API RP 53

Recommend Practices for Blowout Prevention Equipment Systems for Drilling Wells

vs. Standard 53 4th Edition – 2011

Meeting with BOEMRE

March 1, 2011

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Chair API WG on RP53

GENERAL COMMENTS

- Diverters are not recognized as “well control equipment” within API and well control training. Although diverters play a major role in drilling operations they are not utilized for managing Bottom Hole Pressure.

- Diverters have been addressed in previous editions of RP-53, they are now fully addressed in RP-64. Keeping diverters in this Standard could lead to conflicts between the two API documents and would have prevent independent revisions.

- Removed sections on surface and subsea Stripping Operations. Those tasks and procedures are more detailed in RP-59 for well control operations. Potential for conflicts between the two documents.

- More appropriate and expanded use of “SHALL”.

GENERAL COMMENTS

- A complete change in format.
  - Sections 1 – 5 are common and applies to both surface and subsea applications.
  - Section 6 applies only to surface applications and,
  - Section 7 applies only to subsea applications.

- Incorporated the affects of negative pressure on BOPE in subsea applications.

- Identified *“performance based maintenance*” as an alternative to *“scheduled based maintenance”.*

- Included verbiage on competency in training, procedures and operations.

- Changed document from Recommended Practice to Standard

SCOPE

- Greater emphasis on guidelines between equipment owner and OEM (w.r.t. communicating failure reports – Annex B).

- Clarification of the drawdown testing requirements and differences between Specification 16D and the requirements of this Standard. (New verbiage)
  - *1.6 Prior to performing an accumulator drawdown tests, wait a minimum of 1 hr after charging the accumulator system from precharge pressure to operating pressure, due to the thermal affects on the precharge gas during pressurization. Failure to wait may result in a failed drawdown test.*

If after performing the drawdown test, the pressure has not recovered to the desired 200 psi above the precharge pressure then, observe the build rate. As the gas in the accumulators heat up the pressure should reach the desire pressure within 15 – 30 minutes. If after 30 minutes the desired pressure has not been achieved then the accumulator system requires further inspection and maintenance.

TERMS, DEFINITIONS AND ABBREVIATIONS

- Clearly defined what a BOP is and isn't (new verbiage)

  - **blowout preventer BOP -** *Equipment installed on the wellhead or wellhead assemblies to contain wellbore fluids, either in the annular space between the casing and the tubular's, or in an open hole during well drilling, completion and testing operations.*

Note: A Blowout Preventer is not: a gate valve(s), workover control package, Subsea Shut-in Device (SSID or SID), Well Control Components (per API RP16ST), Intervention Control Packages, Diverters, Rotating Heads or Rotating Circulating Devices, Capping Stack, Snubbing or Stripping packages.

TERMS, DEFINITIONS AND ABBREVIATIONS

- More consistent use of MASP and its applicability to BOP operations.

  - **maximum anticipated surface pressure (MASP)** - *Is a design load that represents the maximum pressure that may occur in the well during the construction of the well. As with land and shelf wells, it is a surface pressure.* (Same as RP - 96)

- More consistent use of MASP & MAWP and their applicability to subsea BOP operations.

  - **maximum anticipated wellhead pressure (MAWP)** - *The highest pressure predicted to be encountered at the wellhead in each hole section of a subsea well.* (Same as RP - 96)

TERMS, DEFINITIONS AND ABBREVIATIONS

- New definition added for shearing considerations in drilling operations.

  - **maximum expected wellhead shear pressure (MEWSP) -** *The expected pressure at the wellhead for a given hole section, a specific shear pressure requirement, specific operating piston design, and drill pipe material specifications, to achieve shearing at MASP (surface), MAWP (subsea) or other pressure limiting value.*

- New discussions and considerations for determining pipe shearability for surface and subsea applications. (Example calculations in Section 6 and 7).

OTHER NOTE WORTHY ADDITIONS

- Included requirements for 20K, 25K and 30K systems.

- Defined BOP Classifications based on the quantity of rams and annulars installed, with some relationship to pressure. (JIP Reliability Study)

- Clarification on the uses of API 16C and 16D hoses (gas & flame requirements) as they relate to BOP controls and service loops.
  - Lines where hydrocarbons can be introduced and permeate through the line structure are required to meet API Spec 16C fire testing requirements. Those lines that are incapable of getting hydrocarbons introduced are not required to meet the fire requirements of Spec 16C.

- Updated tables for testing requirements (for surface and subsea applications) and frequency.

OTHER NOTE WORTHY ADDITIONS (cont'd)

- Enhanced subsea testing requirements (added riser recoil test)

- All JITF recommendations were considered.
  - ROV standardization (17H High Flow and min. pipe sizing)
  - AUTOSHEAR / DEADMAN on all moored and DP rigs

- Risk Assessments were done within some companies looking at optimal ram configurations.
  - Operations were looked at, in conjunction with rig equipment and the affects of BSR and/or CSR ram placement.

- The only priorities were given to:
  - LIFE
  - ENVIRONMENT

Status Update

- Received over 1200 comments from Draft 2 ballot on December 07, 2010.
  - Approximately 1/3 are redundant comments.
  - Most of the remaining comments were technical in nature.
  - The largest concerns on changes were primarily from land operations.

- Timing for release:
  - May 23rd - ballot closes (~ 6 week ballot period).
  - May 25th - comments sent to task group.
  - June 15th - comment resolution completed.
  - June 20th - final draft sent to API for publication.
  - July 8th - Std 53 issued for publication.

Q&A