



DRIVING SAFETY AND SUSTAINABILITY ACROSS THE NATURAL GAS AND OIL INDUSTRY THROUGH WORLD-CLASS STANDARDS

API Standards



American
Petroleum
Institute



THROUGH THE GLOBAL INDUSTRY SERVICES DIVISION,

the American Petroleum Institute (API) is expanding its global reach, driving safety through targeted segment programs, certifying high-quality products and both setting the bar for standards – and working with organizations around the world to encourage the adoption of those standards.

API has been setting standards since 1924 and is the global leader in convening subject matter experts to establish, maintain and distribute consensus standards for the natural gas and oil industry. These standards further safety, efficiency, environmental protection and sustainability across the industry.

API standards are developed under the American National Standards Institute accredited process, ensuring that the API standards are recognized not only for their technical rigor but also their third-party accreditation, which requires a development process that is transparent, balanced and consensus-based.



Development Process

Before publishing an API standard: API first determines the need for a standard that not only has a significant impact on the industry – but also potentially a document that will have a significant regulatory or market impact. Then API assembles subject matter experts and an editor to move the standard through a complicated development process, determine which API Committee should manage this process and send the standard through ballots. During balloting, or voting, API standards are revised to incorporate feedback from subject matter experts, as well as other stakeholders, including: partner organizations, nonprofits, unions or regulatory agencies. The full process can take years, but the result is a world-class standard or best engineering practice that helps the natural gas and oil industry further its mission of providing energy in a safe, sustainable and efficient way.

API's Standards Committees are made up of subcommittees and task groups comprised of industry experts who develop API standards. These include natural gas and oil companies, manufacturers and suppliers, contractors and consultants and representatives of government agencies and academia.



Incorporated by Reference

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

800+ STANDARDS



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



789 INTERNATIONAL REFERENCES

by Brazil, Canada, China, India, Indonesia, Mexico, Saudi Arabia, United Arab Emirates and others

All API standards enhance the safety of industry operations, assure quality, help keep costs down, reduce waste and minimize confusion. Highlighted here are a few of API's most applied standards across the industry.



SAFETY

API standards facilitate safe operations worldwide, protecting workers, contractors, local communities and the environment.

API RP 54

Occupational Safety and Health for Natural gas and oil Well Drilling and Servicing Operations, establishes procedures to promote and maintain safe and healthy work environments in rotary drilling and well servicing operations.

API RP 1160

Managing System Integrity for Hazardous Liquid Pipelines, provides a process within a management system framework for operators to assess and safely manage potential risks through day-to-day operations.

API RP 751

Safe Operation of Hydrofluoric Acid Alkylation Units, communicates proven industry practices to support the safe operation of HF alky units and materials at refineries.



SUSTAINABILITY

API standards provide consensus-based practices for environmental protection and help improve sustainable operations worldwide.

API RP 100-1, API RP 100-2 and API Bull 100-3

Hydraulic Fracturing Series, provides guidance for onshore operations while establishing a baseline for environmental protection and guidelines for community engagement across the globe.

API RP 1175

Pipeline Leak Detection – Program Management, focuses on a risk-based approach to detect leaks quickly and with certainty to minimize negative consequences.

API RP 580

Risk-Based Inspection, emphasizes safe and reliable operation through risk-prioritization to further sustainability in the refining industry.





EFFICIENCY

API standards assure quality and reliable operations, keep costs down, reduce waste, speed acceptance and redirect savings into innovation.

API SPEC Q1

Quality Management System Requirements for Manufacturing Organizations, promotes consistent manufacturing processes for the development of reliable products and helps companies improve the efficiency of their management systems.

API RP 1173

Pipeline Safety Management Systems, provides a framework for managing risk, promoting learning and continuous improvement for safe and efficient pipeline operations.

API RP 755

Fatigue Risk Management Systems, establishes policies and procedures to address fatigue in the workplace to help ensure safe and efficient operations.



INNOVATION

API standards foster innovation by standardizing emerging products and services and leveraging new technologies for industry advancement.

API RP 17H

Remotely Operated Tools and Interfaces on Subsea Production Systems, provides development and design guidelines for remotely controlled subsea intervention systems.

API 1164

Pipeline Control Systems Cybersecurity, establishes the framework to develop sound cybersecurity practices to protect against system vulnerability and risks.

API 1509

Engine Oil Licensing and Certification System, describes methods that protect vehicle components that control emissions and turbocharging engine components that cut pollution, while improving the effective use of renewable fuels.



APPLICATION OF API STANDARDS

API standards are the foundation for API offerings for the natural gas and oil industry, including trainings, certifications and events.



INSTILLING CONFIDENCE IN INDUSTRY PRODUCTS

MONOGRAM AND APIQR



API Monogram facilitates the consistent manufacture of products for the natural gas and oil industry that conform to API world-class specifications.

With Monogram, customers can distinguish from competitors and be assured that services and products conform to API product standards. Independent, third-party audits of Monogram facilities ensure that manufacturers and service providers have implemented processes and controls to meet design, performance, legal and customer requirements.

www.API.org/Monogram | Certification@api.org

ENGINE OIL LICENSING AND CERTIFICATION SYSTEM



API 1509 governs how engine oil marketers certify that gasoline and diesel engine oils meet API's stringent engine oil performance standards. The 20th edition of API 1509, Engine Oil Licensing and Certification System, describes the voluntary API Engine Oil Licensing and Certification System (EOLCS) as well as methods for developing new engine oil performance standards. It also provides sellers with a description of the API Marks and their use, licensing requirements and aftermarket conformance and enforcement procedures that help to ensure that products licensed as or claiming to meet API standards actually do meet the standards.

www.API.org/EOLCS | EOLCS@api.org





INVESTING IN PEOPLE

TRAINING

Through API Training programs, and API Learning, the natural gas and oil industry is building a more knowledgeable workforce. API Training courses and online instruction are developed by subject matter experts, to help professionals become knowledgeable on the latest API standards, specifications and recommended practices. For example, API has instructor-led courses on Q1 and Q2. And, API Learning has a variety of online course offerings, including a WorkSafe Contractor Safety Program based on RP 1646; a course on RP 3000 for classifying, measuring, testing and loading Crude Oil by Rail; and, courses on Worker Fatigue Management and Fire Protection in Refineries, that is based on RP 755 and RP 2001.

www.API.org/Training | Training@api.org

INDIVIDUAL CERTIFICATION PROGRAMS

API Individual Certification Programs (ICP) provide an independent and unbiased way to evaluate field personnel in petroleum and petrochemical industries. ICP practical exams evaluate a person's knowledge and ability for the job function they perform, and inspections performed by ICP certified personnel help companies identify inefficiencies and opportunities for improvement. From a certification on API 571, Corrosion and Materials, to a certification on API 653, Aboveground Storage Tanks, to a certification on RP 1169, Pipeline Construction – ICP helps maintain safety and high performance across industry operations.

www.API.org/ICP | Inspector@api.org

EVENTS

API hosts more than 200 events each year that connect natural gas and oil industry leaders. These events convene the most knowledgeable minds in the natural gas and oil industry and create forums for discussion. There are numerous API events on standards development to encourage proven engineering practices and promote safe and environmentally sound operations. API events include: standards conferences and committee meetings to exchange information and discuss the latest technologies; an Inspection Summit, which is the only networking event for inspectors and other inspection support professionals in the industry; a Cybersecurity Conference on the latest technologies and hazards in cybersecurity and how they could impact industry infrastructure; and, a Pipeline Conference on integrity, risk and construction management and standards updates.

www.API.org/Events | Registrar@api.org



DRIVING SAFETY THROUGHOUT THE INDUSTRY

CENTER FOR OFFSHORE SAFETY



The Center for Offshore Safety (COS) promotes the highest level of safety for the U.S. offshore natural gas and oil industry, partly by convening industry experts to develop good practices. These includes good practices that provide guidance on implementing a Safety and Environmental Management System. COS focuses on API's Recommended Practice 75, which serves as the offshore industry's safety and environmental management systems program, or SEMS, providing a systematic methodology for companies to identify and manage risks. COS also helps companies comply with the API standards that have been adopted by the main regulatory agency for the offshore industry – the Bureau of Safety and Environmental Enforcement.

www.CenterforOffshoreSafety.org | Info@centerforoffshoresafety.org

PIPELINE SAFETY MANAGEMENT SYSTEM



API's Pipeline Safety Management System (SMS) helps companies from 5 to 5,000 employees manage and ensure safety for pipeline projects. The program is based on API RP 1173, Pipeline Safety Management Systems, which helps users gain a better understanding of how to systematically manage pipeline safety and continuously measure progress to improve overall safety performance. The core principle of RP 1173 is the Plan-Do-Check-Act cycle, which requires operators determine the steps needing to be taken, completed and periodically reviewed to enact changes or improvements.

www.PipelineSMS.org | PipelineSMS@api.org

PROCESS SAFETY SITE ASSESSMENT PROGRAM



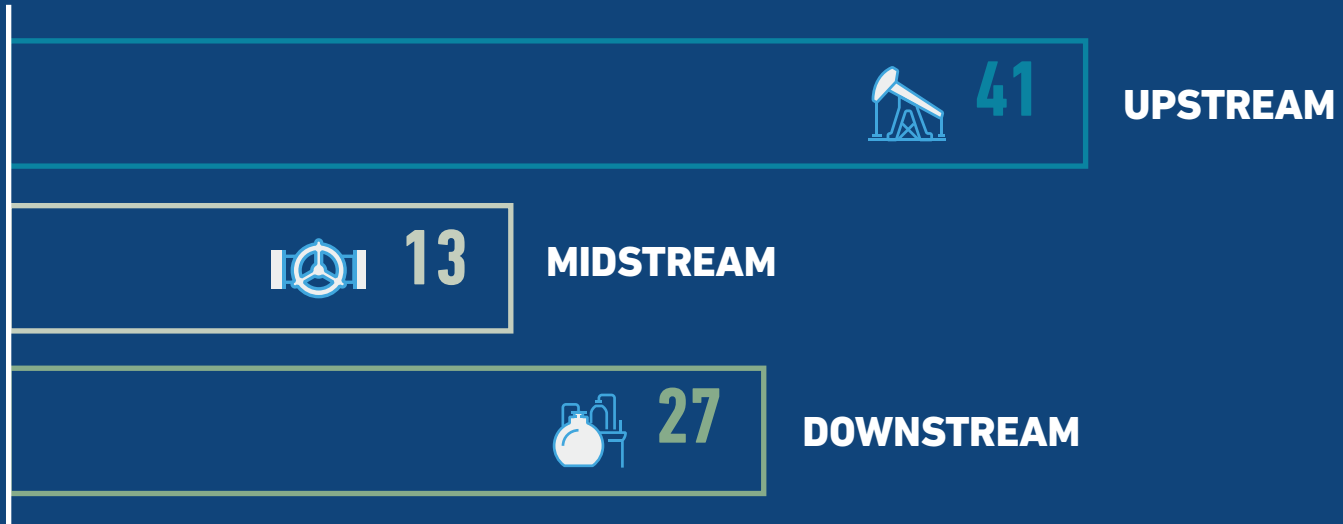
As a voluntary program, put together by industry, for industry, PSSAP® is an effective and efficient program that looks beyond regulatory compliance to drive continuous improvements in the refining and petrochemical industries. During a PSSAP assessment, a team of independent process safety experts work with employees and leadership to fully evaluate the health of the existing process safety systems. One of the protocols that can be reviewed include an audit per API's HF Alky/Recommended Practice 751, *Safe Operation of Hydrofluoric Acid Alkylation Units* (HF RP 751).

www.API.org/PSSAP | PSSAP@api.org



SETTING THE BAR

In 2020, API published more than 80 standards, including:



17 of the 81 (20%)

Standards have a significant regulatory, safety, or industry impact; for example:



UPSTREAM

Updated editions of API Specification 2C and Recommended Practice 2D, vital to safe offshore operations and maintenance of cranes.



MIDSTREAM

Recommended Practices 1182 and 80 were published in conjunction to enhance safety and operational efficiency of large diameter gathering pipelines.



DOWNSTREAM

An update to API Standard 2510 help address the safety of LPG storage installations by employing good engineering practices during both the design and construction of these facilities.

PURCHASING API STANDARDS

API offers more than 700 publications to help the industry operate safely, efficiently and responsibly. Standards can be obtained through the publication catalog, authorized distributors, or API's subscription service.



API WEBSTORE

Purchase your standards from www.techstreet.com/API to receive full, accurate and current editions or go to one of API's authorized distributors.

API SUBSCRIPTION SERVICE

Gain access to any and all of API's standards and specifications through API's new digital platform. This subscription service provides the latest updates, references and comparison tools to ensure safety, compliance and interoperability.

www.API.org/GetStandards | Compass@api.org



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