Download presentations from the 24 April IADC ART Spark Tank

The IADC Advanced Rig Technology (ART) Spark Tank was held on Wednesday, 11 December, 2019, at IADC’s new headquarters at 3657 Briarpark Drive, Suite 200, Houston, TX 77042.

The mission of the IADC ART Spark Tank is to provide opportunity to provide technology entrepreneurs an opportunity to pitch their products and ideas (“Sparks”) to a panel of drilling contractors and operators (“Sharks”). The purpose is to provide insights to technology developers into what matters to those they are innovating for. Only Sharks ask questions of the presenters.

IADC is grateful to its Sharks for sharing their time, talents, and expertise. Sharks for the 24 April Spark Tank were:

- Riaz Israel, Team Lead – Wells Technology, BP
- Matt Dalton, Technology Business Manager, Transocean
- Paul Tompkins, President, Oilfield Products International (OPI)
- Robert van Kuilenburg, Noble Drilling (ART Chair and moderator)

Agenda

8:30  **Coffee and networking**

9:00  **Welcome & Introductions**  – Robert van Kuilenburg, IADC ART Chair

9:10  **Facility Update & IADC Antitrust Guidelines**  – Linda Hsieh, IADC

*Speakers have 15 minutes, with 15 minutes allotted for Sharks’ Q&A:*

9:15  **“Real-Time Oil Degradation Monitoring”**: Tab Manning, Pratt Hydraulics

Contaminated oil is one of the leading causes of component and system failures in hydraulics. The goal is to be able to predict failures before they occur. A reliable and proven solution is implementing the TAN Delta Oil Quality Sensor into the system for real monitoring for instantaneous feedback of the oil quality on a holistic level.

9:45  **“Predicting Time to Failure”**: Sunil S. Vedula, CEO & Founder, Nanoprecise Sci Corp

Nanoprecise has created a patent-pending solution that combines physics, material science, and data analytics to diagnose issues with physical assets such as machinery and predicts the "Remaining Time to Failure." The sensor extracts RPM, vibration, sound, temperature &
humidity information, and the software analyzes the data to achieve anomaly detection, fault characterization & remaining useful life prediction. The software is built on AI algorithms that had only been limited to research papers until now.

10:15  Break

10:30  “Bolt Monitoring – Detecting Bolt Rotation, Shock and Vibration in the Derrick”: Jim Profit, Salunda

Real-time feedback on bolt position is currently missing. A new technology is available that can detect any bolts that are rotating in position as a precursor to failure/dropped object. By filling this sensor gap, a significant reduction in HSE risk is achieved, as well as significant cost savings. A real-time monitor provides multiple data points around the derrick and provides clear condition-based monitoring on the status of the derrick via a green/yellow/red status indicator. The network already integrates with OEM control systems. In addition, real-time surface vibration data can be compared with the operator’s downhole events, such as jarring, stuck pipe, stick-slip, BHA whirl, lateral & axial vibration, etc, and the effects better understood. Data is logged and date/time stamped for analysis and can be made available to operator networks for continuous local and remote monitoring.

11:00  “A Safer and More Efficient Drillpipe Spinner”: Paul Tompkins, Oilfield Products International (OPI)

OPI has developed a patent-pending drill pipe spinner that is safer, more efficient and versatile, making it a unique piece of equipment at any rig location. With these principles in mind, it is important to be intentional about every piece of equipment that goes into this process. OPI has created a viable solution to ensure these principles are upheld with their drill pipe spinner. Its versatility is evident in its technologically adept design, working seamlessly with rig augmentation software. Its efficiency is evident in its simplicity and maintenance friendly design, decreasing trip time by 40%. Furthermore, it can spin up and spinout drill pipe and tubulars both vertically and horizontally and can go from being a stand-alone spinner to a spinner directly installed in an Iron Roughneck.

11:30  Adjournment