



Maintenance Committee Meeting Notes

10 APR 2019

9-9:45 Closed Session

- Discussion of when the next asset integrity conference should be planned – Jim Rocco to follow up with Leesa Teel to refresh the committee consciousness on details of the conference’s “hiatus”
- For future meetings the closed session will include scheduled vendor presentations. Revised schedule - Put presentations together in the morning for the closed contractor session
- Equipment Issues
 - TDX1250 - seals in the North Sea (3yrs old)
 - IBOP valve
- Leveraging one committee with another – Vendor performance review data; how can Supply chain, maintenance, and the JIP BOP possibly share practices/lessons learnt.
 - Use BOP JIP data to drive vendor visits for the maintenance committee
 - Ian’s group – vendors to present based on current data being supplied to OEMs
- NOV, MH Worth, and Cameron as potential presenters for next meeting based on reliability data provided by drilling contractors.

10:00 Regulatory Review – IADC & API

- Holly Hopkins provided the API review via phone; items covered included, *inter alia*;
 - BSEE activity
 - Coast Guard activity
 - API standards, RP, specs in development/revision
- Jim Rocco provided the API review; items covered included, *inter alia*;
 - Onshore review taking from the latest edition of the “Onshore Radar”
 - Offshore Slide deck with focused discussion IMO developments

10:30 Kluber Lubricants presentation

- Jakub Bednarz provided an informative presentation on lubricants (see attached slide deck)
 - Temperature and time (15 degrees C decrease in op temp generally doubles a lubricants life)
 - Specific lubricates for specific applications as lubricate composition is unique to the application based on rotational speed and contact forces

11:45 Lunch Presentation – Smart Group

- Stephen Allen and Kevin McCearry presented the latest technologies in augmented reality & provided interactive demonstrations of AR video capabilities with committee meeting attendees

1:00 Class Society Updates ABS & DNVGL

- John Preston provided an update on the latest ABS remote survey technology (see attached)
 - ABS – Remote Surveys: see [here](#)
 - Flag states are beginning to see the value of such survey technologies
 - PMP notation Planned maintenance program required for remote machinery survey
 - Remote underwater examination of offshore units – such capability is becoming more prevalent as a means to conduct these exams for credit
- David McKay provided an update on the latest DNVGL Rule
 - DNVGL Rig Owners Committee meeting will further address potential rule changes. The meeting will convene in 2 May 2019 at DNVGL's Houston office at 1400 Ravello Dr. in Katy TX 77449. Contact Cynthia Ervin for details at: Cynthia.Ervin@dnvgl.com

1:30 PM Closed Presentations

- Caterpillar
 - C175 fuel valve issue
 - Service letter PS46140 – fuel Valve can fail and shut down the engine
 - PCA – remove power module, change wiring to power fuel valve directly from the ECM power supply
 - C175 high pressure fuel pump
 - Bottom-end failures at less than 10k hours
 - 3500 ASO Valve Failures
- NOV
 - TDX-1250 motor de-couple
 - Issue only reported from one rig
 - PIB release March 2016
 - Shift limiting feature removed from production
 - TDX-1250 hub disengagement
 - Extensive testing done in-house, unable to replicate failure
 - PIN released Aug 2017
 - Torsional shock load and improper shaft to hub assembly
 - Software update and DIT required
 - TDX-1250 hydraulic IBOP's
 - Testing is a pain – NOV engineering designing single ball valve option
 - Air operated IBOP can be shifted remotely
 - Correctly testing new design dual ball valve IBOP
 - G-series elevators
 - PIB G-SERIES-180-PIB-001 explains limitations of elevators

2:30 Other business/discussion

- Discussed scheduling a “pre-meeting” to be convened the day of the next maintenance committee as the first order of business to further discuss failure data to assess OEM reliability and performance.
- 2:45 Adjourned