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RAIL TRANSPORTATION

RP 3000 ■

Classifying and Loading of Crude Oil into Rail Tank Cars

Provides guidance on the material characterization, transport classification, and quantity measurement for overfill prevention of petroleum crude oil, for the loading of rail tank cars.

This document applies only to petroleum crude oil classified as Hazard Class 3—Flammable Liquid under the U.S. *Code of Federal Regulations (CFR)* at the time of publication.

RP 3000 identifies criteria for determining the frequency of sampling and testing of petroleum crude oil for transport classification. It discusses how to establish a sampling and testing program and provides an example of such a program.

This document provides guidance on Packing Group (PG) assignment, including the potential effect of heel, and mixing of crude oils of differing PGs. The document provides guidance on initial testing and an ongoing sampling and testing for assignment of PG.

RP 3000 provides guidance on determining the loading target quantity (LTQ) of crude oil transported by rail tank car. This includes crude oil temperature and density determination, identification of sampling points based on loading scenarios, and measurement equipment and processes.

Guidance on the documentation of measurement results and record retention is also provided. Pages: 38

1st Edition | September 2014 | Product Number: A30001 | Price: \$125.00

You may download a copy of this document from the Rail Transportation section of the API website.

PIPELINE PUBLIC EDUCATION AND AWARENESS

Get the Dirt

Video

A damage prevention awareness video produced by the Dig Safely team. The video explains the call first process and encourages its use. Available in both English and Spanish.

Single copies free from the API Pipeline Segment: 202-682-8125

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Guidelines for Property Development

Brochure

The liquid petroleum pipeline industry has developed these guidelines to improve understanding and increase awareness of the nature of underground pipelines that transport oil, petroleum products, natural gas liquids, and other hazardous liquids and how to conduct land development and use activity near pipeline rights-of-way. The guidelines are intended for use by anyone who is involved in land development, agriculture, and excavation/construction activities near a pipeline. The industry's goal is to protect public safety of the people who live and work along pipeline rights-of-way, protect the environment along rights-of-way, and maintain the integrity of the pipeline so that petroleum products can be delivered to customers safely and without interruption.

A pipeline right-of-way (ROW) is property in which a pipeline company and a landowner both have a legal interest. Each has a right to be there, although each has a different type of use for the land. Pipeline companies are granted permission from private landowners to transport petroleum products across their private lands. That permission is documented in a written agreement called an easement, and it is obtained through purchase, license, or by

agreement with the landowner. In cases where the land is owned by the government—whether local, state, or federal—similar arrangements for easements and their respective responsibilities for maintaining the safety of this vital, but invisible, transportation system.

November 2009 | Product Number: DOGP04

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PIPELINE OPERATIONS PUBLICATIONS

RP 1102

Steel Pipelines Crossing Railroads and Highways

(includes Errata 1 dated November 2008, Errata 2 dated May 2010, Errata 3 dated September 2012, Errata 4 dated February 2014, and Errata 5 dated March 2014)

Gives primary emphasis to provisions for public safety. It covers the design, installation, inspection, and testing required to ensure safe crossings of steel pipelines under railroads and highways. The provisions apply to the design and construction of welded steel pipelines under railroads and highways. The provisions of this practice are formulated to protect the facility crossed by the pipeline, as well as to provide adequate design for safe installation and operation of the pipeline.

The provisions herein should be applicable to the construction of pipelines crossing under railroads and highways and to the adjustment of existing pipelines crossed by railroad or highway construction. This practice should not be applied retroactively. Neither should it apply to pipelines under contract for construction on or prior to the effective date of this edition. Neither should it be applied to directionally drilled crossings or to pipelines installed in utility tunnels. Pages: 39

7th Edition | December 2007 | Reaffirmed: December 2012

Product Number: D11021 | Price: \$116.00

Std 1104

Welding of Pipelines and Related Facilities

(includes Addendum 1 dated July 2014, Errata 1 dated April 2014, Errata 2 dated June 2014, and Errata 3 dated July 2014)

Covers the gas and arc welding of butt, fillet, and socket welds in carbon and low-alloy steel piping used in the compression, pumping, and transmission of crude petroleum, petroleum products, fuel gases, carbon dioxide, nitrogen, and where applicable, covers welding on distribution systems. It applies to both new construction and in-service welding. The welding may be done by a shielded metal-arc welding, submerged arc welding, gas tungsten-arc welding, gas metal-arc welding, flux-cored arc welding, plasma arc welding, oxyacetylene welding, or flash butt welding process or by a combination of these processes using a manual, semiautomatic, mechanized, or automatic welding technique or a combination of these techniques. The welds may be produced by position or roll welding or by a combination of position and roll welding.

This standard also covers the procedures for radiographic, magnetic particle, liquid penetrant, and ultrasonic testing, as well as the acceptance standards to be applied to production welds tested to destruction or inspected by radiographic, magnetic particle, liquid penetrant, ultrasonic, and visual testing methods. It is intended that all work performed in accordance with this standard shall meet or exceed the requirements of this standard. Pages: 118

21st Edition | September 2013 | Product Number: D110421 | Price: \$345.00

You may access Std 1104 in a read-only platform: publications.api.org

Std 1104 *

Welding of Pipelines and Related Facilities—Kazakh

Kazakh translation of Std 1104.

21st Edition | September 2013 | Product Number: D110421K | Price: \$276.00

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Transportation

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Phone Orders: 303-397-7956 (Local and International)

RP 1109

Marking Liquid Petroleum Pipeline Facilities (includes Errata 1 dated November 2010)

Addresses the permanent marking of liquid petroleum pipeline transportation facilities. It covers the design, message, installation, placement, inspection, and maintenance of markers and signs on pipeline facilities located onshore and at inland waterway crossings. Markers and signs indicate the presence of a pipeline facility and warn of the potential hazards associated with its presence and operation. The markers and signs may contain information to be used by the public when reporting emergencies and seeking assistance in determining the precise location of a buried pipeline.

The provisions of this recommended practice cover the minimum marker and sign requirements for liquid petroleum pipeline facilities. Alternative markers, which are recommended for some locations under certain circumstances, are also discussed. The pipeline operator is responsible for determining the extent of pipeline marking. Consideration should be given to the consequences of pipeline failure or damage; hazardous characteristics of the commodity being transported; and the pipeline's proximity to industrial, commercial, residential, and environmentally sensitive areas. The pipeline marking programs are also integral parts of the pipeline operator's maintenance and emergency plans.

This recommended practice is not intended to be applied retroactively. Its recommendations are for new construction and for normal marker maintenance programs subsequent to the effective date of this edition. Pages: 13

4th Edition | October 2010 | Product Number: D11094 | Price: \$89.00
You may access RP 1109 in a read-only platform: publications.api.org

RP 1110

Recommended Practice for the Pressure Testing of Steel Pipelines for the Transportation of Gas, Petroleum Gas, Hazardous Liquids, Highly Volatile Liquids, or Carbon Dioxide

Applies to all parts of a pipeline or pipeline facility including line pipe, pump station piping, terminal piping, compressor station piping, metering station piping, delivery station piping, regulator station piping, appurtenances connected to line pipe, appurtenances connected to facility piping, fabricated assemblies, valves, tees, elbows, reducers, flanges, and any other pipeline equipment or appurtenances. This RP does not apply to pumping units, compressor units, breakout tanks, pressure vessels, control piping, sample piping, instrument piping/tubing, or any component or piping system for which other codes specify pressure testing requirements (i.e. ASME *Boiler and Pressure Vessel Code*, piping systems covered by building codes, etc.). Although this RP contains guidelines that are based on sound engineering judgment, it is important to note that certain governmental requirements may differ from the guidelines presented in this document. Nothing in this RP is intended to inhibit the use of engineering solutions that are not covered by the RP. This may be particularly applicable where there is innovative developing technology. Where an alternative is offered, the RP may be used, provided any and all variations from the RP are identified and documented. This RP does not address piping systems that are pressure tested with natural gas, nitrogen, or air. Pages: 25

6th Edition | February 2013 | Product Number: D11106 | Price: \$95.00

RP 1111

Design, Construction, Operation, and Maintenance of Offshore Hydrocarbon Pipelines (Limited State Design) (includes Errata 1 dated May 2011)

Sets criteria for the design, construction, testing, operation, and maintenance of offshore steel pipelines used in the production, production support, or transportation of hydrocarbons from the outlet flange of a production facility. The criteria applies to transportation piping facilities located on production platforms after separation and treatment, including meter facilities, gas compression facilities, liquid pumps, and associated piping and appurtenances. This document may also be used for water injection pipelines offshore. Limit state design has been incorporated into

the document to provide a uniform factor of safety with respect to rupture or burst failure as the primary design condition independent of the pipe diameter, wall thickness, and grade. The criteria contained in this document are intended to permit the economical transportation of hydrocarbons while providing for the safety of life and property and the protection of the environment. The general adoption of these criteria should assure that offshore hydrocarbon pipelines possess the requisite structural integrity for their safe and efficient operation. Pages: 68

4th Edition | December 2009 | Product Number: D11114 | Price: \$133.00

RP 1113

Developing a Pipeline Supervisory Control Center (supersedes the 3rd Edition of Publ 1113)

Focuses on the design aspects that may be considered appropriate for developing or revamping a control center. A pipeline supervisory control center is a facility where the function of centralized monitoring and controlling of a pipeline system occurs. This document is not all-inclusive. It is intended to cover best practices and provide guidelines for developing a control center only. It does not dictate operational control philosophy or overall SCADA system functionality. This document is intended to apply to control centers for liquids pipelines; however, many of the considerations may also apply to gas control center design. Pages: 10

1st Edition | August 2007 | Reaffirmed: June 2012
Product Number: D11131 | Price: \$85.00

RP 1114

Recommended Practice for the Design of Solution-Mined Underground Storage Facilities

Provides basic guidance on the design and development of new solution-mined underground storage facilities. It is based on the accumulated knowledge and experience of geologists, engineers, and other personnel in the petroleum industry. Users of this guide are reminded that no publication of this type can be complete nor can any written document be substituted for qualified, site-specific engineering analysis. All aspects of solution-mined underground storage are covered, including selecting an appropriate site, physically developing the cavern, and testing and commissioning the cavern. Additionally, a section on plug and abandonment practices is included. This recommended practice does not apply to caverns used for waste disposal purposes. See API 1115 for guidance in the operation of solution-mined underground storage facilities. Pages: 47

2nd Edition | January 2013 | Product Number: D11142 | Price: \$90.00

RP 1115

Recommended Practice on the Operation of Solution-Mined Underground Storage Facilities

Provides basic guidance on the operation of solution-mined underground hydrocarbon liquid or liquefied petroleum gas storage facilities. This document is intended for first-time cavern engineers or supervisors, but would also be valuable to those people experienced in cavern operations. This recommended practice is based on the accumulated knowledge and experience of geologists, engineers, and other personnel in the petroleum industry. All aspects of solution-mined underground storage operation, including cavern hydraulics, brine facilities, wellhead and hanging strings, and cavern testing are covered. Users of this guide are reminded that no publication of this type can be complete, nor can any written document be substituted for effective site-specific operating procedures.

This recommended practice does not apply to caverns used for natural gas storage, waste disposal purposes, caverns which are mechanically mined, depleted petroleum reserve cavities, or other underground storage systems which are not solution-mined. Pages: 16

1st Edition | September 1994 | Reaffirmed: October 2012
Product Number: D11151 | Price: \$86.00

RP 1117

Recommended Practice for Movement in In-Service Pipelines

(includes Errata 1 dated December 2008 and Errata 2 dated August 2009)

Covers the design, execution, inspection, and safety of a pipeline-lowering or other movement operation conducted while the pipeline is in service. (In this document, the terms lowering and movement can be used interchangeably.) This recommended practice presents general guidelines for conducting a pipeline-movement operation without taking the pipeline out of service. It also presents equations for estimating the induced stresses. To promote the safety of the movement operation, it describes stress limits and procedures. Additionally, it outlines recommendations to protect the pipeline against damage. The practicality and safety of trench types, support systems, and lowering or other methods are considered. Inspection procedures and limitations are presented. Pages: 33

3rd Edition | July 2008 | Reaffirmed: October 2013

Product Number: D11173 | Price: \$132.00

RP 1130

Computational Pipeline Monitoring for Liquids

Focuses on the design, implementation, testing, and operation of CPM systems that use an algorithmic approach to detect hydraulic anomalies in pipeline operating parameters. The primary purpose of these systems is to provide tools that assist pipeline controllers in detecting commodity releases that are within the sensitivity of the algorithm. It is intended that the CPM system would provide an alarm and display other related data to the pipeline controllers to aid in decision-making. The pipeline controllers would undertake an immediate investigation, confirm the reason for the alarm and initiate an operational response to the hydraulic anomaly when it represents an irregular operating condition or abnormal operating condition or a commodity release. The purpose of this recommended practice is to assist the pipeline operator in identifying issues relevant to the selection, implementation, testing, and operation of a CPM system. Pages: 42

1st Edition | September 2007 | Reaffirmed: April 2012

Product Number: D011301 | Price: \$112.00

You may access RP 1130 in a read-only platform: publications.api.org

RP 1133

Guidelines for Onshore Hydrocarbon Pipelines Affecting High Consequence Floodplains

Sets out criteria for the design, construction, operation, maintenance, and abandonment of onshore pipelines that could affect high consequence floodplains and associated commercially navigable waterways. This document applies only to steel pipelines that transport gas, hazardous liquids, alcohols, or carbon dioxide.

The design, construction, inspection, and testing provisions of this document should not apply to pipelines that were designed or installed prior to the latest revision of this publication. The operation and maintenance provisions of this document should apply to existing facilities. The contents in this document should not be considered a fixed rule for application without regard to sound engineering judgment. Pages: 9

1st Edition | February 2005 | Reaffirmed: February 2010

Product Number: D11331 | Price: \$82.00

Publ 1149

Pipeline Variable Uncertainties and Their Effects on Leak Detectability

Quantifies the effects of variables on leak detection using common software-based leak detection methods. This study provides a database and a step-by-step methodology to evaluate leak detection potential of a given pipeline with specified instrumentation and SCADA capabilities. Incremental improvement of leak detectability resulting from upgrading individual variables can also be determined.

The utility of the results from this study is to enable users (i.e., pipeline companies) to determine the achievable level of leak detection for a specific pipeline with a specified set of instrumentation and SCADA system. The results also help users to understand the sensitivity of leak detectability with

respect to the variables involved. This information is useful in several ways: investigating the feasibility of leak detection systems, justifying and prioritizing changes to instrumentation and SCADA systems, configuring pipeline and measurement stations, and aiding leak detection operations.

Three general types of software-based leak detection methods are addressed in this study:

- mass balance,
- mass balance with lineful correction, and
- transient flow analysis.

The leak detection potential of these methods are discussed based on hydraulics to the extent possible. The liquids considered are crude oils and refined petroleum products such as gasoline, jet fuel, and fuel oil.

The pipeline configuration considered is a pipe segment with pressure, temperature, and volumetric flow measurements at each end. During steady-state flow, this configuration applies to pipelines with booster pumping stations where rates of flow are measured only at the inlet and the outlet of the entire system. All variables affecting leak detection are listed. General relationships between the variable uncertainties and leak detection potential are analyzed. The methodology are described and verified with field tests. The variables are ranked according to their importance to leak detectability. A step-by-step method and a database are established to enable simple hand calculations for establishing leak detectability based on mass balance. The method and the database are verified with field data. The rationale and the procedure to establish leak detectability using mass balance with line pack correction and transient flow simulations are given and illustrated with examples and field trial results. Pages: 118

1st Edition | November 1993 | Product Number: D11491 | Price: \$188.00

Std 1160

Managing System Integrity for Hazardous Liquid Pipelines

(includes Errata 1 dated September 2013)

Outlines a process that an operator of a pipeline system can use to assess risks and make decisions about risks in operating a hazardous liquid pipeline in order to reduce both the number of incidents and the adverse effects of errors and incidents.

An integrity management program provides a means to improve the safety of pipeline systems and to allocate operator resources effectively to: identify and analyze actual and potential precursor events that can result in pipeline incidents; examine the likelihood and potential severity of pipeline incidents; provide a comprehensive and integrated means for examining and comparing the spectrum of risks and risk reduction activities available; provide a structured, easily communicated means for selecting and implementing risk reduction activities; and establish and track system performance with the goal of improving that performance.

This standard is intended for use by individuals and teams charged with planning, implementing, and improving a pipeline integrity management program. Typically a team would include engineers, operating personnel, and technicians or specialists with specific experience or expertise (corrosion, in-line inspection, right-of-way patrolling, etc.). Users of this standard should be familiar with the pipeline safety regulations (Title 49 CFR Part 195), including the requirements for pipeline operators to have a written pipeline integrity program and to conduct a baseline assessment and periodic reassessments of pipeline management integrity. Pages: 99

2nd Edition | September 2013 | Product Number: D116002 | Price: \$215.00

You may access Std 1160 in a read-only platform: publications.api.org

RP 1161 ■

Recommended Practice for Pipeline Operator Qualification (OQ)

Provides guidance to the liquids pipeline industry. The United States Department of Transportation (DOT) requires that pipeline operators develop a written qualification program to evaluate personnel and contractor ability to perform covered tasks and to recognize and respond to abnormal operating conditions that may be encountered while performing these covered tasks. This is a performance-based qualification program. Pages: 256

3rd Edition | January 2014 | Product Number: D11613 | Price: \$210.00

You may access RP 1161 in a read-only platform: publications.api.org

RP 1162

Public Awareness Programs for Pipeline Operators

Provides guidance for pipeline operators to develop and manage public awareness programs tailored to meet the needs of the community. It is meant to raise the quality of public awareness programs and align baseline core safety messages across the oil and gas industry.

The scope of this RP covers the development, implementation, evaluation, and documentation of public awareness programs associated with the normal operation of existing pipeline systems and facilities, including transmission pipelines, local distribution systems, and gathering lines.

Two important objectives of this RP are to provide a framework to help each pipeline operator create and manage a public awareness program as well as a process for periodic program evaluation to encourage each operator to enhance the program, at the operator's discretion, as circumstances warrant.

Communications related to new pipeline construction, offshore operations, and during emergencies are not covered by this RP, nor is it intended to provide guidance to operators for communications about operator-specific performance measures that are addressed through other means of communication or regulatory reporting.

This RP provides the operator with the elements of a recommended baseline public awareness program and considerations to determine when and how to enhance the program to provide the appropriate level of public awareness outreach. Enhancements may affect messages, delivery frequency and methods, geographic coverage areas, program evaluation, and other elements. Pages: 59

2nd Edition | December 2010 | Product Number: D11622 | Price: \$124.00
You may access RP 1162 in a read-only platform: publications.api.org

Std 1163

In-Line Inspection Systems Qualification

Covers the use of in-line inspection (ILI) systems for onshore and offshore gas and hazardous liquid pipelines. This includes, but is not limited to, tethered, self-propelled, or free flowing systems for detecting metal loss, cracks, mechanical damage, pipeline geometries, and pipeline location or mapping. The standard applies to both existing and developing technologies.

This standard is an umbrella document that provides performance-based requirements for ILI systems, including procedures, personnel, equipment, and associated software. Nothing in this standard is intended to inhibit the use of inspection systems or engineering solutions that are not covered by the standard. This may be particularly applicable where there is innovative developing technology. Where an alternative is offered, the standard may be used, provided any and all variations from the standard are identified and documented. Pages: 79

2nd Edition | April 2013 | Product Number: D11632 | Price: \$131.00

Std 1164

Pipeline SCADA Security

Provides guidance to the operators of oil and gas liquids pipeline systems for managing SCADA system integrity and security. The use of this document is not limited to pipelines regulated under Title 49 CFR 195.1, but should be viewed as a listing of best practices to be employed when reviewing and developing standards for a SCADA system. This document embodies API's *Security Guidelines for the Petroleum Industry*. This guideline is specifically designed to provide operators with a description of industry practices in SCADA security, and to provide the framework needed to develop sound security practices within the operator's individual companies. It is important that operators understand system vulnerability and risks when reviewing the SCADA system for possible system improvements. The goal of an operator is to control the pipeline in such a way that there are no adverse effects on employees, the environment, the public, or the customers as a result of actions by the operator, or by other parties. This document is structured so that the main body provides the high-level view of holistic security practices. The annexes provide further details and technical guidance. Reviewing the main body of this document and following the guidance set forth in the annexes assists in creating inherently secure operations. Implementation of this standard to advance supervisory control and data acquisition (SCADA) cyber security is not a simple process or onetime event, but a continuous process. The overall process could take years to implement correctly,

depending on the complexity of the SCADA system. Additionally, the process would optimally be started as part of a SCADA upgrade project and use this standard to "design in" security as an element of the new system. Pages: 64

2nd Edition | June 2009 | Product Number: D11642 | Price: \$146.00

You may access Std 1164 in a read-only platform: publications.api.org

RP 1165

Recommended Practice for Pipeline SCADA Displays

Focuses on the design and implementation of displays used for the display, monitoring, and control of information on pipeline Supervisory Control and Data Acquisition Systems (SCADA). The primary purpose is to document industry practices that provide guidance to a pipeline company or operator who want to select a new SCADA system, or update or expand an existing SCADA system.

This document assists pipeline companies and SCADA system developers in identifying items that are considered best practices when developing human machine interfaces (HMI). Design elements that are discussed include, but are not limited to, hardware, navigation, colors, fonts, symbols, data entry, and control/selection techniques. Pages: 45

1st Edition | January 2007 | Reaffirmed: July 2012

Product Number: D11651 | Price: \$152.00

You may access RP 1165 in a read-only platform: publications.api.org

RP 1166

Excavation Monitoring and Observation

(includes Errata 1 dated December 2006)

Provides a consistently applied decision making process for monitoring and observing of excavation and other activities on or near pipeline rights-of-way for "hazardous liquid" and "natural and other gas" transmission pipelines. (NOTE: One call provisions and laws vary by state and it is the operator's responsibility to be familiar with and comply with all applicable one-call laws.) This document's purpose is to protect the public, excavation employees, and the environment by preventing damage to pipeline assets from excavation activities. Pages: 4

1st Edition | November 2005 | Reaffirmed: November 2010

Product Number: D11661 | Price: \$106.00

RP 1167

Pipeline SCADA Alarm Management

Provides pipeline operators with recommended industry practices in the development, implementation, and maintenance of an alarm management program. It provides guidance on elements that include, but are not limited to, alarm definition, alarm philosophy, documentation, management of change, and auditing.

This document is not intended to be a step-by-step set of instructions on how to build an alarm management system. Each pipeline operator has a unique operating philosophy and will therefore have a unique alarm philosophy as well. This document is intended to outline key elements that should be considered when building an alarm management system. Pages: 41

1st Edition | December 2010 | Product Number: D116701 | Price: \$116.00

You may access RP 1167 in a read-only platform: publications.api.org

RP 1168

Pipeline Control Room Management

Provides pipeline operators and pipeline controllers with guidance on industry best practices on control room management to consider when developing or enhancing practices and procedures. This document was written for operators with continuous and non-continuous operations, as applicable. This document addresses four pipeline safety elements for hazardous liquid and natural gas pipelines in both the transportation and distribution sectors: pipeline control room personnel roles, authorities, and responsibilities; guidelines for shift turnover; pipeline control room fatigue management; and pipeline control room management of change (MOC). Pages: 11

1st Edition | September 2008 | 2-Year Extension: December 2013

Product Number: D11681 | Price: \$83.00

You may access RP 1168 in a read-only platform: publications.api.org

RP 1169

Recommended Practice for Basic Inspection Requirements—New Pipeline Construction

Covers the basic requirements and their associated references needed to effectively and safely perform inspection activities during construction of new onshore pipelines. Use of this document will provide the basis for what construction inspectors need to know and where to find detailed information related to each facet of new pipeline construction inspection activities.

The requirements are organized into the following major sections:

- inspector responsibilities,
- personnel and general pipeline safety,
- environmental and pollution control.
- general pipeline construction inspection.

Users of this document include those individuals either engaged in pipeline construction inspection or seeking to become certified inspectors. Pipeline owner/operators and pipeline inspection service companies may also use this document to aid and enhance their inspector training programs. Pages: 46

1st Edition | July 2013 | Product Number: D11691 | Price: \$115.00

RP 1172 ■

Recommended Practice for Construction Parallel to Existing Underground Transmission Pipelines

Emphasis of these guidelines is on the interaction between existing transmission pipeline operators and those planning to construct in a parallel fashion. These activities may involve many different parties. Contractors working on behalf of the constructing party, including environmental and survey professionals, design engineers, construction contractors, and operators of excavation and earth moving equipment, should engage in work practices that are in conformance with these guidelines and apply vigilance in identifying unanticipated circumstances that may indicate a problem. This RP refers to all of these entities as the "constructing party." These guidelines have been developed such that they can be incorporated into contract documents executed with contractors and subcontractors by whichever party is involved in or responsible for construction activities. Pages: 19

1st Edition | April 2014 | Product Number: D11721 | Price: \$85.00

RP 2200

Repairing Crude Oil, Liquefied Petroleum Gas and Product Pipelines

Discusses guidelines to safe practices while repairing in-service pipelines for crude oil, liquefied petroleum gas, highly volatile liquids, and product service. Although it is recognized that the conditions of a particular job will necessitate an on-the-job approach, the observance of the suggestions in this document should improve the probability that repairs will be completed without accidents or injuries. Pages: 11

4th Edition | September 2010 | Product Number: D22004 | Price: \$71.00

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PIPELINE MAINTENANCE WELDING

Investigation and Prediction of Cooling Rates During Pipeline Maintenance Welding, and User's Manual for Battelle's Hot-Tap Thermal-Analysis Models

Investigated and improved the methods of predicting cooling rates during pipeline maintenance welding. The scope of this study included

- a review of three previous research efforts to develop satisfactory methods for welding appurtenances to in-service pipelines;
- a survey of pipeline leak and rupture incidents associated with appurtenances;
- the enhancement of existing analytical models for predicting cooling rates and temperatures during welding on an in-service pipeline; and

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- a validation of the thermal-analysis models that was achieved by performing welds on pipeline carrying three different liquid-petroleum products.

May 2002 | Product Number: | Version 4.2 | May 2002

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Std 1104

Welding of Pipelines and Related Facilities

(includes Addendum 1 dated July 2014, Errata 1 dated April 2014, Errata 2 dated June 2014, and Errata 3 dated July 2014)

Covers the gas and arc welding of butt, fillet, and socket welds in carbon and low-alloy steel piping used in the compression, pumping, and transmission of crude petroleum, petroleum products, fuel gases, carbon dioxide, nitrogen, and where applicable, covers welding on distribution systems. It applies to both new construction and in-service welding. The welding may be done by a shielded metal-arc welding, submerged arc welding, gas tungsten-arc welding, gas metal-arc welding, flux-cored arc welding, plasma arc welding, oxyacetylene welding, or flash butt welding process or by a combination of these processes using a manual, semiautomatic, mechanized, or automatic welding technique or a combination of these techniques. The welds may be produced by position or roll welding or by a combination of position and roll welding.

This standard also covers the procedures for radiographic, magnetic particle, liquid penetrant, and ultrasonic testing, as well as the acceptance standards to be applied to production welds tested to destruction or inspected by radiographic, magnetic particle, liquid penetrant, ultrasonic, and visual testing methods. It is intended that all work performed in accordance with this standard shall meet or exceed the requirements of this standard. Pages: 118

21st Edition | September 2013 | Product Number: D110421 | Price: \$345.00

You may access Std 1104 in a read-only platform: publications.api.org

Std 1104 *

Welding of Pipelines and Related Facilities—Kazakh

Kazakh translation of Std 1104.

21st Edition | September 2013

Product Number: D110421K | Price: \$276.00

TANK TRUCK OPERATIONS

For Safety's Sake—MC 306 Cargo Tank Vehicle Inspection

This VHS tape provides a step-by-step approach to pre- and post-trip inspection of MC 306 cargo tank vehicles. The tape follows a driver through an actual walk-around inspection and covers driver recordkeeping and the inspection itself—brakes, lights, mirrors, tires, wiring, the tank, and placards. Also includes common truck defects. The videotape was prepared under the direction of the API Highway Safety Committee and parallels the U.S. Department of Transportation's truck inspection regulations. Two minutes of blank leader is provided on the tape so that it can be customized to fit company training needs. VHS tape: 14 minutes. Pages: 65

January 1989 | Product Number: A11500 | Price: \$103.00

RP 1004

Bottom Loading and Vapor Recovery for MC-306 & DOT-406 Tank Motor Vehicles

Provides an industry standard for bottom loading and vapor recovery of proprietary and hired carrier DOT MC-306 tank vehicles at terminals operated by more than one supplier. Guides the manufacturer and operator of a tank vehicle as to the uniform features that should be provided to permit loading of a tank vehicle with a standard 4-in. adapter. This edition of

Transportation

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RP 1004 requires an independent secondary control system and maximum requirements for outage in the tank to allow the secondary control system to function. Pages: 21

8th Edition | January 2003 | Reaffirmed: February 2011

Product Number: A10048 | Price: \$111.00

You may access RP 1004 in a read-only platform: publications.api.org

RP 1007

Loading and Unloading of MC 306/DOT 406 Cargo Tank Motor Vehicles

Ensuring the safe and efficient loading and delivery of petroleum products to retail service stations and bulk facilities is the primary goal for all companies that transport product. This document is a guideline for use by the truck driver and persons responsible for loading and unloading of MC306/DOT406 cargo tanks. It identifies specific steps to ensure that product can be loaded into tank trucks and unloaded into both underground and aboveground storage tanks in a safe and efficient manner that protects the environment. It is intended to be used in conjunction with existing driver training programs and procedures. Pages: 24

1st Edition | March 2001 | Reaffirmed: February 2011

Product Number: A10071 | Price: \$39.00

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