API 16G Reliability Model and Report

• Technical report and model will provide direction and guidance to risk mitigation in design, installation and operation of well control equipment.

• Analysis of model can provide engineering justification and insight for:
  • Equipment redundancy
  • Testing requirements and frequency
  • Maintenance requirements and frequency

• Results could be utilized to inform Standard 53 and other well control equipment related documents.

• Industry model could be further analyzed to engineer requirement changes, thus relying less on opinion.
Model and Examples Completed

• Third party developed Fault Tree base models covering:
  • Subsea BOP System, DP MODU
  • Subsea BOP System, Moored Drilling Rig
  • Surface BOP System, Offshore/Onshore

• Third party developed sensitivity analysis on base models covering:
  • Redundancy
  • Testing Frequency

• Third party developed draft report on results of analysis
API 16G – Current Status

• Document is being drafted by two work groups

• Work group 1 led by John Holmes is focused on detailing the process and best practice for well control equipment system reliability modelling

• Work group 2 led by Gregg Walz is focused on documenting the example model and example analysis results to provide context for what end users can accomplish
  • Testing Frequency Analysis
  • Common Cause Analysis
  • Failure Rate Sensitivity
  • Redundancy Analysis
  • Operator Ability Analysis
API 16G – Path Forward

• Work group meetings to continue through next couple of months
• Full committee meetings to be started post work groups completion of drafts
• A list of interested participants has been collected; if you would like to be added, please reach out to danny.fugate@bp.com, john.holmes@BakerHughes.com or Gregory_Walz@oxy.com