

Subsea IMR & Integrity Management

Growing requirements on the North-West Shelf, What does this mean to the subsea industry?

Report on SUT Perth Branch Evening Technical Meeting
25th February 2015



By Marcus Hemsted, Perth Branch Committee Member

The first technical evening of 2015, held at the Parmelia Hilton, with a 'full house' of SUT members and guests was a great start to the year. The evening was opened by SUT Chair, Julie Morgan and chaired by SUT Committee Member, Marcus Hemsted. The event was sponsored by DOF Subsea.

The landscape of the subsea oil and gas industry in Australia is changing from an industry with booming growth and huge greenfield development projects to a more mature industry now with a significant amount of subsea infrastructure on the seabed and therefore increasing requirements for Inspection Maintenance and Repair (IMR) and Integrity Management.

Three technical presentations of very high standard were given, demonstrating the broad and varied nature of subsea IMR:

1. Cathodic Protection Surveys for Subsea Assets
2. FPSO Mooring System Repair
3. Latest development in subsea wellhead and riser fatigue monitoring

Presentations can be found at http://www.sut.org.au/perth/sutau_perth_events_archive.htm

1. John Grapiglia provided a very interesting presentation into the various types of cathodic protection surveys, and the critical factors required to ensure the results provide meaningful data and allow a proper assessment of the cathodic protection status for subsea structures. A number of methods to assess the status of a cathodic protection system were presented, as well as how structures should be treated very differently from pipeline systems. John also very highlighted limitations as to the benefit of some of the captured data and reporting often acquired during the surveys.
2. Richard Rickett described a case study on a recent emergency repair to an FPSO mooring system in New Zealand. Most FPSO systems have no facility to detect early signs of deterioration to their mooring system, therefore regular inspection campaigns are performed to confirm mooring system integrity, and it is not uncommon for failures to be detected. Richard outlined how, with the right planning, preparation, and bespoke equipment, repair of damaged components was executed safely and successfully in a short time frame, minimising the FPSO facility downtime.
3. Gordon Hamilton gave an enlightening presentation on the issue of subsea wellhead and riser fatigue, which has been increasingly affected by the continued growth of the structures placed on risers such as BOPs etc. Assessment of fatigue is an increasing requirement by Operators which assists them to optimise work-over operations. Gordon provided a case study which detailed the most recent developments in obtaining real time data on the motions of subsea risers and the processing of them to obtain wellhead information.

Marcus Hemsted ended the technical side of the evening with question time of which there were a number of very good questions and the event was wrapped up by SUT Chair Julie Morgan.

The night was completed with drinks and nibbles courtesy of our generous sponsor DOF Subsea to whom we are all grateful.

Yet another successful technical evening!