



AMERICAN PETROLEUM INSTITUTE
Standards

Role of Industry Standards in improving Offshore Safety

Standards Background
Role of Standards
Standards and Regulations

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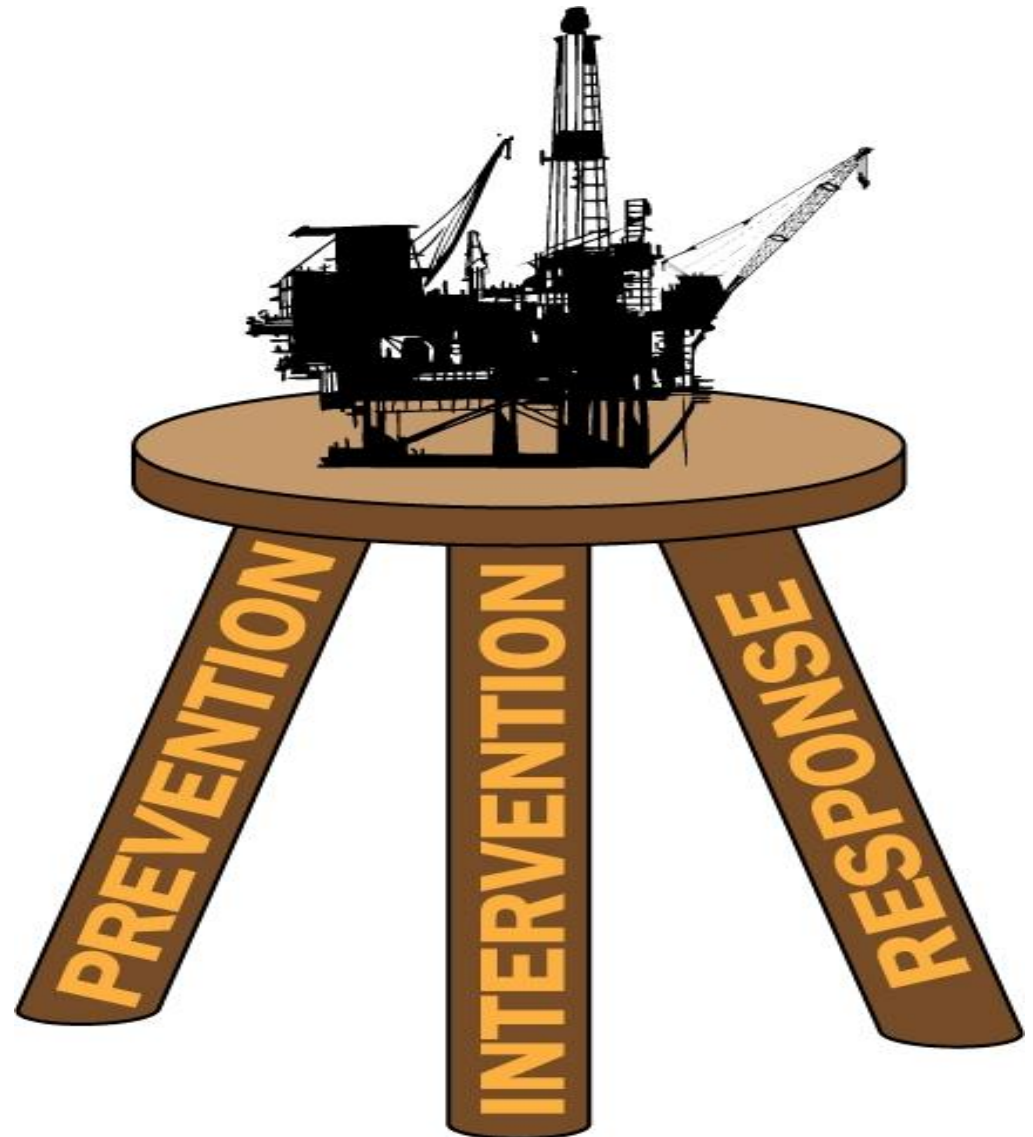
API Standards Background

- API established 1919, Standards Department formed in 1923 as one of three initial API foundational programs
 - Others were industry statistics and taxation
- First standards published in 1924 on pipe sizes, threads, and couplings
- All industry segments now active in standards work
 - Exploration and Production
 - Refining
 - Marketing
 - Pipeline Transportation
 - Petroleum Measurement

API Standards Program Accreditation

- API is an American National Standards Institute (ANSI) accredited standards developing organization
- ANSI accreditation requires:
 - Openness, Balance, Consensus and Due Process
 - Approved and Published Procedures
 - Requirement for standards updates
 - Regular Program Audits

Role of Standards in Improving Offshore Safety



Role of Standards

- **Prevention**
 - Specification 14A, Standard 53, Standard 65-2, RP 96, Bulletin 97, Specification Q2
 - Center for Offshore Safety
- **Intervention**
 - RP 17W
 - RP 17H
- **Response**
 - RP 98, Oil Spill Response Technical Reports

Role of Standards

Prevention

- Specification 14A, Subsurface Safety Valve Equipment, 11th Edition, October 2005, reaffirmed 2012
- Standard 53, Blowout Prevention Equipment Systems for Drilling Wells, 4th Edition, Nov. 2012
- Standard 65-2, Isolating Potential Flow Zones During Well Construction, 2nd Edition, Dec. 2010
- RP 96, Deepwater Well Design and Construction, 1st Edition, Mar. 2013
- Bulletin 97, Well Construction Interface Guidelines, 1st Edition, April 2011
- Specification Q2, Quality Management System Requirements for Service Supply Organizations for the Petroleum and Natural Gas Industries, 1st Edition, Dec. 2011

Center for Offshore Safety



COS Mission...

Promote the highest level of safety for offshore drilling, completions, & operations by effective leadership, communication, teamwork, utilization of disciplined safety management systems & independent third-party auditing & certification.

Program based on API RP 75, SEMS standard

Role of Standards

Intervention

- RP 17W, Subsea Capping Stacks, 1st Edition, July 2014
- RP 17H, Remotely Operated Tools and Interfaces on Subsea Production Systems, 2nd Edition, June 2013

Role of Standards

Response

- RP 98, Personal Protective Equipment Selection for Oil Spill Responders, 1st Edition, Aug. 2013
- Oil Spill Response Technical Reports:
 - Spill Response Planning – 4 reports
 - Oil Sensing & Tracking
 - Dispersants – 15 Reports
 - In-Situ Burning
 - Mechanical Recovery
 - Shore Line Protection – 9 reports
 - Alternative Response Technologies
- All materials available at <http://www.oilspillprevention.org/oil-spill-research-and-development-cente>

Role of Standards

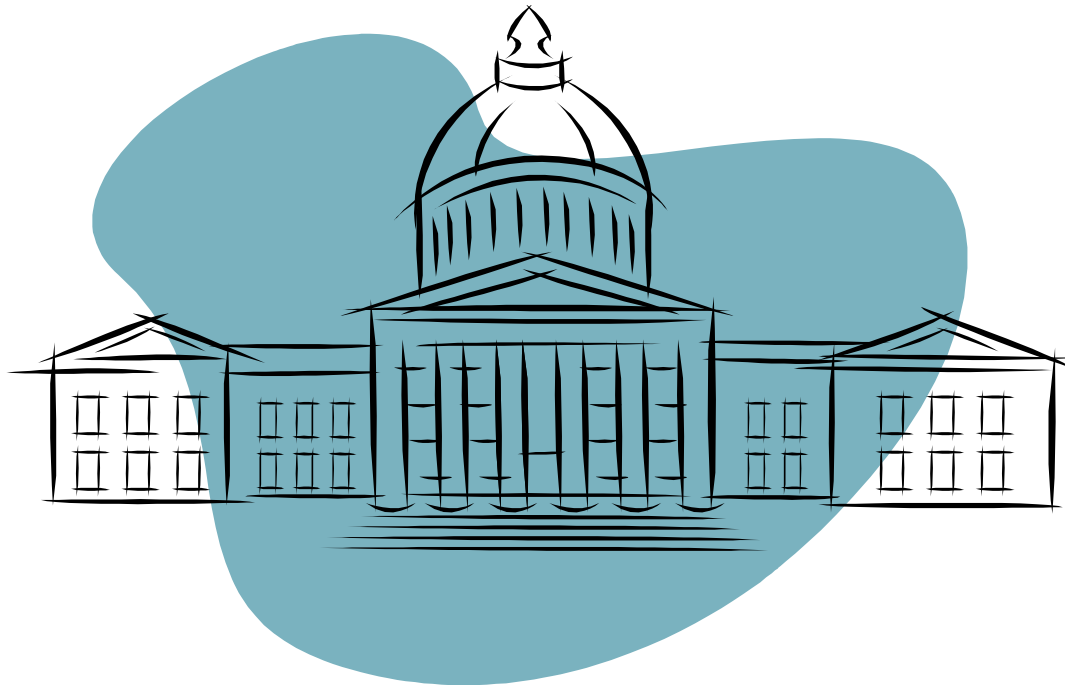
- **Standards in Process**

- Specification 16A, Specification for Drill-through Equipment , 4th Edition
- Standard 16AR, Repair and Remanufacture of Blowout Prevention Equipment, 1st Edition
- Specification 16C, Choke and Kill Systems, 2nd Edition
- Specification 16D, Control Systems for Drilling Well Control Equipment and Control Systems for Diverter Equipment, 3rd Edition
- Specification 16F, Specification for Marine Drilling Riser Equipment, 2nd Edition
- Recommended Practice 16Q, Design, Selection, Operation and Maintenance of Marine Drilling Riser Systems, 2nd Edition
- Specification 16R, Marine Drilling Riser Couplings, 2nd Edition
- Specification 16RCD, Drill Through Equipment - Rotating Control Devices, 2nd Edition
- Recommended Practice 16ST, Coiled Tubing Well Control Equipment Systems, 2nd
- 18 Life Cycle Management, 1st Edition

Life Cycle Management

- Management system and process requirements
- System requirements to identify the continued conformity of a product throughout its lifecycle to;
 1. Original and / or current manufacturing and design requirements,
 2. Original and / or current product standards and industry/product specific technical requirements, and
 3. Regulatory requirements (as applicable)

API's standards and their relationship to regulations



API's standards and their relationship to regulations

- All API standards are voluntary
- In 1995 the US passed the National Technology Transfer and Advancement Act, or NTTAA
- The NTTAA encourages US Federal Agencies to both use consensus standards and to participate in the standards development process
- Since 2000 the US Federal Government has doubled its use of consensus standards and increased participation

API's standards and their relationship to regulations

- 130 of API's standards are incorporated by reference (IBR) over 350 times in the US Code of Federal Regulations
 - Agencies include BLM, **BSEE**, DOT, EPA, OSHA, SEC and **USCG**
- US States also widely cite API standards
 - 184 API standards cited over 3300 times
- API standards are also the most widely cited by international regulators
- All API IBR and Safety Standards are posted on API website

API's standards and their relationship to regulations

- International Adoption/Translation MOUs
 - Brazil (ABNT)
 - Bosnia and Herzegovina (Federal Ministry of Energy)
 - China (CNPC, CNOOC, PSRI, Sinopec)
 - Colombia (Ministry of Environment)
 - India (OISD)
 - Indonesia (Badan Standardisasi Nasional)
 - Kazakhstan (KPO, NCOC)
 - Turkmenistan (Turkmen State Registrar)
 - Vietnam (Petro-Vietnam Drilling, in process)

MOU agreement in principle with National Hydrocarbons Commission

API's standards and their relationship to regulations

- National Offshore Petroleum Safety and Environmental Management Authority, Australia (NOPSEMA) – Safety Case Regulatory Approach
- Petroleum Safety Authority, Norway, (PSA) – 36 API citations
- US Bureau of Safety and Environmental Enforcement (BSEE) – 88 API citations including 53, 65-2, 75
- Danish Energy Agency (DEA) – 20 API citations
- National Hydrocarbons Commission, Mexico (CNH) – MOU agreement in principle
- New Zealand Department of Labor, (DOL) – 1 API citation
- Canada-Newfoundland and Labrador Offshore Petroleum Board, (C-NLOPB) and Canada-Nova Scotia Offshore Petroleum Board, (CNSOPB) – 32 API citations
- Brazilian National Petroleum Agency, (ANP) – 22 API citations
- The Health and Safety Executive, Great Britain, (HSE) – 33 API Citations
- State Supervision of Mines, the Netherlands, (SSM) - hybrid regulatory approach – 1 API citation of a total of 4 citations

Conclusions

- API standards represents industry's collective wisdom on operational practices, developed and refined over many years
- API standards are a key part of industry's efforts to improve offshore safety with the approach of:
 - Prevention
 - Intervention
 - Response
- API standards are the most widely cited standards by international regulators and API is updating its standards program and strategy to better reflect the global industry

Role of Industry Standards in Improving Offshore Safety

Thank You for your attention!

- For more information:
- API's website: www.api.org
- API's online catalog: www.api.org/cat
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