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OTC 2019 technical
sessions schedule

May 6 - 9, 2019 | Houston, Texas, USA

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Model Based Digitization of Engineering Systems

Digitalization Goes Subsea

This presentation discusses the requirements for a "next-generation" subsea control system and describes the proposed setup/architecture which integrates subsea control and historian systems directly into the existing topsides control and historian systems. Implementation of an anti-surge control system is used as an example to illustrate the concept for control of operations, and the use of AI and historical stored data are used as examples for topside digitalization techniques used on subsea installed equipment.

Monday, May 6th at 11:42 a.m. in Room 312
Paper # 29226 | *Presenter – K. Berge Kristiansen*

Digitalization Deployed: Case Studies

Applying Artificial Intelligence to Optimize Oil and Gas Production

This presentation, which includes a use case, explores a unique AI-based application that enables operators to preempt costly ESP failures while optimizing production. In one case, the probability of an ESP failure was determined 12 days before an actual failure of the ESP occurred.

Tuesday, May 7th at 9:52 a.m. in Room 604
Paper # 29384 | *Presenter – C. Allemand*

Digitalization Deployed: Case Studies

Updated Case Study: The Pursuit of an Ultra-Low Manned
Platform Pays Dividends in the North Sea

The use of a unique, data-driven approach to remote condition monitoring of equipment maintenance has enabled a major offshore E&P producer to build and operate a low-manned platform. This presentation offers an update to a 2018 OTC conference presentation when this use case was introduced (based on operations and observations during the platform's first full year of operation).

Tuesday, May 7th at 10:14 a.m. in Room 604
Paper # 29606 | *Presenter – S. Settemsdal*

Digitalization Deployed: Case Studies

The Evolution of Asset Management:
Harnessing Digitalization and Data Analytics

Underwriting the costly insurance of complex oil and gas projects requires careful risk assessment of numerous factors via long-standing criteria. Learn how E&P operators can now use today's advanced asset management technologies like the digital twin, data analytics, and secure IoT connectivity to better quantify the probabilities of untoward events and mitigate their risks, improving their HSE posture, and potentially reducing the cost of their insurance premiums.

Tuesday, May 7th at 10:58 a.m. in Room 604
Paper # 29347 | *Presenters – J. Nixon and E. Peña, Emil Peña Interests, Inc.*

Topside Innovative Processing and Design

New Concepts for a Normally Unattended Installation (NUI) –
Design, Operation, Automation and Digitalization

This presentation is based on an ongoing multi-participant study which focuses on the development of concepts for unmanned or "Normally Unattended Installations" (NUIs) that can be used for the economic recovery of stranded oil and gas reserves considered too small for traditional floating production storage and offloading (FPSO) vessels, and too far away from existing facilities for tie-backs.

Wednesday, May 8th at 9:52 a.m. in Room 312
Paper # 29367 | *Presenters – E. La Grange and J. Maisey, Buoyant Production Technologies Ltd.*

Advances in Offshore Floating Wind Turbine Technology

Overcoming the Obstacles of Financing Offshore Wind Projects

This presentation is designed to help various stakeholders involved in offshore wind projects identify and overcome the challenges of financing offshore wind projects. It presents key considerations for debt and equity financing during the development (i.e., early stage), construction, and operational project phases, and outlines the benefits of adopting a joint go-to-market approach that combines equipment, services, and financing solutions into a single bundled package.

Wednesday, May 8th at 11:20 a.m. in Room 610
Paper # 29366 | *Presenters – S. Grosse, P. Azevedo*

Topside Innovative Processing and Design

Practical Method for Simulating Flotation for Produced Water System Design

This presentation discusses a novel method for simulating the removal of fine oil droplets from produced water by the gas flotation process based on the use of computational fluid dynamics (CFD). The presentation aims to demonstrate how CFD simulation is commonly used to model gas flotation systems and processes and discusses some of the many technical challenges faced in capturing the complete physics involved before introducing a method developed that provides an efficient method to predict oil removal potential in produced water systems.

Wednesday, May 8th at 11:20 a.m. in Room 312
Paper # 29466 | *Presenters – M. Straw, D. Fielding, E. Kay, Norton Straw Consultants; S. Lo, T. Eppinger, Siemens PLM*

Going the Distance: Subsea Electrical and Production Systems

A New All Electric Subsea Control System Development

This presentation discusses a program around the development of subsea separators and a subsea water treatment and injection process composed of several modules that requires new subsea technology (e.g., subsea barrier fluid-less water injection pumps, filters, special water analyzers, etc.). Within the ongoing industrialization program of the new technologies, a Joint Development Agreement was put into place to qualify the open framework platform for the control of subsea processes.

Wednesday, May 8th at 2:00 p.m. in Room 606
Paper # 29356 | *Presenters – C. Monteverde, M. Novello, Saipem and K. Kristiansen*

Project Monetization

Considerations and Strategies for Financing Integrated LNG to Power Projects

With increasing population growth and deficits in power generation capacity in many developing parts of the globe, the LNG-to-power concept has emerged as an important driver of future sustainability. This presentation will outline the many challenges that must be addressed in order to bring LNG-to-power projects to life, with a focus on the unique risk elements that are presented to lenders and investors throughout development.

Thursday, May 9th at 9:52 a.m. in Room 604
Paper # 29662 | *Presenter – B. Cory*