

New Regulations and Impacts on Well Control

An API Standard 53 Perspective

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API Standard 53

Blowout Prevention Equipment for Drilling Wells

Current Chairman: Ricky Cummings – Chevron

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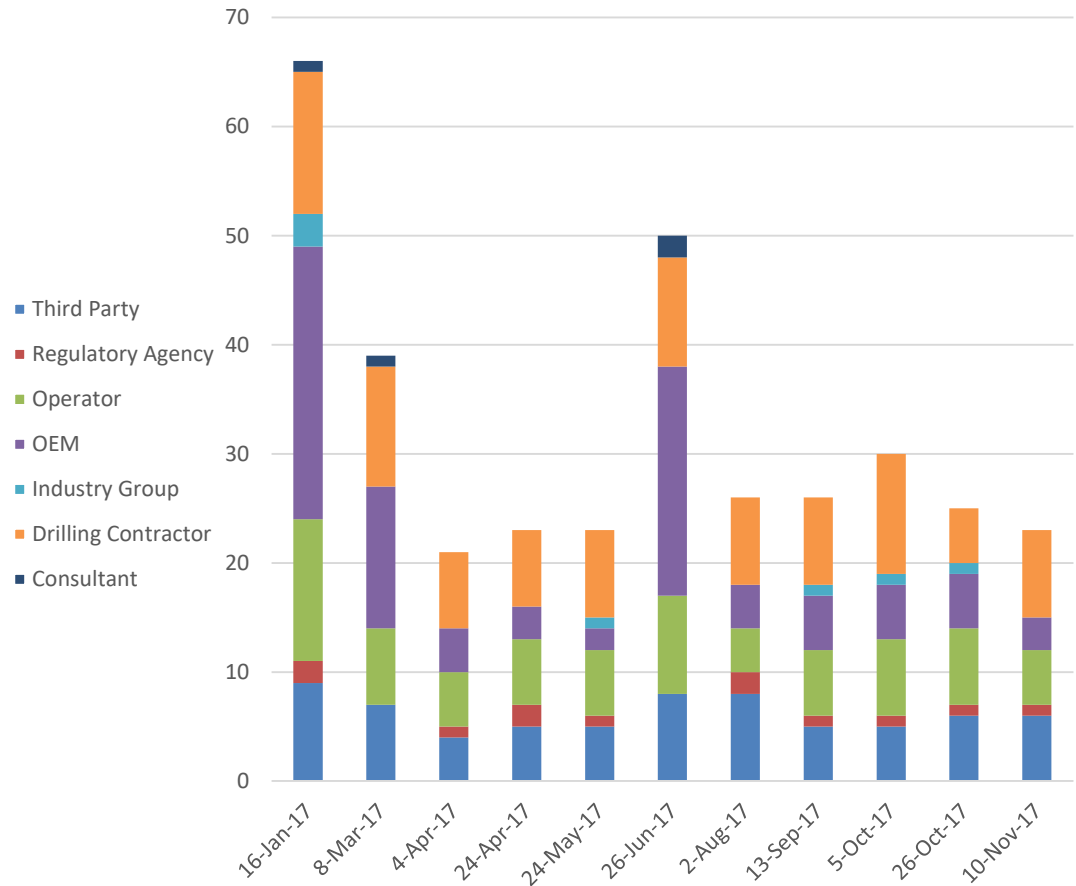
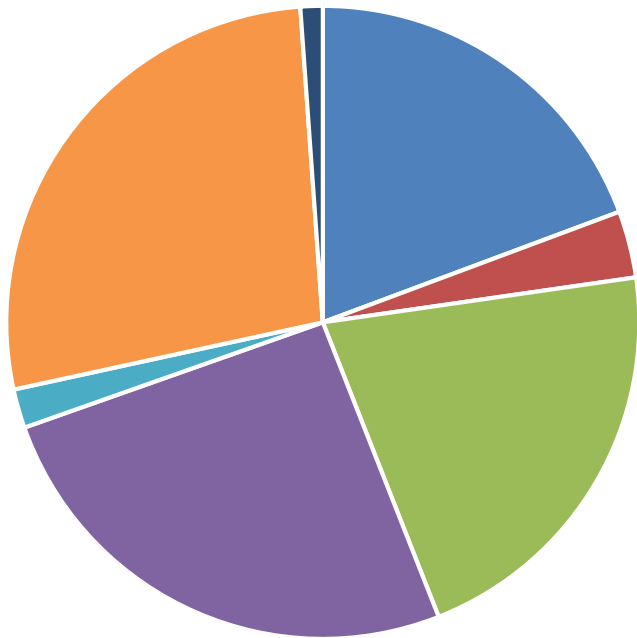
Current 4th Edition Published - November 2012

Addendum 1 Published – July 2016

Ballot 5th Edition – 1Q18

API Standard 53 Status

- Steady participation from industry



API 53 History

- **API Bulletin D13**,
Installation and Use of Blowout Preventer Stacks and Accessory Equipment
 - February 1966
- **API Recommended Practice 53**,
Blowout Prevention Equipment Systems for Drilling Wells, First Edition
 - February 1976
- **API Recommended Practice 53**,
Second Edition
 - May 1984
- **API Recommended Practice 53**,
Third Edition
 - March 1997
- **API Standard 53**, Fourth Edition
 - November 2012
 - Addendum 1, July 2016

After April 20, 2010

- Immediately Industry recognized the need establish a new baseline for operating BOPE
- Industry SME's joined together and provided direction to strengthen *API Recommended Practice 53*
- Published the now *API Standard 53 (S53)* in 2012
- During the development, when challenges were met, two priorities were established over all others:

HUMAN LIFE then ENVIRONMENT

All else was deemed tertiary

- Priority aligned well with then MMS (BSEE) and US Coast Guard

API RP 53 Transition to a Standard

- Need for Standardization – everyone operate identically
- Operators, Drilling Contractors, Equipment Manufacturers, 3rd Party Inspectors and Regulatory Bodies participated in the Standard Revision
- Industry worked diligently for two years to accelerate the development of the document.

API Standard 53 – What was new

- Enhanced emphasis on failure reporting requirements
 - Industry now has an equipment database to report events
 - 15 Drilling Contractors
 - 12 Operators
 - 4 Equipment Manufacturers
- Expanded the use of “Shall”
- Introduced a new specific shear pressure requirement (MEWSP) for shearing at MASP and MAWP
 - Dedicated sections in the document related to shearing pipe both in Surface and Subsea operations

API Standard 53 – What was new

- Expanded testing tables for testing requirements, frequency, and acceptance criteria
- Introduced new shearing capability section with MEWSP calculations
 - Gave clarity to shear pressure estimates at the wellhead
- Introduced “condition-based maintenance” as an alternative to “scheduled-based maintenance”

Standardization

- Standardization – continues to be the most important contribution to the industry for the 4th Edition of API Standard 53
- Accepted globally as a recognized petroleum and natural gas industry standard
- Accepted globally as the industry standard, regulation in U.S. OCS waters.
- All of industry operates on the same level ‘SAFE’ playing field

API Standard 53 Progress

- Published Addendum 1 in July 2016, to address FAQ's and clarifications on the intent contained within S53
 - Addressed Subsea BOP “well hop” testing criteria
 - Clarified that equipment be maintained in accordance with the requirements of the edition of the applicable specification used for its manufacture
 - Newer editions should be used for mods, remanufactured or replacement equipment
 - Clarified starting date for 5 year major inspection periods

API Standard 53 – 5th Edition Progress

- Removed “informative” language in lieu of more “normative” language – Standardization
- Transferred equipment design/manufacturing criteria to the applicable product specification
- Incorporated state and other regulatory input in order to facilitate S53 integration with regulations
 - S53 Task Group identified a need to develop a land-focus group to address surface BOP requirements

API Standard 53 – 5th Edition Progress

- Surface BOP Pressure Requirements
 - Originally BOP requirements were dictated by the RWP of the BOPs
 - Shifting to BOP requirements driven by MASP of well and not RWP of available equipment
- N2 Back-up for BOP Controls
- Testing Section improvements/clarifications to text/tables
- Expanded Section 4 for general BOP requirements (same req's for both surface and subsea)
- Surface Testing requirements for Land BOPs

Closing Comments

Since API S53 4th edition has been published, industry now has one international document for standardized inspections, testing, and maintenance on blowout preventers.

S53 4th Edition has been serving the industry for 5 years, industry has recognized improvements to the Standard which will be reflected in the 5th Edition.

The 5th Edition document continues to improve through collaboration between industry personnel and regulatory bodies.