API Standards

For industry, by industry

Roland Goodman
Manager, Upstream Standards
American Petroleum Institute
goodmanr@api.org
Topics

- API mission, history, and structure
- Value of API standards
- Value of participation
- API standards program
- API standards committees
- API standards development process
API Mission

- Influence public policy in support of a strong US oil and natural gas industry
- Engage in U.S. legislative and regulatory advocacy
- Develop industry standards that ensure reliability, address safety, and document best work practices
- Provide a forum to develop consensus industry policies
API History

- 1919: API founded as non-profit national trade association, New York City
  - Taxes
  - Statistics
  - Standards (equipment and operations)

- 1923: Standards Department formed; first standard published in 1925

- 1969: API relocates to Washington, DC

- 2007 – 2013: Opened three international offices in Beijing, Dubai, Singapore, and Rio de Janeiro
API Structure

- Over 600 member companies involved in all aspects of the oil and natural gas industry
- Over 700 committees and task forces covering various advocacy and technical issues
- Staff of ~250 led by board of directors who are the CEO’s of API member companies
Other API Roles

- Inform government and public
- Implement and manage industry quality and certification programs
- Conduct research
- Provide education and training
Value of API Standards

- Improves safety and reliability
- Improves equipment interchangeability
- Reduces compliance costs
- Reduces procurement costs
- Foundation for company standards
- Basis for a majority of the ISO equipment standards in the oil and gas industry (TC 67)
Participating Companies

- Baker Hughes
- ConocoPhillips
- Statoil
- Tenaris
- Chevron
- Dow
- BR
- Total
- Petrobras
- Halliburton
- Schlumberger
- Cameron
- ExxonMobil
- PetroChina
- Weatherford
- GE Oil & Gas
- Eni
Value of API Standards

- A North Sea operator reduced the cost of subsea wellhead equipment by 30% by aligning internal company specifications with API 17D

- A refinery reduced plant turnaround costs by 2.5 million USD (5 million BRL) in one year by implementing an RBI program based on API 581
Value of API Standards

- An offshore equipment fabricator estimated a customer’s welding specifications added 8-9% to the fabrication costs because they needlessly exceeded industry standards.

- An operator completed the development of an offshore field at 23% below planned expenditures by selecting contractors that were familiar with industry standards and other innovative techniques.
Value of Participation

- Gives your company a **voice** in the development of a standard
- Networking with experts from other companies to **learn** from their experiences
- Sharing lessons learned to **prevent** problems before they occur
Value of Participation

- Early access to information
- Opportunity for company personnel to gain expertise through consistent participation
- Use knowledge to help demonstrate compliance with industry standards to customers and regulators
API Standards Program

- API publishes ~600 technical standards covering all aspects of the oil and natural gas industry
- Over 6000 active volunteers representing over 50 countries
- One-third of all API standards are referenced in U.S. Regulations
API Standards Program

- Foundation of API quality and certification programs
- API is accredited by the American National Standards Institute (ANSI)
  - Transparent process
  - Openness, balance, consensus, due process
  - Program audited by ANSI every five years
API Standards Committees

- Committee on Standardization of Oilfield Equipment & Materials (CSOEM)
- Drilling and Production Operations Subcommittee (DPOS)
- Committee on Refinery Equipment (CRE)
- Committee on Petroleum Measurement (COPM)
  - Safety & Fire Protection
  - Pipelines
  - Marketing/Aviation
API Standards Committees

- Standards committees typically meet twice a year
- Subgroups (task forces, resource groups) meet as needed to progress work, often via conference calls or web meetings
- Balance between operators, manufacturers, contractors, service companies, and consultants
- API corporate membership is not a requirement for participation on API standards committees
Downstream Standards Committees

Global Industry Services Committee (GISC)

Committee on Refinery Equipment (CRE)

Subcommittee on Piping and Valves (SCOPV)
Subcommittee on Inspection (SCI)
Subcommittee on Pressure Relieving Systems (SCPRS)
Subcommittee on Electrical Equipment (SOEE)
Subcommittee on Corrosion and Materials (SCCM)
Subcommittee on Heat Transfer Equipment (SCHTE)
Subcommittee on Instruments and Control Systems (SOICS)
Subcommittee on Mechanical Equipment (SOME)
Subcommittee on Aboveground Storage Tanks (SCAST)
Petroleum Measurement Standards Committees

Global Industry Services Committee (GISC)

Committee on Petroleum Measurement (COPM)

- Subcommittee on Evaporation Loss Estimation (CELE)
- Subcommittee on Gas Fluid Measurement (COGFM)
- Subcommittee on Measurement Education and Training (COMET)
- Subcommittee on Production Measurement and Allocation (CPMA)

- Subcommittee on Measurement Quality (COMQ)
- Subcommittee on Measurement Accountability (COMA)
- Subcommittee on Liquid Measurement (COLM)
Committee Mission Statements

Each of API’s Standards Committees serve the Oil and Gas Industry through its specific areas of interest.

The API Committee on Standardization of Oilfield Equipment and Materials (CSOEM) provides leadership in the efficient development and maintenance of standards that meet the priority needs of the domestic and global oil and gas exploration and production industry by minimizing needs for individual company standards, promoting broad availability of safe, interchangeable oilfield equipment and materials, and, promoting broad availability of proven engineering and operating practices.

USA (ANSI) participation in ISO/TC 67, Materials, Equipment and Offshore Structures for Petroleum, Petrochemical and Natural Gas Industries, is coordinated through the U.S. TAG for which API is the Administrator.

The API Committee on Refinery Equipment (CRE) promotes safe and proven engineering practices in the design, fabrication, installation, inspection, and use of materials and equipment in refineries and related processing facilities.

The API Pipeline Standards Committee is dedicated to developing, revising, and approving consensus standards for the pipeline industry. These committees are comprised of technical experts, operating companies, vendors, consultants, academia, and regulators to create standards that facilitate safe operation and maintenance of pipelines.

The API Safety and Fire Protection Committee (SFPS) provides proactive safety and occupational health leadership and expertise to the industry. API committees and member companies. The SFPS seeks to advance and improve the industry’s overall performance and occupational health issues by combining resources to identify and address important public, private, and company issues.

The API Marketing Committee provides leadership in developing and maintaining standards on the wholesale and retail distribution, including tanker truck transportation, of refined petroleum products such as gasoline, diesel fuel to business, industry, government, and public consumers. The Standards committees address commonly asked questions for consumers.

The API Committee on Petroleum Measurement (CPMP) provides leadership in developing and maintaining an accurate, cost-effective, state-of-the-art, hydrocarbon measurement standards and programs based on sound technical principles consistent with current measurement technology, recognized business accounting and engineering practices, and industry consensus. This is accomplished through the committee’s and API’s leadership role in the national and international standardization community in the development, publication, promotion, and revision of petroleum measurement standards, through its subcommittee structure, and through elimination of duplicative efforts.

USA (ANSI) participation in ISO/TC 193, Natural Gas, is coordinated through the U.S. TAG for which API is the Administrator.
CSEO: Committee on Standardization of Oilfield Equipment and Materials

Calendar
There are currently no upcoming events.

Our Mission
The Committee on Standardization of Oilfield Equipment and Materials (CSEO) is broken up into several subcommittees. Each subcommittee works with a specific area of exploration and production of oilfield equipment. Below is a list of the subcommittees and the areas they work with. You can access these subcommittee pages using the links at the top of the page.

SC2- Subcommittee on Offshore Structures
SC5- Subcommittee on Tubular Goods
SC6- Subcommittee on Valves & Wellhead Equipment
SC8- Subcommittee on Drilling Structures & Equipment
SC10- Subcommittee on Well Cements
SC11- Subcommittee on Field Operating Equipment
SC15- Subcommittee on Fiberglass & Plastic Tubulars
SC16- Subcommittee on Drilling Well Control Equipment
SC17- Subcommittee on Subsea Production Equipment
SC18- Subcommittee on Quality
SC19- Subcommittee on Completion Equipment
SC20- Subcommittee on Supply Chain Management

BallotsWP

<table>
<thead>
<tr>
<th>Ballot ID</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2700</td>
<td>Closed</td>
<td>In Progress</td>
</tr>
<tr>
<td>2852</td>
<td>Closed</td>
<td>Resolution Required</td>
</tr>
</tbody>
</table>

Committee ID: 1314
CSEO Voters Only

Privacy Policy | Terms and Conditions | Legal Notices | Copyright 2007 - API. All rights reserved
Requirements for Standards Committee Membership

- Be technically proficient in a discipline related to the standard
- Have the support of company management to participate
- Attend/participate in committee meetings
- Agree to work on committee business such as standards revisions and technical inquiries
Standards Development Process

- Developed using a consensus-based process (does not mean unanimity)
- Generally written for flexibility as performance-based documents
- Standards committees decide when to develop a new standard
Standards Development Process

- All standards balloting is done via the web
- All comments must be considered and the resolution documented
- One vote per company on standards ballots
- Voting rights are determined by level of participation
Types of API Standards

- Specifications
- Standards
- Recommended Practices
- Bulletins
- Technical Reports
Types of API Standards

- **Specifications** - Documents that are written to facilitate communications between purchasers, manufacturers, and/or service suppliers

- **Standards** - Documents that combine elements of both specifications and recommended practices
Types of API Standards

- **Recommended Practices** - Documents that communicate recognized industry practices; RPs may include both mandatory and non-mandatory requirements.

- **Bulletins & Technical Reports** - Documents that convey technical information on a specific subject or topic and are generally issued on a one time-basis.
More Information

- Ballot System – http://ballots.api.org
- Meetings & Training – http://www.api.org/events-and-training
- Catalog of Publications – www.api.org/publications
Questions?