

Emerson's Smart Wireless Solutions Improve Wellhead and Heat Exchanger Monitoring on StatoilHydro Offshore Platform

BENEFITS

- Smart Wireless delivered 100% reliability and stability in the crowded metal wellhead environment
- Easy integration of wireless data into third party system
- Customer identified operational improvements as a result of increased process visibility
- Wireless solution eliminates the need for daily visits to the wellhead to manually record gauge readings
- Continuous monitoring enables unusual readings to be identified earlier



CHALLENGE

Emerson Process Management has successfully applied its wireless self-organizing mesh field network to monitor wellhead annular pressure and heat exchanger pressures on the Grane offshore platform. The Grane platform is operated by StatoilHydro and is stationed in the Norwegian Sea off the coast of Bergen, Norway. Statoil Hydro needed to remotely monitor wellhead and heat exchanger in harsh, difficult to reach areas. The wellhead area is crowded with metal pipe work, metal walkways above and below, together with other metal obstructions.

SOLUTION

The Smart Wireless network on the platform includes 22 wireless Rosemount pressure transmitters which replace traditional gauges. Ten pressure transmitters are mounted on a wellhead and used to measure annular pressure. A further twelve pressure transmitters monitor inlet pressure and pressure drop over the heat exchanger. Each transmitter relays data back to the operator consoles in the control room. A wireless gateway was mounted outside the process area on one side of the platform, at a height where it oversees the wellhead area.

“We are delighted with the performance of the Emerson Smart Wireless network in these challenging conditions. Following a short training programme, our instrument engineers are very confident about adding more wireless devices to our installation as required. These typically take around two hours to install compared with up to two days for a conventional wired unit.”

Geir Leon Vadheim
Instrument Lead, Grane Platform, StatoilHydro

RESULTS

Despite the challenging environment, as each transmitter was powered up, the devices found the gateway and the mesh was established. As new devices were added, they quickly and easily joined the mesh. Signal strength and consistency during the operational period has been excellent. The wireless network enables continuous monitoring of pressures and eliminates the need for daily visits to the wellhead to manually record gauge readings. Continuous monitoring enables unusual readings to be identified earlier and action taken to investigate and rectify faults before they develop into serious problems.



The Rosemount Smart Wireless pressure transmitters are used to measure pressure drop over the platform heat exchangers.

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