

# Status of Standard 53, Blowout Prevention Equipment System for Drilling Wells, 4th Edition

**BSEE BOP Forum**  
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*Presented by:*

Frank Gallander

Chevron

Chair API WG on Standard 53

## 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 “*condition-based maintenance*” as an alternative to “*schedule-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 equipment manufacturer (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)
  - *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 false positive 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)** -*A design load that represents the maximum pressure that may occur at the surface during well construction or production. (Same as RP 96)*
- More consistent use of MASP & MAWHP and their applicability to subsea BOP operations.
  - **maximum anticipated wellhead pressure (MAWHP)** - *The highest pressure predicted to be encountered at the wellhead in a subsea well. NOTE: It may be calculated for each hole section during well construction. (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), MAWHP (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).

## WORTHY ADDITIONS

- For the purpose of discussion or where an impasse was reached, we had to develop priorities to provide guidance. Only two priorities were established to provide that guidance:
  - **LIFE**
  - **ENVIRONMENT**
- Updated tables for testing requirements (for surface and subsea applications), including frequency and acceptance criteria.
- 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.*

## WORTHY ADDITIONS (cont'd)

- Enhanced subsea testing requirements (added riser recoil test)
- All JITF Equipment recommendations were considered
  - ROV standardization (17H High Flow and min. pipe sizing)
  - Identified minimal functions required for ROV interfacing
- Included requirements for 20K, 25K and 30K systems
- Defined BOP Classifications based on the quantity of rams and annulars installed, with some relationship given to pressure
- Considered all past JITF's and JIP recommendations to API

## Status Update

- Received over 281 comments from Ballot Draft #2.
- Timing for release:
  - **May 18<sup>th</sup> – Task Group meeting on comment resolution**
  - **June – Re-ballot of Standard 53.**
  - **Summer – Finalize Standard 53 for publication.**
  - **Fall -- Issue Standard 53 for publication**

# Q&A