Wireless at Sea

Equipment Health Monitoring Solution Helps Protect Employees and Improve Productivity

Industrial facilities contain hundreds of pieces of rotating equipment, which slowly wear down over time. This equipment is only occasionally monitored manually or not monitored at all.

Maintaining rotating equipment is even more critical on a floating tanker. Imagine a pump breakdown in the middle of the sea or at a risky point of transporting oil to or from a platform. In the oil and gas industry alone, the failure of rotating equipment causes approximately 40 percent of all unplanned downtime.

An energy company operating in the North Sea faced a rotating equipment challenge. The company needed to protect its rotating assets on its oil tanker, improve its ability to operate at full capacity, and proactively manage its long lead-time maintenance schedules. With over 500 points, manually monitoring the rotating equipment could only gather data from each asset once every three months. Because of the ship's docking location and mobility, performing on-demand maintenance is difficult, if not impossible.

Many of the company's assets have long purchased lead-times, making it hard to balance the spare parts inventory levels. Additionally, some of the company's critical assets are in the engine room with some areas not ideal for employees during operation.

Because the company was only able to safely gather such little data, it was unable to predict failures, which can lead to running the ship at a more conservative performance level instead of at full capacity.

The company realized it needed an online system to obtain real-time data. Adding wires would have cost over $100 per foot, however, and with a ship almost 900 feet long by 150 feet wide, wires were not a cost-effective solution.

To install a wireless solution, Honeywell completed a wireless network design assessment. Implementing a wireless solution on a metal tanker is not an easy task - few propagation paths exist in the ship and inherent vibration can affect readings.

Honeywell assessed the interference points, considered how the equipment would behave with a sensor attached, and planned around the steel of the ship by deploying powered wireless access points and configuring the sensors so that they would not create interference.

The company also chose Honeywell to implement the network design and install the condition monitoring solution. Honeywell's OneWireless Equipment Health Monitoring System provided the company a reliable and cost-effective way to monitor the condition of its assets and support its future application needs, such as wireless video.

With Honeywell's new system installed, the company will be able to read and historize real-time data at least five times a day. This change will help the company better protect its employees, proactively schedule maintenance, manage resources, and operate confidently at full capacity.

More Information

For more information on Honeywell's OneWireless solutions, visit our website www.honeywell.com/ps/wireless, or contact your Honeywell account manager.

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