

American Petroleum Institute

API-USEA-USAID Webinar

September 2020



OVERVIEW OF API STANDARDS



API Members

600+ companies involved in all aspects of the global natural gas and oil industry



API's Global Industry Services Division

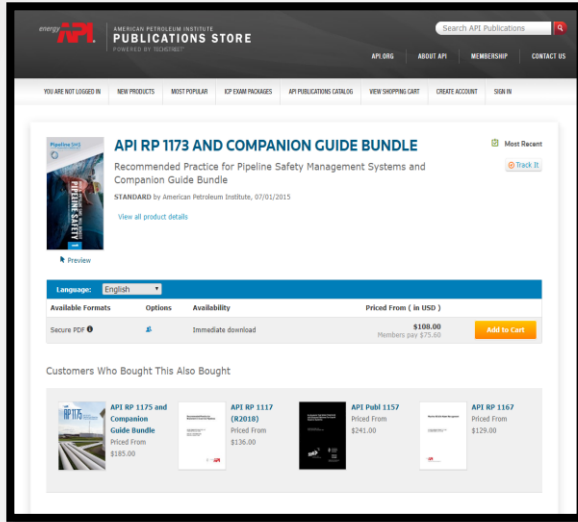
Mission: Provide world-class services that enable the oil and natural gas industry to operate efficiently, safely, reliably, profitably, and sustainably

- 100+ Employees
- 145 Auditors
- 200 Training Programs
- 700+ Publications
- 200+ Events
- 56,000 Personnel Certifications in 128 Countries
- 5,000 Company Certifications in 80+ Countries
- 50,000+ Licensed Products



API Standards

Setting Standards Since 1924 to promote safety, environmental protection, reliability and sustainability through proven engineering practices.



API's standards:



Cover all industry segments

- Upstream (Exploration & Production)
- Downstream (Refining & Marketing)
- Midstream (Pipeline, Rail & Truck transportation, and Petroleum Measurement)



American National Standards Institute (ANSI) accredited standards developing organization



API now publishes +700 standards



Over 650 citations in U.S. Code of Federal Regulations



API Standards Program Accreditation



API is accredited by the American National Standards Institute (ANSI)



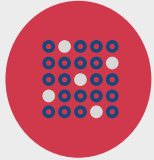
ANSI Accreditation requires:

- ✓ Openness, Balance, Consensus and Due Process
- ✓ Approved and Published Procedures
- ✓ Requirement for Standards Updates
- ✓ Regular Program Audits

API Standards Development Process



Transparent, impartial, and consensus-based process



Driven by research, data and science-based decisions



Committees made up of thousands of volunteers from industry, academia, government, and NGO's



Collaborate with other standards bodies to avoid duplication; connect globally

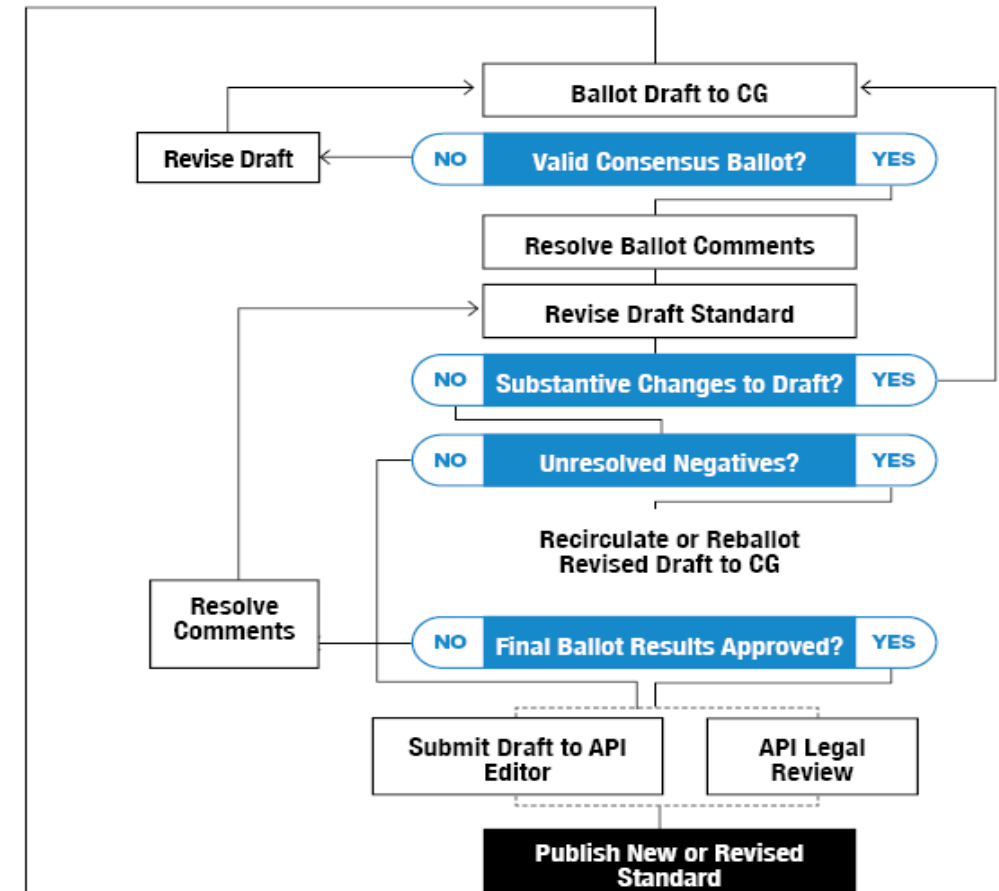
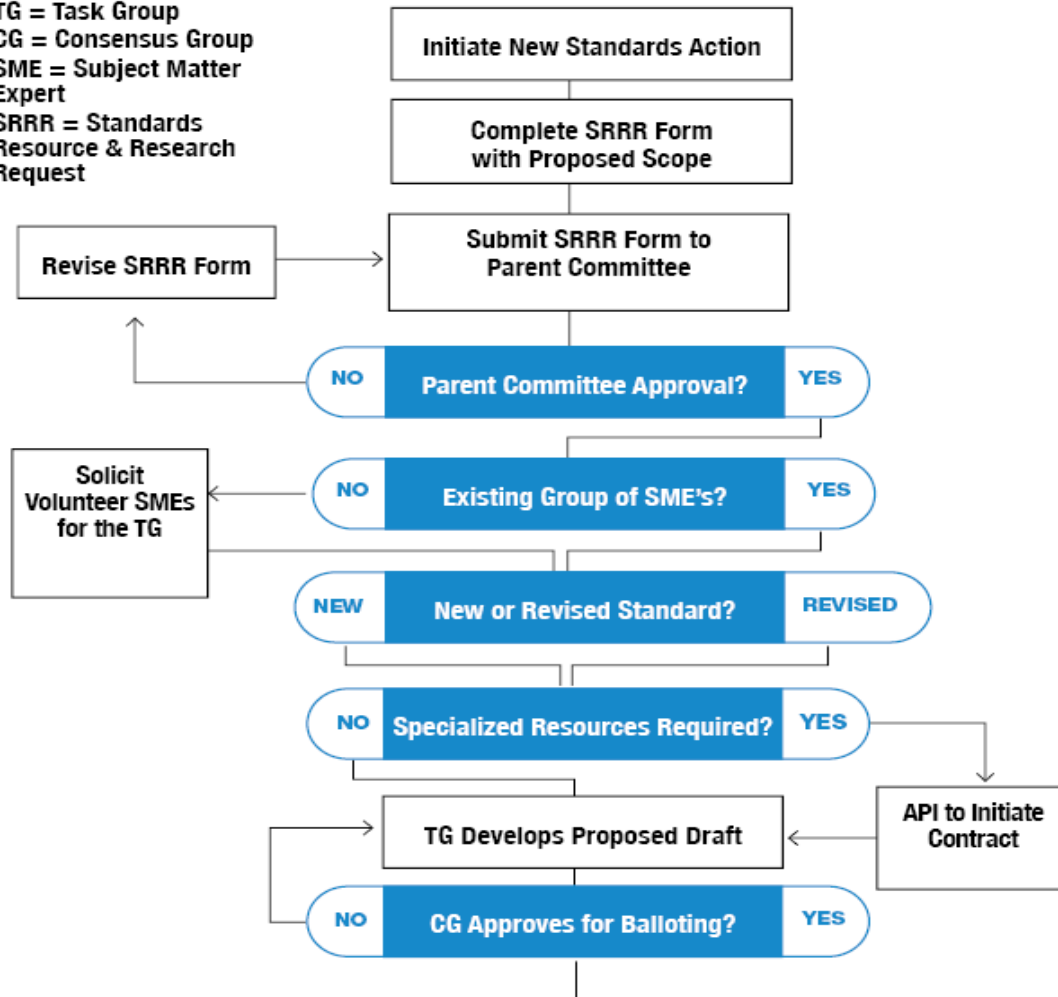


Incorporate new proven engineering practices, updated periodically

API Standards Development Process

KEY:

TG = Task Group
 CG = Consensus Group
 SME = Subject Matter Expert
 SRRR = Standards Resource & Research Request



API Standards Committees



API standards are developed by subcommittees and task groups comprised of industry experts from around the world.



Participants from oil and gas companies, manufacturers and consultants, government agencies and academia that have expertise in the standards topic.



Opportunities for all stakeholders to comment on draft standards through transparent public balloting process.

API Standards and Transparency



API Standards Plan is displayed online in real time

- Standards are shown in three phases:
 - Pre-Ballot Phase
 - Ballot Phase
 - In-Editing



IBR Reading Room

- Free, read-only access to incorporated by reference standards

Standards Plan

Below is a list of standards in development by industry segment.
See a breakdown of standards in pre-ballot, ballot, and editing: [Chart Standards](#)

Downstream Midstream Upstream Published (2020)

Copy PDF Print Show 10 rows Search:

Committee	Pub. Type	Pub. No.	Title	Ed.	Pre-Ballot Phase	Ballot Phase	In Editing
COPM	Ch.	10.10	Continuous on-line Measurement of Water in Petroleum (Crude Oil and Condensate)	1	X		
COPM	Ch.	10.4	Determination of Sediment and Water in Crude Oil by the Centrifuge Method (Field Procedure)	5			X
COPM	Ch.	10.9	Standard Test Method for Water in Crude Oils by Coulometric Karl Fischer Titration (ASTM D4928)	4	X		

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Home Read-Online Documents Purchase/Download Documents

BROWSE READ-ONLY DOCUMENTS

Browse By Category

U.S. Safety and Government-Cited Standards are available for review only in each of the following categories:

- Exploration and Production
- Petroleum Measurement
- Marketing
- Pipeline Transportation
- Refining
- Safety and Fire Protection
- IBR Documents Under Consideration

700+ Standards

API standards and recommended practices are incorporated by reference into both federal and state oil and gas regulations and they are the most widely-cited petroleum industry standards by international regulators.



3,800 Citations

in state regulations



650 Citations

by U.S. federal government organizations: U.S. Coast Guard, U.S. EPA, FTC, BSEE, OSHA, and PHMSA



780+ International References

by Brazil, China, Saudi Arabia, Singapore, Indonesia, Vietnam, and others.

International Usage & Deployment

25

MARKETS ANALYZED



China and SE Asia
India and the Middle East
South America
Africa

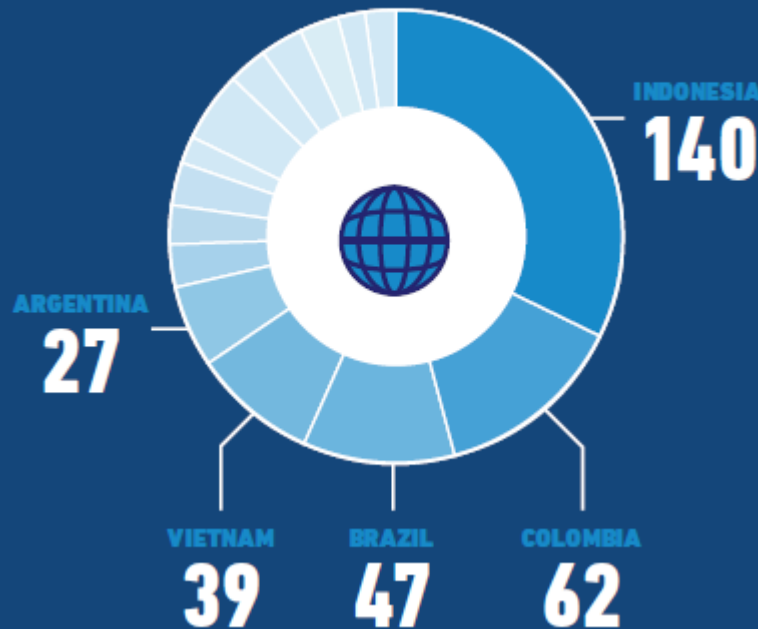


WIDESPREAD USE OF API STANDARDS

780+

references to API standards in laws, regulations, national standards, and operations manuals

REFERENCES IN NATIONAL STANDARDS/REGULATIONS



REFERENCES IN NATIONAL STANDARDS



70%

of references were in national standards and regulations

Utilization of Standards



**Reference in
technical
manuals**



**Incorporated
and/or
referenced in
national
standards**



**Incorporated
and/or
referenced in
regulations**



**Agency
discretion -
mandatory
or voluntary
based on
policy
objectives**

CASE STUDIES: API STANDARDS USED IN PRACTICE



U.S. Standards Use

National Technology Transfer and Advancement Act (NTTAA)



All Federal agencies and departments shall use technical standards that are developed or adopted by voluntary consensus standards bodies



Federal agencies and departments shall consult with voluntary, private sector, consensus standards bodies and shall, when such participation is in the public interest...participate with such bodies in the development of technical standards.



Office of Management and Budget (OMB) Circular A-119 developed as guidance to all agencies and departments

USG Use of Voluntary Standards



Regulation that incorporates standard by reference

- An agency may adopt a voluntary standard (without changes) by incorporating the standard in a regulation by listing (or referencing) the standard by title.
- Approach eliminates the cost to the regulator of creating a new standard



Regulation based on existing standard

- A regulator reviews an existing standard and if necessary, makes changes to match its goal
- A regulator conducts a rulemaking process to solicit public opinion and stakeholder input

Case Study: BSEE & RP 75

Bureau of Safety and Environmental Enforcement (BSEE)



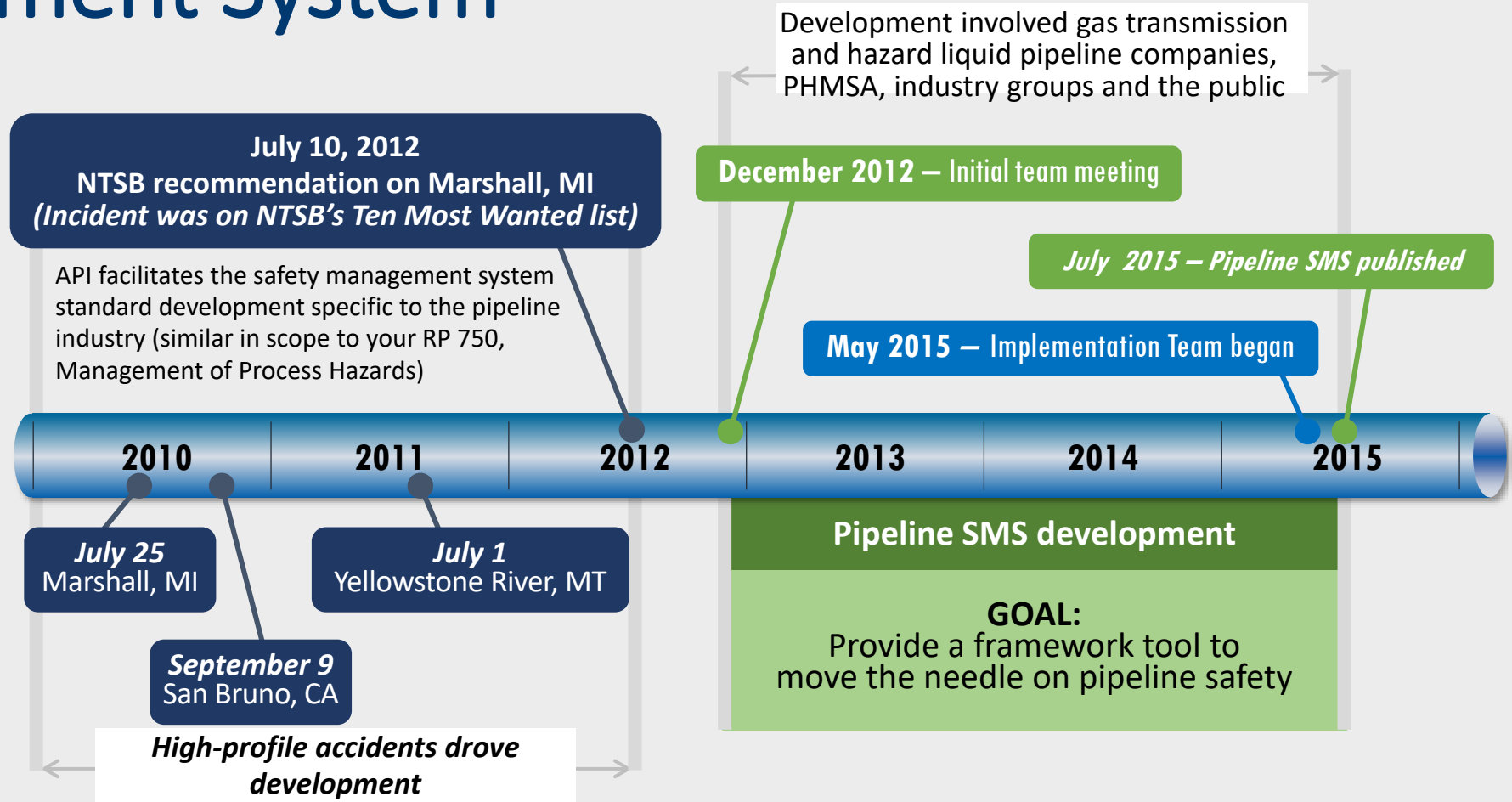
- **Incorporates API RP 75 v. 3 *in whole* –**

“You must develop, implement, and maintain a safety and environmental management system (SEMS) program. Your SEMS program must address the elements described in §250.1902, American Petroleum Institute’s Recommended Practice for Development of a Safety and Environmental Management Program for Offshore Operations and Facilities (API RP 75) (as incorporated by reference in §250.198), and other requirements as identified in this subpart.”



SEMS (API RP 75 v.3) is mandatory for all operators in Outer Continental Shelf (within U.S. jurisdiction) to have SEMS, 3rd party audits every 3 years.

Case Study: API RP 1173, Pipeline Safety Management System



After the U.S. NTSB recommended the industry develop guidance for safety management systems for energy pipeline operations, API partnered with PHMSA and state regulators to develop RP 1173.

Case Study: PHMSA and RP 1173



- ✓ **Developed with participation from regulators**
 - Pipeline and Hazardous Materials Safety Administration (PHMSA)
 - U.S. National Transportation Safety Board (NTSB)
- ✓ **Voluntary implementation; not incorporated by reference into U.S. regulation**
 - PHMSA strongly promotes implementation of RP 1173 by all pipeline operators
 - In some cases, PHMSA has required operators to implement RP 1173 as an enforcement action following an incident

Case Study: Indonesia and API Standard 521

Ministry of Energy and Mineral Resources (ESDM) – regulation requires O&G companies to “guarantee the effective standard and quality...as well as apply good technical forms”

ESDM Use of Standards in Oil and Gas Business Activities – Indonesian Standards Body (BSN)

- Mandatory and voluntary standards (+100 for O&G, 4 mandatory)
- When BSN mandatory standards not applicable, 140 API standards permitted for use

API Standard 521, Pressure-Relieving and Depressuring Systems

- Used in LNG Facilities
- Referenced in ESDM, Use of Standards in O&G Business Activities
- Work Procedure Guidelines – Operation and Maintenance of Petroleum Storage Tanks

Case Study: Brazil and API Standard 620

Brazilian Association of Technical Standards (ABNT) – leads standards development activities; referenced in Brazilian O&G regulations

ABNT maintains over 400 standards related to O&G sector

- 19 ABNT standards make 50 normative references to API standards



API Standard 620, Design and Construction of Large, Welded, Low-Pressure Storage Tanks

- ABNT NBR 17505-2:2015, Storage of Flammable and Combustible Liquids Part 2: Tank and Recipient Storage
- ABNT NBR 17505-7:2015, Storage of flammable and combustible liquids Part 7: Fire protection for parks with stationary storage tanks

Global Standards in the Energy Sector



Use of global standards helps facilitate trade and business across economies



Reliance on standards developed by the private sector help minimize unnecessary regulatory burdens, economic inefficiencies, and creation of TBT's



Use of international standards in policies can help spur economic growth while advancing environmental, health, safety, and sustainability performance



Facilitate use of products and materials that are interoperable, improving industry infrastructure and efficiency

Questions?

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