

Pre-Commissioning & Start-up Issues



Report on SUT Perth Branch Evening Technical Meeting
Wednesday, 29th April 2015

By Roland Fricke, Perth Branch Committee Member

The evening was opened by SUT Chair, Julie Morgan and chaired by SUT Committee Member Roland Fricke who is the Subsea & Pipelines Engineering Authority at Woodside Energy.

The presenters were greeted by another packed audience at the Parmelia Hilton Hotel. In spite of the current downturn in the local economy in Western Australia, the continued excellent turnout at the SUT Perth Branch evening technical meetings is testament to the thriving underwater technology community in Perth and the interest generated by the technical subjects being offered by the SUT, notwithstanding the networking opportunities the evenings provide.

Two interesting presentations were given about the considerations to ensure successful commissioning and start-up and handover of new developments from Projects to Operations. The third presentation described a pre-commissioning technique that provides economic, technical and safety advantages for developments in deep water and ultra deep waters.

1) Integrity – by Grahame Strong, Materials Lead Engineer, Wood Group Kenny

Over the past 8 – 10 years a number of significant subsea gas projects in Australia have either commenced production or are about to start-up.

Grahame provided a fitting review of some of the integrity issues that have arisen during these years in the hope this will spark innovative thinking in areas of coatings, chemicals, wet parking pipelines, management of corrosion allowances and cleaning equipment to host facility, etc.

A brief overview of these issues was presented to stimulate a conversation about how industry can look to improve itself and to promote the thinking needed to lower costs and successful delivery of subsea projects in the 21st century.

2) Commissioning of Hydraulic Systems – by Tim Dallas, Business Development Manager - Oil & Gas, Pressure Dynamics International

Almost all subsea production systems have hydraulically actuated safety critical systems incorporated into their design, these extend from simple process control tasks to more critical emergency shutdown systems. Each system, subsystems and even individual components can have differing requirements with respect to preservation, commissioning and start up that will impact their operability and ultimately life of service.

Tim provided an overview of some of the considerations required when commissioning the various hydraulic componentry commonly found in subsea equipment and related power and control systems, giving examples of when things can go wrong.

3) Integrated Start-up - Andrew Duff, Principal Engineer - Pigging and Precommissioning, Wood Group Kenny

Integrated start-up refers to the process where the production fluids are used to dewater a pipeline or network of pipelines using production fluids.

Andrew described how the process removes the requirement for dewatering using air or Nitrogen. Integrated start-up is typically suitable for in-field systems but not dry gas trunklines that need to be dried prior to the injection of gas. Integrated start-up has economic, technical and safety advantages by removing the requirement for offshore vessel based compression

The technical advantages are particularly important for fields in deep and ultra-deep water where long “downlines” connecting the vessel to the assets are required to deliver the gases.

The evening concluded with the usual drinks and nibbles, thanks to the evening’s sponsors: Clarke Commissioning and Completions; Pressure Dynamics; Tracerco Ltd; and Wood Group Kenny

Special thanks go to the SUT staff for their continued efficiency and excellence in support of the technical meetings, which contributes to enjoyment of the meetings by all, and the ongoing success of these events.