



TECHENOMICS
INTERNATIONAL

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Press Release

Techenomics implements IoT sensor trial at PT Bormindo onshore oil drilling rig

'Supporting Engineering Excellence, One Sample at a Time'

The provision of accurate and timely data is vital in an ever-evolving technological world and the commitment of Techenomics, 'Your Partner in Lubrication Reliability', to provide effective oil analysis and condition monitoring sees the company keeping up to date with technology trends.

The Internet of Things (IoT) has been incorporated by the company on the path to smarter, more timely, reliable and cost-effective maintenance, including highly sophisticated oil condition sensors which gather and transmit data to monitor and ensure the health of machinery.

These sensors serve as vigilant guardians delivering continuous and instantaneous data on the condition of the oil and help Techenomics 'Support Engineering Excellence, One Sample at a Time'.

An important step in the company's ongoing development of data gathering and interpretation is the installation of IoT sensors in a trial on a Weatherford mud pump at an onshore oil drilling rig of PT Bormindo in Duri Riau Sumatera, Indonesia.



CHRIS ADSETT
CEO OF TECHENOMICS



The Weatherford Mud Pump from a PT Bormindo oil drilling rig.

Data from the sensor is collected and displayed in rapid time on the Blue Oceans all-in-one and continuously upgraded cloud-based maintenance software package of Tehenomics. Parameters captured and presented on the Blue Oceans dashboard from the mud pump are temperature, fine debris, coarse debris and the oil quality index.



The sensor installed by Tehenomics on the mud pump.

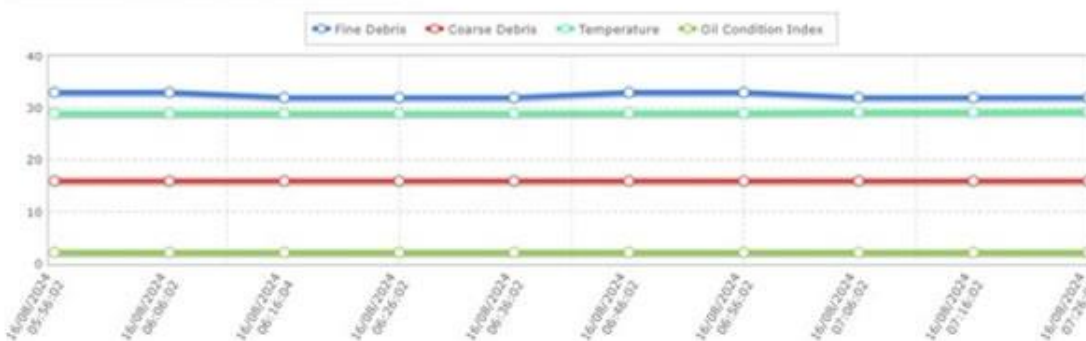
The oil quality is the most valuable information as it shows actual oil quality in a range of between 1 and 6. More parameters can be added if required, including moisture, water activity, viscosity and density. Sensors can be installed on any mechanical equipment, including engines, in which oil or lubricants are used to ensure effective operation.

Sensor Results

Time Stamp	Fine Debris	Temperature	Sensor ID	Site	Unit	Compartment	Coarse Debris	Oil Condition Index
16/08/2024 05:56:02	33	29.0	1122	BORMINDO RIAU	MUD PUMP_TRIAL	PUMP	16	2.3
16/08/2024 06:06:02	33	29.0	1122	BORMINDO RIAU	MUD PUMP_TRIAL	PUMP	16	2.3
16/08/2024 06:16:04	32	29.0	1122	BORMINDO RIAU	MUD PUMP_TRIAL	PUMP	16	2.3
16/08/2024 06:26:02	32	29.0	1122	BORMINDO RIAU	MUD PUMP_TRIAL	PUMP	16	2.3
16/08/2024 06:36:02	32	29.0	1122	BORMINDO RIAU	MUD PUMP_TRIAL	PUMP	16	2.3
16/08/2024 06:46:02	33	29.1	1122	BORMINDO RIAU	MUD PUMP_TRIAL	PUMP	16	2.3
16/08/2024 06:56:02	33	29.1	1122	BORMINDO RIAU	MUD PUMP_TRIAL	PUMP	16	2.3
16/08/2024 07:06:02	32	29.2	1122	BORMINDO RIAU	MUD PUMP_TRIAL	PUMP	16	2.3
16/08/2024 07:16:02	32	29.2	1122	BORMINDO RIAU	MUD PUMP_TRIAL	PUMP	16	2.3
16/08/2024 07:26:02	32	29.3	1122	BORMINDO RIAU	MUD PUMP_TRIAL	PUMP	16	2.3

Page 1 of 45

< Previous 1 2 3 4 Next >



A Blue Oceans screen capture from the sensor sent every 10 minutes.



The Data Terminal Unit protected with an oil & gas standard enclosure

Real-time monitoring offers an early warning system, preventing downtime, prolonging equipment life and ensuring operational efficiency and reliability.

By integrating sensors, IoT facilitates instantaneous data analysis enabling Technomics to create a smart system that monitors, analyses and reports oil conditions in real time directly to the customer, empowering informed and timely decision making.

This is done via Blue Oceans, an online information system providing customer focused equipment maintenance solutions based on various condition monitoring inputs, giving clients secure, direct and live access to all Technomics' data and test results.

Technomics CEO Chris Adsett said the data would be utilised by PT Bormindo to optimise operations of the mud pump and this innovative practice along with the outcomes would be shared with other customers throughout the company's global operations to provide an indication of the benefits of the IoT sensor program.

"There are many locations in an engine, a hydraulic system, a vehicle, a truck or in machinery from which data can be gathered to measure all types of factors, including vibration, temperature, oil condition, wear and friction," he said.



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