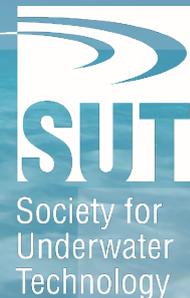


Evening Technical Meeting

Technology and Strategy Enablers for Subsea Oil and Gas Tie-backs

Wednesday 9th October 2019

Parmelia Hilton Hotel (Swan Room), Mill St. Perth



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Cladding or inhibited carbon steel for long subsea tiebacks? Mariano Iannuzzi, Curtin University Corrosion Centre

The corrosion management of subsea pipelines divides the oil and gas and materials communities into two opposed camps, namely, those that use carbon steel pipe cladded with a corrosion-resistant alloy (CRA) and those that implement corrosion inhibition strategies.

Carbon steel pipelines typically cladded with UNS S31603 or N06625 eliminate the need for the additional infrastructure required to manage and monitor corrosion inhibitors. However the cladding process is costly, time-consuming, and it can become cost-prohibitive for long length pipelines.

Some operators prefer to opt to manage corrosion using a combination of corrosion inhibition strategies. There are local examples of qualified two-step approaches that uses a film-forming corrosion inhibitor (FFCI) in the early stages of production and gradually switches over a pH-control strategy based on N-methyl diethanolamine (MDEA) injection. In this presentation, the mechanisms, advantages, and disadvantages of each strategy are discussed with a focus on their potential enabling role in long subsea tiebacks.

Subsea Processing Technology: Christopher Merrick, DORIS

Subsea processing is an evolution in field developments that support production of reserves that would otherwise be technically unfeasible to produce or commercially stranded. Innovative designs that push elements of the processing train further upstream, enable production from difficult reservoirs, from deep water and at long step outs from existing facilities. Three such enabling technologies are: multiphase pumping, subsea separation, and subsea chemical storage.

Subsea multiphase pumping is a proven technology with the benefits of increasing production in early field life, extending production in late field life and increasing ultimate recovery from a field. DORIS will present a case study from the Moho Nord field in the Congo where MPP facilitated pressure boosting without the use of bottom hole gas lift, simplifying the field architecture and avoiding challenges arising from rapid system cooldown. TOTAL's Pazflor field employed the first full scale subsea separation system in the world with DORIS being involved from Concept through to Detailed Design phase. Adopting subsea separation reduced CAPEX by reducing the subsea facilities, reducing topside gas compression and first stage separator requirements, and allowing shorter drilling trajectories. A reduction in OPEX and increase in availability was achieved by high efficiency, [Read more](#)

Step changes in subsea gas compression technology for Ormen Lange: Luca Letizia – OneSubsea

Ormen Lange is one of the largest gas fields in the world, with daily production of 2.5 bcf/d, it produces 20% of the UK gas consumption. The field has been in production since 2007. The Ormen Lange project has been at the forefront of subsea compression for many years, originally focusing on Aker Solution technology, then recycling the project and widening the supplier to TFMC and OSS. OSS was recently selected to be the preferred vendor by Shell.

The technology steps which have been achieved in the Ormen Lange project present a considerable development on previous projects, realising a low risk approach to the Ormen Lange subsea compression project. The Ormen Lange solution will be presented against existing technology currently in operation, as well as outlining the steps undertaken to achieve this technology.

Standardising Subsea Pumping Systems to reduce Lifecycle Cost: Tim Nallipogu – Woodside

Woodside has participated in a Joint Industry Project (JIP) co-ordinated by DNV GL entitled "Subsea Processing Standardisation – Subsea Pumping Systems", along with other major operators and the four main subsea pump suppliers. The JIP work led to publication of a Recommended Practice (RP). The objective of the RP is to reduce cost in a lifetime perspective and make subsea processing more competitive through standardisation and alignment of technical requirements, definitions, work processes and documentation. The RP was released in 2019, and this presentation talks through a summary of the RP.

Registration: 5.30 pm | Presentations: 6.00 pm – 7.30 pm | Networking over food/drinks 7.30 pm – 8.30 pm

Thank you to our event sponsors:

Registration Costs	Early Bird (ends 7 August)	Regular (from 8 August)	Onsite
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Non-Members	\$50	\$60	\$65
5 Ticket Member Pass	\$125	\$200	\$225
5 Ticket Non-Member Pass	\$225	\$300	\$325



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