Recommended Practice for Truck Transportation of Line Pipe—Russian
Russian translation of RP 5LT.
1st Edition | March 2012 | Product Number: G5LT01R | Price: $48.00

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
Product Number: G5LW03 | Price: $61.00

RP 5LW *
Recommended Practice for Transportation of Line Pipe on Barges and Marine Vessels—Russian
Russian translation of RP 5LW.
3rd Edition | September 2009 | Product Number: G5LW03R | Price: $48.00

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
Product Number: G5SI01 | Price: $59.00

RP 5SI *
Recommended Practice for Purchaser Representative Surveillance and/or Inspection at the Supplier—Russian
Russian translation of RP 5SI.
1st Edition | January 2006 | Product Number: G5SI01R | Price: $47.00

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Spec 5ST ◆
Specification for Coiled Tubing—U.S. Customary and SI Units
Covers the manufacturing, inspection, and testing of all carbon and low alloy steel coiled tubing in Grades CT70, CT80, CT90, CT100, and CT110, in the designations and wall thicknesses given in Table A.5, that can be used as work strings, completion strings, and static installations in oil and gas wells. Coiled tubing may be ordered to this specification. Coiled tubing is manufactured using the continuously milled process. This specification does not cover the joining of seamless or welded tubing segments in lengths less than 200 ft (61 m). Pages: 68
Product Number: G5ST01 | Price: $138.00

Spec 5ST *
Specification for Coiled Tubing—U.S. Customary and SI Units—Chinese
Chinese translation of Spec 5ST.
1st Edition | April 2010 | Product Number: G5ST01C | Price: $97.00

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

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

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

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: $91.00

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

VALVES AND WELLHEAD EQUIPMENT

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

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

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**Std 6ACRA**

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

(includes Errata 1 dated October 2015, Addendum 1 dated September 2017, Errata 2 dated February 2018, and Addendum 2 dated September 2018)

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

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

This document expands the scope of Std 6A718. With its issuance, it replaces Std 6A718, 2nd Edition in its entirety. Pages: 33

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

**TR 6AF**

Technical Report on Capabilities of API Flanges Under Combinations of Load

(includes Errata 1 dated March 2017)

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

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

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

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

**TR 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 66-21) 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: $162.00

**TR 6AF2**

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

(includes Errata 1 dated November 2018)

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

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

**TR 6AM**

Technical Report on Material Toughness

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

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

**Spec 6AV1**

Validation of Safety and Shutdown Valves for Sandy Service

There are three service classes—Class I, Class II, and Class III—for API 6A surface safety valve (SSV), underwater safety valve (USV), or boarding shutdown valve (BSDV). This standard establishes sandy service design validation for valves to meet Class II and Class III. Class II is intended to validate the valve bore sealing mechanism if substances such as sand can be expected to cause safety or shutdown valve failure. Class III adds additional requirements and validation of the bonnet assembly inclusive of stem seals and may be selected by the user/purchaser. Validation to Class III also validates the same SSV/USV/BSDV for Class II in accordance with scaling limitations specified in the document. Pages: 32

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

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

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

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

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

RP 6DR
Recommended Practice for the Repair and Remanufacture of Pipeline Valves
Provides guidelines for the repair and remanufacture of steel ball, check, gate, and plug valves normally used in pipeline applications, as defined by Spec 6D. This RP covers repair or remanufacturing of end user's (owner's) valves for continued service in the owner's production applications. Repaired or remanufactured valves may not meet API and/or the OEM standard requirements for new valves. The owner is responsible for the correct application of valves repaired or remanufactured per this document. It does not cover repair or remanufacture of used or surplus valves intended for resale. Furthermore, field repair is outside the scope of this document. Pages: 11
2nd Edition | May 2012 | Product Number: G66DR2 | Price: $80.00

RP 6DR *
Recommended Practice for the Repair and Remanufacture of Pipeline Valves—Russian
Russian translation of Spec RP 6DR.
2nd Edition | May 2012 | Product Number: G66DR2R | Price: $65.00

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

Std 6DX/ISO 12490:2011
Standard for Actuator Sizing and Mounting Kits for Pipeline Valves
Defines the requirements for mechanical integrity and sizing of actuators used on valves manufactured under Spec 6D. It is applicable to all types of electric, pneumatic, and hydraulic actuators, inclusive of mounting kit, installed on pipeline valves. This document is not applicable to actuators installed on control valves, valves being used for regulation, valves in subsea 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: G6DX01 | Price: $135.00

TR 6F1
Summarizes the results of four projects to test the performance of API and ANSI end connections in a fire test according to Spec 6FA. The appendices present the analytical procedures used to generate performance prediction. Pages: 29
3rd Edition | April 1999 | Product Number: G66F13 | Price: $118.00

TR 6F2
Technical Report on Fire Resistance Improvements for API Flanges
Establishes recommended methods for improving the performance of standard API flanges when subjected to the adverse effects of external high temperatures induced by exposure to fires. This publication does not cover fire prevention, suppression, or firefighting practices. Pages: 19
3rd Edition | April 1999 | Product Number: G66F23 | Price: $112.00

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

*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 6FB
Specification for Fire Test for End Connections
(includes Errata/Supplement dated December 2008)
Estabishes 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 wellbay. 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.

Product Number: G06FD1 | Price: $92.00

2nd Edition | June 2013 | Reaffirmed: November 2018
Product Number: G06FD1R | Price: $74.00

3rd Edition | May 1998 | Effective Date: November 30, 1998
Reaffirmed: September 2011 | 2-Year Extension: July 2016
Product Number: G06FD3 | Price: $112.00

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

Product Number: G06FD1 | Price: $92.00

Spec 6FD *
Specification for Fire Test for Check Valves—Russian
Russian translation of Spec 6FD.
1st Edition | February 1995 | Product Number: G06FD1R | Price: $74.00

RP 6HT
Heat Treatment and Testing of Carbon and Low Alloy Steel Large Cross Section and Critical Section Components
Supplements the heat treatment and testing requirements found in the API 6A equipment specification and not to replace them altogether. Heat treatment is a critical process that must be appropriate and controlled in order to produce parts that comply with design requirements. The specified mechanical properties may not necessarily be required or achieved through the entire section thickness of the production part(s). These procedures are intended to provide the manufacturer and end user with a means of ensuring that the quality of 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 the manufacturer and end user with a means of ensuring that the component has the required mechanical properties at the depth below the surface established by the manufacturer 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.

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

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.

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

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

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

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

2nd Edition | August 2018 | Product Number: G06MET2 | Price: $112.00

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.

1st Edition | March 2014 | Product Number: G06X01 | Price: $62.00
connections are subject to additional inspection and testing—the user is
connections that are recut after service. It should be realized that recut
finishing. This standard applies both to newly manufactured connections and
connection designs. These are traceable to an internationally supported
This standard is applicable to the following preferred rotary shouldered
styles, regular (REG) style, or full-hole (FH) style. Pages: 114
includes Errata 1 dated August 2017)
Recommended Practice for Drill Stem Design and Operating Limits—Russian
Recommended Practice for Drill Stem Design and Operating Limits—Kazakh
Kazakh translation of RP 7G.
 RP 7G *
Recommended Practice for Drill Stem Design and Operating Limits—Russian
Russian translation of RP 7G.

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

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

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

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

Spec 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: $88.00

Spec 7F *
Oil Field Chain and Sprockets—Kazakh
Kazakh translation of Spec 7F.
8th Edition | November 2010 | Product Number: G7F008 | Price: $119.00
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Online Orders: global.ihs.com

Recommended Practice for Inspection and Classification of Drill Stem Element Inspection
(includes Errata 1 dated October 2009)
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;
• sub- and riser formulas;
• rotary slips, both manual and powered;
• slip bowls; and
• spiders, both manual and powered. Pages: 130
6th Edition | December 2015 | Product Number: G07K06 | Price: $206.00

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: $112.00

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
Product Number: G7NRV01 | Price: $72.00

Spec 7NRV *
Specification for Drill String Non-Return Valves—Chinese
Chinese translation of Spec 7NRV.
1st Edition | July 2006 | Product Number: G7NRV01C | Price: $50.00

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;
• rotary swivel-bail adapters;
• spiders, both manual and powered. Pages: 130
6th Edition | December 2015 | Product Number: G07K06 | Price: $206.00

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This publication is a new entry in this catalog. ◆ This publication is related to an API licensing, certification, or accreditation program.
• 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: $98.00

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: $144.00

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: $101.00

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: $112.00

Spec 9A *
Specification for Wire Rope—Chinese
Chinese translation of Spec 9A.

RP 9B
Application, Care, and Use of Wire Ropes for Oil Field Service
Covers typical wire rope applications for the oil and gas industry. Typical practices in the application of wire rope to oil field service are indicated in Table 1, which shows the sizes and constructions commonly used. Because of the variety of equipment designs, the selection of other constructions than those shown is justifiable.
In oilfield service, wire rope is often referred to as wire line or cable. For the purpose of clarity, these various expressions are incorporated in this recommended practice. Pages: 44
14th Edition | October 2015 | Product Number: G9B014 | Price: $124.00

OIL WELL CEMENTS

Bull E3 ◆
Wellbore Plugging and Abandonment Practices
Addresses the environmental concerns related to well abandonment and inactive well practices. The primary environmental concerns are protection of usable aquifers from fluid migration; and isolation of hydrocarbon production and water injection intervals. Additional issues in the document include protection of surface soils and surface waters, future and use, and permanent documentation of plugged and abandoned wellbore locations and conditions. Pages: 22
2nd Edition | April 2018 | Product Number: G11008 | Price: $142.00

Spec 10A/ISO 10426-1:2009 ◆
Specification for Cements and Materials for Well Cementing
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
Product Number: G10A24 | Price: $149.00

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RP 10B-2
Recommended Practice for Testing Well Cements
Includes Errata 1 dated June 2006 and Errata 2 dated January 2007
Supersedes RP 10B
 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: $227.00

RP 10B-2
Recommended Practice for Testing Well Cements—Russian
 Russian translation of RP 10B-2.
2nd Edition | April 2013 | Product Number: G10B202RU | Price: $182.00

RP 10B-3
Testing of Well Cements Used in Deepwater Well Construction
Provides procedures for testing well cement slurries and cement blends for use in a deepwater environment or wells drilled in areas with a low seafloor temperature or areas where low 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.
2nd Edition | January 2016 | Product Number: G10B32 | Price: $98.00

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: $98.00

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 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.
Product Number: GX10B501 | Price: $82.00

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.
1st Edition | August 2010 | Reaffirmed: April 2015
Product Number: GG10B601 | Price: $64.00

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 manufacturing 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.
6th Edition | March 2002 | Effective Date: September 1, 2002
Reaffirmed: April 2015 | Product Number: GX10D06 | Price: $92.00

Spec 10D/ISO 10427-1:2001
Specification for Bow-Spring Casing Centralizers—Chinese
 Chinese translation of Spec 10D.

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.
Product Number: GS10D01 | Price: $79.00

Spec 10F
Cementing Float Equipment Testing
Provides testing and marking requirements for cementing float equipment to be used in oil and natural gas well construction.
4th Edition | July 2018 | Product Number: GX10F04 | Price: $77.00

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.
2nd Edition | September 2008
Product Number: G10TR12 | Price: $149.00

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Exploration and Production

TR 10TR1 *
Cement Sheath Evaluation—Kazakh
Kazakh translation of TR 10TR1.
2nd Edition | September 2008
Product Number: G10TR12K | Price: $119.00

TR 10TR1 *
Cement Sheath Evaluation—Russian
Russian translation of TR 10TR1.
2nd Edition | September 2008
Product Number: G10TR12R | Price: $119.00

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
Product Number: G10TR2 | Price: $126.00

TR 10TR2 *
Shrinkage and Expansion in Oilwell Cements—Russian
Russian translation of TR 10TR2.
1st Edition | July 1997 | Product Number: G10TR2R | Price: $100.00

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: $162.00

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: $129.00

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: $63.00

TR 10TR4 *
Selection of Centralizers for Primary Cementing Operations—Kazakh
Kazakh translation of TR 10TR4.
1st Edition | May 2008 | Product Number: G10TR40K | Price: $50.00

TR 10TR4 *
Selection of Centralizers for Primary Cementing Operations—Russian
Russian translation of TR 10TR4.
1st Edition | May 2008 | Product Number: G10TR40R | Price: $49.00

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: $63.00

TR 10TR5 *
Methods for Testing of Solid and Rigid Centralizers—Kazakh
Kazakh translation of TR 10TR5.
1st Edition | May 2008 | Product Number: G10TR50K | Price: $50.00

TR 10TR5 *
Methods for Testing of Solid and Rigid Centralizers—Russian
Russian translation of TR 10TR5.
1st Edition | May 2008 | Product Number: G10TR50R | Price: $49.00

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

TR 10TR7
Mechanical Behavior of Cement
Provides the necessary cement property data for use in cement sheath integrity simulations. The compressive strength tests and nondestructive sonic determination of compressive strength of cement defined in API 10B-2 do not provide suitable data for cement sheath integrity simulations. The methods of API 10B-2 provide information on the strength of cement to ensure that the cement is suitable for general well construction applications and to determine when sufficient strength is developed to allow well operations to continue. Pages: 63
1st Edition | December 2017 | Product Number: G10TR71 | Price: $121.00

RP 65-1 ■
Cementing Shallow-Water Flow Zones in Deepwater Wells
Describes methods designed to prevent shallow-water flow (SWF) during and following cementing of wells located in deep water. It is the compilation of technology and practices developed and used by many operators around the world. Although most of the discussion in this standard is focused on SWF, shallow flows can be mixtures of water, gas, gas hydrates, and formation fines. There is no single method of preventing SWF, and many of the activities described can require customization to fit individual well conditions. Pages: 71
2nd Edition | June 2018 | Product Number: G65102 | Price: $137.00

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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 to help prevent and/or control flows just prior to, during, and after primary cementing operations to install or “set” casing and liner pipe strings in wells. The second objective is to help prevent sustained casing pressure (SCP). The guidance from this document covers recommendations for pressure-containment barrier design and installation and well construction practices that affect the zone isolation process to prevent or mitigate annular fluid flow or pressure. Pages: 83
Product Number: G65202 | Price: $134.00

FIELD OPERATING EQUIPMENT

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

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

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

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

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

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

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

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

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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: $88.00

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

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: $126.00

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

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/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: G11L06 | Price: $89.00
**Recommended Practice on 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 applications. This document covers the acceptance testing of electric submersible pumps (sold as new) by manufacturers, vendors, or users to the prescribed minimum specifications. 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.

2nd Edition | May 2008 | Product Number: G11L602C | Price: $63.00

**Recommended Practice on Electric 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 water producing wells where the equipment is installed on tubing. It is not prepared for equipment selection or application. Pages: 18


**Recommended Practice on Application and 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: 38


**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


**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: 38


**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


**Recommended Practice for Electric 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.


**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


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

Russian translation of RP 11S2.


**Recommended Practice on Application and Testing of Electric Submersible Pump Cable Systems—Russian**

Russian translation of RP 11S5.


**Recommended Practice on Electric Submersible System Vibrations—Russian**

Russian translation of RP 11S7.

2nd Edition | October 2012 | Product Number: G11S802 | Price: $80.00

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**LEASER 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: 25

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

**Spec 12D** ◆

**Specification for Field-Welded Tanks for Storage of Production Liquids**

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

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

**Spec 12F** ◆

**Specification for Shop Welded Tanks for Storage of Production Liquids**

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

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

**Spec 12F * **

**Specification for Shop Welded Tanks for Storage of Production Liquids—Chinese**

Chinese translation of Spec 12F.

12th Edition | October 2008 | Product Number: G12F12C | Price: $70.00

**Spec 12J** ◆

**Specification for Oil and Gas Separators**

Covers minimum requirements for the design, fabrication, and 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: $100.00

**Spec 12J * **

**Specification for Oil and Gas Separators—Chinese**

Chinese translation of Spec 12J.

8th Edition | October 2008 | Product Number: G12J08C | Price: $70.00

**Spec 12J * **

**Specification for Oil and Gas Separators—Russian**

Russian translation of Spec 12J.

8th Edition | October 2008 | Product Number: G12J08R | Price: $80.00

**Spec 12K** ◆

**Specification for Indirect Type Oilfield Heaters**

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

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

**Spec 12K * **

**Specification for Indirect Type Oilfield Heaters—Chinese**

Chinese translation of Spec 12K.

8th Edition | October 2008 | Product Number: G12K08C | Price: $83.00

**Spec 12L** ◆

**Specification for Vertical and Horizontal Emulsion Treaters**

Covers minimum requirements for material, design, fabrication, and testing of vertical and horizontal emulsion treaters. Emulsion treating is normally conducted on crude oil immediately after it is separated from its associated gas in a vessel referred to as a treater or sometimes as a heater treater. High gas-oil ratio wells or those produced by gas lift may require the installation of an oil and gas separator upstream of the treater to remove most of the associated gas before the emulsion enters the treater. Where the water to oil ratio is high, freewater knockouts may be required upstream of the treater. The jurisdiction of this specification terminates with each pressure vessel as applicable: the emulsion treater with firetube(s) and, if used, the heat exchanger(s) and water siphon. Pressure vessels covered by this specification are classified as natural resource vessels. An emulsion treater is a pressure vessel used in the oil producing industry for separating oil-water emulsions and gas and for breaking or resolving emulsified water 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

8th Edition | October 2008 | Effective Date: April 1, 2009
Product Number: G12L08 | Price: $100.00

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Exploration and Production

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

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

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

**DRILLING, COMPLETION, AND FRACTURING FLUIDS**

**Spec 13A/ISO 13500:2009**
Specification for Drilling Fluid Materials
(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 baryte, barite, bentonite, nontreated bentonite, OCMA-grade bentonite, attapulgite, sepiolite, sepiolite-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
Effective Date: August 1, 2010
Product Number: GX13A018 | Price: $186.00

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

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

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

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RP 13C
Recommended Practice on Drilling Fluid Processing Systems Evaluation

Specifies a standard procedure for assessing and modifying the performance of solids control equipment systems commonly used in the field in petroleum and natural gas drilling fluids processing. The procedure described in this standard is not intended for the comparison of similar types of individual pieces of equipment. Pages: 60

5th Edition | October 2014 | Product Number: G13C05 | Price: $139.00

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

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

7th Edition | September 2017 | Product Number: G13D07 | Price: $159.00

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

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

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

Product Number: GX13I8 | Price: $192.00

RP 13J
Testing of Heavy Brines

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

5th Edition | October 2014 | Product Number: G13J05 | Price: $134.00

RP 13K
Recommended Practice for Chemical Analysis of Barite

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

Product Number: G13K03 | Price: $110.00

RP 13K *
Recommended Practice for Chemical Analysis of Barite—Kazakh
Kazakh translation of RP 13K.

3rd Edition | May 2011 | Product Number: G13K03K | Price: $89.00

RP 13L
Training and Qualification of Drilling Fluid Technologists

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 fluid technologists should use this recommended practice (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 fluid technologist should use this RP as a checklist of knowledge that a technologist should be able to demonstrate proficiency in applying. Pages: 36

2nd Edition | November 2017 | Product Number: G13L02 | Price: $89.00

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

2-Year Extension: June 2015 | Product Number: GX13M01
Price: $101.00

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

Russian translation of RP 13M.

1st Edition | July 2004 | Product Number: GX13M01R | Price: $81.00

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

Product Number: G13M41 | Price: $59.00

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

Provides a consistent methodology to test and evaluate the performance of friction (drag) reducers in straight, smooth circular conduits. This standard includes only smooth-walled tubing and excludes any rough-walled tubing. Pages: 22

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

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TR 13TR1
Stress Corrosion Cracking of Corrosion Resistant Alloys in Halide Brines Exposed to Acidic Production Gas
Evaluates the stress corrosion cracking (SCC) risks of a range of corrosion resistant alloys (CRAs) in various halide brine compositions for the case of exposure to acidic production gas (CO₂+H₂S). Also evaluated are SCC risks due to air exposure. However, the testing became focused on a group of martensitic stainless steels alloyed with Ni and Mo, which are collectively referred to as modified 13Cr martensitic stainless steel (SS) or alternatively in some publications as super (S13Cr) martensitic SSs. Most tests evaluated the as-received brine, excluding proprietary additivies such as corrosion inhibitor or oxygen scavengers. For completeness and comparison, test results provided by member companies in the API program or in the publications are cited; these test protocols may be different from those in the API test protocols hence, where that occurs, significant differences are noted. Pages: 39
1st Edition | November 2017 | Product Number: G13TR1 | Price: $128.00

TR 13TR3
Size Measurement of Dry, Granular Drilling Fluid Particulates
Serves as a guide for selection of appropriate techniques to determine the particle size distribution (PSD) of relatively large, dry solid additivies for drilling fluids, especially lost circulation materials (LCMs). Detailed procedures for the utilization of any specific PSD method are not included. The technician should refer to and be guided by the measurement equipment manufacturor's instructions.
The particulates range in size from approximately one micron to as much as several millimeters in diameter and are considered "granular" in shape, i.e. relatively isometric (of similar length, width, and height).
The recommendations in this technical report generally are not applicable to the measurement of the PSD of non-isometric (high aspect ratio) materials, such as fibers or flakes. Pages: 32
1st Edition | October 2018 | Product Number: G13TR31 | Price: $98.00

OFFSHORE SAFETY AND ANTIPOLLUTION
Std 2CCU
Offshore Cargo Carrying Units
Defines the design, material, manufacture, inspection, repair, maintenance, and marking requirements for offshore cargo carrying units (CCU) and lifting sets to include dry goods boxes, baskets, and other skids designed to move equipment and goods offshore with maximum gross weight up to 70,000 kg (154,323 lb). Pages: 57
1st Edition | August 2017 | Product Number: G2CCU01 | Price: $108.00

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 (SCSSV), 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. Pages: 37
NOTE Spec 14A provides requirements for SSSV equipment design, qualification, and repair.
6th Edition | September 2015 | Product Number: G14B06 | Price: $130.00

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RP 14FZ
Recommended Practice for Design, Installation, and Maintenance of Electrical Systems for Fixed and Floating Offshore Petroleum Facilities for Unclassified and Class I, Zone 0, Zone 1, and Zone 2 Locations

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

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

Pages: 177

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

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

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

Pages: 38

Product Number: G14G04 | Price: $128.00

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

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

Pages: 75

Product Number: G14J02 | Price: $121.00

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

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

Pages: 16

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

FIBERGLASS AND PLASTIC PIPE

RP 15CLT
Recommended Practice for Composite Lined Steel Tubular Goods

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.

Pages: 5

4th Edition | January 2008 | Effective Date: July 1, 2008
Product Number: G15CLT1 | Price: $85.00

Spec 15HR
High-Pressure Fiberglass Line Pipe

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, tests and inspection, marking, handling, storing, and shipping.

Pages: 42

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

Spec 15LE
Specification for Polyethylene Line Pipe (PE)

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

Pages: 38

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

This publication is a new entry in this catalog.

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

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

Spec 15LR ∗
Specification for Low Pressure Fiberglass Line Pipe
(includes Errata 1 dated June 2018)
Covers filament wound (FW) and centrifugally cast (CC) fiberglass line pipe and fittings for pipe in diameters up to and including 24 in. in diameter and up to and including 1000 psig cyclic operating pressures. In addition, at the manufacturer's option, the pipe may also be rated for static operating pressures up to 1000 psig. It is recommended that the pipe and fittings be purchased by cyclic pressure rating. The standard pressure ratings range from 150 psig to 300 psig in 50 psig increments, and from 300 psig to 1000 psig in 100 psig increments, based on either cyclic pressure or static pressure. Pages: 25
7th Edition | August 2001 | Effective Date: February 1, 2002
Reaffirmed: October 2018 | Product Number: G15LR7 | Price: $100.00

Spec 15LR *
Specification for Low Pressure Fiberglass Line Pipe—Chinese
Chinese translation of Spec 15LR.
7th Edition | August 2001 | Product Number: G15LR7C | Price: $70.00

Spec 15PX ●
Specification for Crosslinked Polyethylene (PEX) Line Pipe
Covers PEX line pipe utilized for the production and transportation of oil, gas, and nonpotable water. The piping is intended for use in new construction, structural, pressure-rated liner, line extension, and repair of both aboveground and buried pipe applications. Specific equipment covered by this specification is listed as follows:
- PEX line pipe;
- fittings. Pages: 45
7th Edition | September 2018 | Product Number: G15PX1 | Price: $98.00

Spec 15S
Spoolable Reinforced Plastic Line Pipe
(includes Errata 1 dated July 2016)
Provides requirements for the manufacture and qualification of spoolable reinforced plastic line pipe in oilfield and energy applications including transport of multiphase fluids, hydrocarbon gases, hydrocarbon liquids, oilfield production chemicals, and nonpotable water. Also included are performance requirements for materials, pipe, and fittings. These products consist of a liner with helically wrapped steel or nonmetallic reinforcing elements and an outer cover. The helical reinforcing elements shall be a single material. Additional nonhelical reinforcing elements are acceptable. The spoolable reinforced line pipe under this specification is capable of being spooled for storage, transport, and installation. For offshore use, additional requirements may apply and are not within the scope of this document. This specification is confined to pipe, end-fittings, and couplings and does not relate to other system components and appurtenances. Where other system components (e.g., elbows, tees, valves) are of conventional construction, they will be governed by other applicable codes and practices. Pages: 62
2nd Edition | March 2016 | Effective Date: September 1, 2016
Product Number: G15S02 | Price: $129.00

Spec 16A ●
Specification for Drill-Through Equipment
(includes Errata 1 dated August 2017, Addendum 1 dated October 2017, Errata 2 dated November 2017, and Errata 3 dated April 2018)
Defines the requirements for performance, design, materials, testing and inspection, welding, marking, handling, storing, and shipping of drill-through equipment used for drilling for oil and gas. Specifically, this document applies to the manufacture and testing of ram blowout preventers; ram blocks, packs, and top seals; annular blowout preventers; annular packing units; and associated connectors. It also defines service conditions in terms of pressure, temperature, and wellbore fluids for which the equipment is designed. Repair and remanufacture of 16A equipment is now covered in Std 16AR. This specification does not apply to field use or field. Pages: 122
4th Edition | April 2017 | Product Number: G16AR04 | Price: $170.00

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;
- rigid choke and kill lines;
- swivel unions used in choke and kill equipment.
These requirements were formulated to provide for safe and functionally interchangeable surface and subsea choke and kill system equipment utilized for drilling oil and gas wells. Technical content provides the minimum requirements for performance, design, materials, welding, testing, inspection, storing, and shipping. Pages: 114
2nd Edition | March 2015 | Product Number: G16C02 | Price: $155.00

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**Spec 16D** ● **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; control systems for diverter equipment; auxiliary equipment control systems and interfaces; emergency disconnect sequenced systems; backup systems; special deepwater/harsh environment features. Pages: 144

3rd Edition | November 2018 | Effective Date: May 1, 2019
Product Number: G16D03 | Price: $195.00

**Spec 16F** ● **Specification for Marine Drilling Riser Equipment**

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

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

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

Russian translation of Spec 16F.

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

**RP 16Q**

**Design, Selection, Operation and Maintenance of Marine Drilling Riser Systems**

Pertains to the design, selection, operation, and maintenance of marine riser systems for floating drilling operations. Its purpose is to serve as a reference for designers, for those who select system components, and for those who use and maintain this equipment. For the purposes of this standard, a marine drilling riser system includes the tensioner system and all equipment between the top connection of the 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: 90

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

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

Russian translation of RP 16Q.

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

**Spec 16RCD** ● **Specification for Rotating Control Devices**

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

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

**RP 16ST**

**Coiled Tubing Well Control Equipment Systems**

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

- christmas trees constructed to standards stipulated in Spec 6A and/or Spec 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

Product Number: G16ST01 | Price: $149.00

**TR 16TR1**

**BOP Shear Ram Performance Test Protocol**

(includes Errata 1 dated October 2018)

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

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

**Std 53**

**Well Control Equipment Systems for Drilling Wells**

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

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

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RP 59
Recommended Practice for Well Control Operations
Provides information that can serve as a voluntary industry guide for safe well control operations. This publication is designed to serve as a direct field aid in well control and as a technical source for teaching well control principles. This publication establishes recommended operations to retain pressure control of the well under pre-kick conditions and recommended practices to be utilized during a kick. It serves as a companion to RP 53 and RP 64. Pages: 92
2nd Edition | May 2006 | Reaffirmed: December 2018
Product Number: G590002 | Price: $126.00

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

RP 59 *
Recommended Practice for Well Control Operations—Russian
Russian translation of RP 59.
2nd Edition | May 2006 | Product Number: G59002R | Price: $100.00

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

SUBSEA PRODUCTION SYSTEMS

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

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

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

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

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

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Spec 17E  
**Specification for Subsea Umbilicals**  
(includes Addendum 1 dated December 2017)

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

Pages: 178

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

Std 17F  
**Standard for Subsea Production Control Systems**  
(includes Errata 1 dated July 2018)

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

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

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

Pages: 239

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

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

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

This edition of RP 17G is the identical national adoption of ISO 13628-7:2005. Pages: 242

Product Number: G017G02 | Price: $187.00

Spec 17H  
**Specification for Remote 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: $165.00

Spec 17J  
**Specification for Unbonded Flexible Pipe**  
(includes Errata 1 dated September 2016, Errata 2 dated May 2017, and Addendum 1 dated October 2017)

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

Pages: 90

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

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

Defines the technical requirements for safe, dimensionally and functionally interchangeable bonded flexible pipes that are designed and manufactured to uniform standards and criteria. Minimum requirements are specified for the design, material selection, manufacture, testing, marking, and packaging of 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.

Pages: 96

3rd Edition | August 2017 | Product Number: G17K03 | Price: $140.00

This publication is related to an API licensing, certification, or accreditation program.
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: $175.00

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: $175.00

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

Provides a structured approach that organizations can adopt to manage uncertainty throughout the life of a project. This may range from the management of general project risk through to the identification and removal of potential failure modes in particular equipment. This recommended practice aims to provide operators, contractors, 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 nonstandard equipment, and all phases of projects, from feasibility studies to operation. It does not prescribe the use of any specific equipment or limit the use of any existing installed equipment or recommend any action, beyond good engineering practice, where current reliability is judged to be acceptable. It is also not intended to replace individual company processes, procedures, document nomenclature, or numbering: it is a guide. However, this recommended practice may be used to enhance existing processes, if deemed appropriate.

Most organizations will find much that is familiar and recognized as good practice. Some annex sections may only be of interest to a reliability specialist. The basic approach, however, is simple and consistent, and when applied correctly, has the potential to greatly reduce the financial risk of designing, manufacturing, installing, and operating subsea equipment. Pages: 178

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

RP 17O
Recommended Practice on 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: $124.00

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

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

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

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

Equipment used to make the following subsea connections are included:
- pipeline end terminations to manifolds,
- pipeline end terminations to trees,
- pipeline end terminations to riser bases,
- manifolds to trees,
- pipeline inline sleds to other subsea structures.

The following connection components and systems are included:
- jumper assemblies,
- monobore connectors systems,
- multibore connectors systems,
- pressure and flooding caps,
- connector actuation tools. Pages: 52
1st Edition | March 2015 | Product Number: G17R01 | Price: $124.00

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

TR 17TR1
Evaluation Standard for Internal Pressure Sheath Polymers for High Temperature Flexible Pipes
Defines the methodology and test procedures necessary for the evaluation of polymeric materials suitable for use as the internal pressure sheath of 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: G17TR1 | Price: $136.00

TR 17TR2
The Ageing 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: G17TR2 | Price: $104.00

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

The scope of this study is limited to completed subsea wells in the Gulf of Mexico (GOM). The risks were evaluated using fault tree analysis for three systems:
- wellhead system without penetrations,
- wellhead system with one penetration, and
- wellhead system with two penetrations. Pages: 123
1st Edition | November 2004 | Product Number: G17TR3 | Price: $136.00

TR 17TR4
Subsea Equipment Pressure Ratings
The impact of operation in deep water on the pressure rating of equipment is a special concern. The objective of this document is to foster a better understanding of the effects of simultaneous internal and external pressures on the internal pressure rating of well control equipment. Pages: 12
2nd Edition | May 2016 | Product Number: G17TR4 | Price: $67.00
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


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: $101.00

TR 17TR7
Verification and Validation of Subsea Connectors

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

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

1st Edition | April 2017 | Product Number: G17TR71 | Price: $88.00

TR 17TR8
High-Pressure High-Temperature Design Guidelines

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

2nd Edition | March 2018 | Product Number: G17TR82 | Price: $142.00

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

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

This document acts as a reference guide during the early field development planning stage to ensure that due consideration is given to the implications of the size of UTAs and possible consequences during installation. It is intended to be used as a reference guide by end users and operators, UTA and umbilical manufacturers, installers, and front-end engineering design (FEED) companies. The intention is that the document will enable the currently inherent installation difficulties to be addressed up front by the UTA designers, prior to commencing SUT design and functionality definition. It is also intended to be used as a reference document to enable reviews to be undertaken to ensure that installation risk has been properly considered as part of SUT design and operations reviews on a case-by-case basis. Pages: 53

1st Edition | August 2017 | Product Number: G17TR91 | Price: $107.00

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: $107.00

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: $82.00

This publication is a new entry in this catalog. This publication is related to an API licensing, certification, or accreditation program.
TR 17TR12
Consideration of External Pressure in the Design and Pressure Rating of Subsea Equipment

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

This document provides guidance for subsea equipment designers/manufacturers to 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: $98.00

TR 17TR13
General Overview of Subsea Production Systems

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

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

TR 17TR15
API 17H Hydraulic Interfaces for Hot Stabs

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

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

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

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

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

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

RP 17V
Recommended Practice for Subsea Capping Stacks

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

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

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

RP 17W
Recommended Practice for Analysis, Design, Installation, and Testing of Safety Systems for Subsea Applications (includes Errata 1 dated July 2015)

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

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

1st Edition | July 2014 | Product Number: G17W01 | Price: $129.00
**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 requirements for the following:

- HPHF environment equipment;
- HPHF environment operational tools;
- external flow testing.

This edition of Spec 11D1 is the modified national adoption of ISO 14310:2008. Pages: 62

3rd Edition | April 2015 | Effective Date: October 9, 2015

Product Number: G11D103 | Price: $118.00

**Spec 11D1/ISO 14310:2008**

**Packers and Bridge Plugs—Russian**

Russian translation of Spec 11D1.

3rd Edition | April 2015 | Product Number: G11D103R | Price: $95.00

**RP 11V5**

Recommended Practices for Operation, Maintenance, Surveillance, and Troubleshooting of Gas-Lift Installations

Assists gas-lift system operators, analysts, technicians, engineers, and others in understanding how to effectively plan, operate, maintain, troubleshoot, and provide surveillance for gas-lift systems and gas-lift wells. These recommended practices discuss continuous gas-lift with injection in the casing/tubing annulus and production up the tubing. Annular flow gas-lift (injection down the tubing and production up the annulus), dual gas-lift (two tubing strings in the same casing), and intermittent gas-lift are mentioned; however, most of the discussion focuses on conventional continuous gas-lift. Pages: 123


Product Number: G11V53 | Price: $160.00

**RP 11V6**

Recommended Practice for Design of Continuous Flow Gas Lift Installations Using Injection Pressure Operated Valves

Sets guidelines for continuous flow gas lift installation designs using injection pressure operated valves. The assumption is made that the designer is familiar with and has available data on the various factors that affect a design. Pages: 88


Product Number: G11V62 | Price: $153.00

**RP 11V8**

Recommended Practice for Gas Lift System Design and Performance Prediction

Emphasizes gas lift as a system and discusses methods used to predict its performance. Information must be gathered and models validated prior to a system design, which must precede wellbore gas lift mandrel and valve design. The subsurface and surface components of the system must be designed together to enhance the strengths of each and to minimize the constraints. Pages: 79


Product Number: G11V81 | Price: $123.00

**Spec 14A**

Specification for Subsurface Safety Valve Equipment

(includes Errata 1 dated July 2015 and Addendum 1 dated June 2017)

Provides the requirements for subsurface safety valves (SSSVs), and the secondary tools as defined herein necessary to operate the features included within them, including all components that establish tolerances and/or clearances that may affect performance or interchangeability of the SSSV components. It includes repair operations and the interface connections to control conduits and/or other equipment, but does not cover the connections to the primary well conduit. Pages: 140


Product Number: G14A12 | Price: $232.00

**Spec 14L/ISO 16070:2005**

Specification for Lock Mandrels and Landing Nipples

Provides the requirements for lock mandrels and landing nipples within the production/injection conduit for the installation of flow control or other equipment used in the petroleum and natural gas industries. It includes the interface connections to the flow control or other equipment, but does not cover the connections to the well conduit.

This edition of Spec 14L is the identical national adoption of ISO 16070:2005. Pages: 25


Product Number: GG14L02 | Price: $123.00

**Spec 14L/ISO 16070:2005**

**Specification for Lock Mandrels and Landing Nipples—Chinese**

Chinese translation of Spec 14L.

2nd Edition | July 2007 | Product Number: GX14L02C | Price: $87.00

**Spec 19AC/ISO 14998:2013**

**Specification for Completion Accessories**

Provides requirements and guidelines for completion accessories, as defined herein, for use in the petroleum and natural gas industry. This international standard provides requirements for the functional specification and technical specifications, including design, design verification and validation, materials, documentation and data control, quality requirements, redress, repair, shipment, and storage. This international standard covers the pressure-containing, nonpressure-containing, load-bearing, disconnect/reconnect, tubing-movement, and opening-a-port functionalities that may affect performance or interchangeability of completion accessories. Products covered under another API or international specification are not included. Also not included are other products such as line/tubing hangers, downhole well test tools, inflow control devices, surface-controlled downhole chokes, downhole artificial lift equipment, control lines and fittings, and all functionalities relating to electronics or fiber optics. This international standard does not cover the connections to the well conduit. Installation, application, and operation of these products are outside the scope of this international standard.

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

1st Edition | September 2016

Product Number: G19AC01 | Price: $115.00

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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: $89.00

RP 19B
Recommended Practice for Evaluation of Well Perforators—Russian
(formerly RP 43)
Russian translation of RP 19B.
2nd Edition | September 2006
Product Number: G019B2R | Price: $100.00

Std 19C
Measurement of and Specifications for 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 standard 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. Pages: 57
2nd Edition | August 2018 | Product Number: GX19C02 | Price: $114.00

Std 19C
Measurement of and Specifications for Proppants Used in Hydraulic Fracturing and Gravel-Packing Operations—Russian
Russian translation of Std 19C.
2nd Edition | August 2018 | Product Number: GX19C02R | Price: $91.00

RP 19D/ISO 13503-5:2006
Measuring the Long-Term Conductivity of Proppants—Russian
Russian translation of RP 19D.
1st Edition | May 2008 | Product Number: GX19D01R | Price: $89.00

Spec 19G1/ISO 17078-1:2004
Side-Pocket Mandrels
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 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 17078:2004 and replaces RP 61. Pages: 24
Product Number: GG19G11 | Price: $106.00

Spec 19G1/ISO 17078-1:2004
Side-Pocket Mandrels—Chinese
Chinese translation of Spec 19G1
1st Edition | May 2010 | Product Number: GG19G101C | Price: $176.00

*These translated versions are provided for the convenience of our customers and are not officially endorsed by API. The translated versions shall neither replace nor supersede the English-language versions, which remain the official standards. API shall not be responsible for any discrepancies or interpretations of these translations. Translations may not include any addenda or errata to the document. Please check the English-language versions for any updates to the documents.
Exploration and Production

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

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

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

This edition of Spec 19G2 is the modified national adoption of ISO 17078-2:2007. Pages: 132

Product Number: GX19G21 | Price: $160.00

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

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

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

Product Number: GG19G301 | Price: $149.00

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

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

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

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

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

Pages: 90

2nd Edition | April 2015 | Product Number: G19G92 | Price: $170.00

RP 19G10 ◆ Design and Operation of Intermittent Gas-Lift Systems
Covers the design and operation of intermittent gas-lift systems, including designs with chamber and plunger lift equipment. Included are the background and theory of each of these systems, as well as considerations for system design and operation. This information is intended for well engineers who seek to gain a general understanding of the theory and practices of intermittent gas-lift systems.

Not addressed in this recommended practice are absolutes in the development of an intermittent gas-lift system design or operation because of the range of variables for each well and field combination. This document also contains three annexes. Annex A contains mathematical derivations and models of some of the most pertinent intermittent gas-lift calculations. Annex B contains a comprehensive example of an intermittent gas-lift design. Annex C describes how to use the Field (U.S. Customary) Units Calculator and SI Units Calculator. Pages: 120

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

RP 19G11 ◆ Dynamic Simulation of Gas-Lift Wells and Systems
Provides guidance and background for the application and use of dynamic simulation of gas-lift wells and their related systems. Discussion is included for use of steady-state, pseudo-steady-state, and dynamic numerical models. Also presented are guidelines to facilitate the application of these techniques to optimize well/system integrity, operations, life cycle design, and production. Additionally, a range of artificial lift and natural flowing systems and topics (e.g. gas well liquid loading) are addressed. The dynamic simulation recommendations (e.g. stable flow, hydrates, waxes, corrosion, liquid loading, and complex wells) can be implemented in other production systems (e.g. natural flowing wells). Not included are technical requirements for the hardware of the dynamic simulation system, the specifics of the system calculations, the responses to the output of the dynamic simulation data output, and specifics of what actions are required after the provided data is considered. Pages: 31

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

Spec 190H ◆ Openhole Isolation Equipment
Covers requirements and guidelines for openhole isolation equipment and bridge plugs as defined herein. Openhole isolation equipment includes swellable packers, inflatable packers, expandable packers, and openhole packers that are designed for use in the petroleum and natural gas industries. This specification provides requirements for design verification, design validation, manufacturing, quality, shipping, handling, storage, and related supporting topics.

Requirements for the end connections to the well conduit are not included in this specification. Also not covered are downhole anchoring devices (see API 11D1); cup-style packers; and requirements for the application, installation, and use of openhole isolation equipment. Equipment and technology covered by other API specifications and standards are exempted from this specification, such as:

- production packers,
- liner hanger systems,
- service tools,
- test tool packers.

This publication is related to an API licensing, certification, or accreditation program.
Reparis, remanufacturing, and redress are excluded from this specification. Pages: 45
1st Edition | January 2018 | Product Number: G190H1 | Price: $112.00

Provides the requirements and guidelines for downhole well test tools and related equipment as they are defined herein for use in the petroleum and natural gas industry. Included are the requirements for design, manufacture, quality control, marking, and transport. The requirements of this International Standard are applicable to wire-wrap screens, pre-pack screens, and metal-mesh screens. The following items are outside the scope of this International Standard:
- expandable and/or compliant sand screens, slotted liners, or tubing and accessory items, such as centralizers or bull plugs;
- shunt screen technology, inflow control devices, downhole sensors, and selective isolation devices, even where they can be an integral part of the sand screen;
- analysis for sand retention efficiency;
- end connections of the basepipe.
This edition of Spec 19SS is the modified national adoption of ISO 17824:2009. Pages: 79
1st Edition | July 2018 | Product Number: G19SS01 | Price: $165.00

Spec 19SS/ISO 17824:2009 Sand Screens
Provides the requirements and guidelines for sand screens for use in the petroleum and natural gas industry. Included are the requirements for design, manufacture, quality control, marking, and transport. The requirements of this International Standard are applicable to wire-wrap screens, pre-pack screens, and metal-mesh screens. The following items are outside the scope of this International Standard:
- expansion and/or compliant sand screens, slotted liners, or tubing and accessory items, such as centralizers or bull plugs;
- shunt screen technology, inflow control devices, downhole sensors, and selective isolation devices, even where they can be an integral part of the sand screen;
- analysis for sand retention efficiency;
- end connections of the basepipe.
This edition of Spec 19SS is the modified national adoption of ISO 17824:2009. Pages: 79
1st Edition | January 2018 | Product Number: G19SS01 | Price: $165.00

Spec 20A Open Die Shaped Forgings for Use in the Petroleum and Natural Gas Industry
Provides the requirements for 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.
1st Edition | April 2013 | Product Number: G20A02 | Price: $89.00

Spec 20C Closed Die Forgings for Use in the Petroleum and Natural Gas Industry
Provides the requirements for 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 publication is a new entry in this catalog. ◆ This publication is related to an API licensing, certification, or accreditation program.
Exploration and Production

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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
Product Number: G31A01 | Price: $100.00

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, including information regarding interferences, precision, accuracy, and detection limits; as well as the appropriate reporting formats for analytical results. Pages: 60
Product Number: G45003 | Price: $146.00

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
Product Number: G50002 | Price: $112.00

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: $53.00

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
Product Number: G51R01 | Price: $78.00

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: $118.00

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
Product Number: G68001 | Price: $78.00

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: $187.00

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: $187.00
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: $72.00

RP 92M

Managed Pressure Drilling Operations with Surface Back-Pressure

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

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

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

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

RP 92S

Managed Pressure Drilling Operations—Surface Back-Pressure with a Subsea Blowout Preventer

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

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

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

RP 92U

Underbalanced Drilling Operations (includes Addendum 1 dated November 2015)

Provides information that can serve as a guide for planning, installation, operation, and testing of underbalanced drilling equipment systems on land and offshore drilling rigs [barge, platform, bottom-supported, and floating with surface blowout preventers (BOPs) 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

Product Number: G92U01 | Price: $108.00

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.
• Wells control procedures (refer to RP 59 for well control information).
• Managed pressure drilling operations (including dual gradient drilling).
• Production operations and fluids handling downstream of the tree (subsea facilities/subsea architecture and surface facilities/offloading hydrocarbons).
• Intervention operations.
• Quality assurance programs. Pages: 158

1st Edition | March 2013 | Product Number: G09601 | Price: $180.00
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: G098011 | Price: $134.00

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: G099011 | Price: $82.00

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 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: $93.00

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: $93.00

Bull 100-3
Community Engagement Guidelines
These guidelines outline what local communities and other key stakeholders can expect from operators. Oil and gas operators acknowledge the challenges associated with industry activities, which can include challenges important to a community. Principles of integrity, transparency and consideration for community concerns underpin responsible operations. Conscientious operators are committed to helping communities achieve positive and 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.


DRILLING AND PRODUCTION OPERATIONS: TRAINING

Gas Lift
(Book 6 in the Vocational Training Series)
Familiarizes field personnel with basic gas lift principles; operating procedures for adjusting, regulating, operating, and troubleshooting gas-lift equipment; and well conditions. Covers conventional practices and concepts. Illustrated with drawings of typical gas-lift installations and related equipment, as well as actual charts illustrating operation of and problems encountered in gas-lift wells. Pages: 143

Product Number: GVT063 | Price: $161.00

Introduction to Oil and Gas Production
(Book 1 in the Vocational Training Series)
Serves as a primer for oil and gas operations. It covers the origins and accumulation of oil and gas, the well, well treatment and wellhead, artificial lift, well testing, separation, treatment and storage, gauging and metering, production, offshore production and structures, corrosion, enhanced recovery, production personnel, tools and equipment, pipe, valves and fittings, reports and records, state and federal regulations, environmental, health, and safety concerns, economic considerations, and future trends. Pages: 120

Product Number: GVT015 | Price: $161.00
**Health, Environment, and Safety: Exploration and Production Safety Standards**

**RP 49**
Recommended Practice for Drilling and Well Servicing Operations Involving Hydrogen Sulfide

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

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

**RP 49**
Recommended Practice for Drilling and Well Servicing Operations Involving Hydrogen Sulfide—Kazakh

Kazakh translation of RP 49.

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

**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: $70.00

**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

Product Number: G51R01 | Price: $78.00

**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: $129.00

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RP 75
Recommended Practice for Development of a Safety and Environmental Management Program for Offshore Operations and Facilities

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

Product Number: G07503 | Price: $92.00

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: $65.00

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 axiomatic tool that can assist operators 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: $35.00

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

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

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

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

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

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

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

Assists the petroleum industry in understanding the SPCC regulation in light of the latest rule (40 CFR Part 112) and to offer guidance for developing SPCC Plans wherever they are needed. Included is a template for developing SPCC plans (i.e., onshore excluding production; onshore oil production, oil drilling or worker; or offshore oil drilling, production, or worker) 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: $266.00 | Template Only: Price: $98.00

HEALTH, ENVIRONMENT, AND SAFETY: GENERAL

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

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

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

Exploration and Production: Protecting the Environment

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

September 1997 | Product Number: G13650 | Price: Free*

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## HEALTH, ENVIRONMENT, AND SAFETY: WASTE

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

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


### Protecting Livestock: Answers to Frequently Asked Questions about Livestock Exposure to Crude Oil in Oilfield Operations

Describes ways livestock might be significantly exposed to petroleum hydrocarbons via a conceptual site model and outlines how to make a screening level determination of whether or not livestock are at risk from the exposure.

2006 | Product Number: I0PL06 | For a free copy, please visit [http://www.api.org/~/media/Files/EHS/Environmental_Performance/LIVESTOCK_EXPOSURE_BROUCHURE_FINAL.pdf](http://www.api.org/~/media/Files/EHS/Environmental_Performance/LIVESTOCK_EXPOSURE_BROUCHURE_FINAL.pdf) |

### API E5

Environmental Guidance Document: Waste Management in Exploration and Production Operations

Includes recommendations for the environmentally sound management of solid waste resulting from the exploration and production of oil and gas. Guidance is provided for the management of drilling fluids, produced waters, and other wastes associated with the operation of gas plants, field facilities, drilling, and workover. Pages: 84

2nd Edition | February 1997 | Product Number: GE5002 | Price: $129.00 |

## SECURITY

### RP 70

Security for Offshore Oil and Natural Gas Operations

Intended to assist the offshore oil and natural gas drilling and producing operators and contractors in assessing security needs during the performance of oil and natural gas operations. It includes information on security awareness, conducting security vulnerability assessments when warranted, and developing security plans for offshore facilities. Pages: 16

1st Edition | March 2003 | Reaffirmed: September 2010 |
Product Number: G07001 | Price: $59.00 |

### RP 70I

Security for Worldwide Offshore Oil and Natural Gas Operations

Intended to assist the offshore oil and natural gas drilling and producing operators and contractors in assessing security needs during the performance of oil and natural gas operations worldwide. Pages: 14

1st Edition | April 2004 | Reaffirmed: January 2012 |
Product Number: G70I03 | Price: $63.00 |
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For more information visit www.api.org/standards.