Success Story

Implementing IoT-based Condition Monitoring Solution for Compressed Air Operations Leads to Significant Manufacturing Savings

The Problem

A leading manufacturer of hydraulic hoses wanted to evaluate performance and effectiveness of plant operations, specifically their compressed air system.

Like many manufacturing facilities, this manufacturer depends heavily on its compressed air system for many processes. The goal was to monitor overall air demand of the facility and pressure drop/loss from compressor discharge to the selected point-of-use equipment within the facility for six weeks.

The Solution

The manufacturer turned to Parker's cloud-based condition monitoring solution. SensoNODE™ Gold Sensors were installed throughout the compressed air system to measure the compressor discharge pressure, the differential pressure of the system filter, the dryer output humidity and pressure, the receiver tank pressure, flow, and the main pipe distribution pressure as well as select point-of-use equipment.

The maintenance team then monitored measurements through the web-based Voice of the Machine™ Cloud software. The system allowed monitoring with no machine shutdowns and without interrupting production.

After monitoring and analyzing the system, the data revealed that 63% of the air demand was the result of inappropriate air usage and leaks. Based on the results, the maintenance team eliminated improper air usage, such as using compressed air to blow water off the extruded hose. They also reduced the plant operating pressure and shut off compressors when the facility is closed. They are estimating a potential annual savings of $60,000.

SensoNODE™ Gold is Parker's series of networked wireless sensors developed for uninterrupted condition monitoring for use with cloud or local applications. SensoNODE™ Gold Sensors monitor assets for changes in pressure, temperature, humidity, flow, current, displacement, analog signal and vibration to help predict problems and prevent downtime, and delivers the information to any internet-connected device.

Voice of the Machine™ Cloud Software is Parker's cloud-based uninterrupted condition monitoring software that provides machine alerts, status and analytics in real time. An intuitive interface makes connecting to sensors uncomplicated and measurements easy-to-read. With customizable dashboards and alarms, you can focus on the data that's most important to you and be alerted when your measurement thresholds are exceeded. Exporting of data is done with a click of one button, which sends a .csv file right to your internet-connected device.

Success Factors	Customer Value
Wireless sensors are compact and versatile for placement in the most difficult to reach areas of equipment and machinery.	Voice of the Machine™ Cloud Software and SensoNODE™ Gold Sensors brought to light insufficiencies of the compressed air system that may have not been discovered by the manufacturer until an actual problem developed. By implementing a condition monitoring solution, technicians can be proactive, not reactive, to monitoring assets and analyzing data to determine the appropriate measures to ensure production is not lost due to an issue and money-saving strategies can be implemented.
View the most accurate measurements of different pressure points.	
Analyze machine data to discover underlining issues before they escalate into serious problems, maximizing uptime while minimizing maintenance costs and downtime.	

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