TECHNOLOGY TOOLBOX

CONDITION MONITORING ON THE GO

New portable solutions let you monitor machines from anywhere – even your couch

Portable tools for condition data collection and monitoring provide an efficient and economical alternative to earlier approaches. Portability gives equipment-facing personnel in operations and maintenance an opportunity to capture and act on changing conditions as needed – at any time, from anywhere.

ON-SITE CONDITION REPORTING

Portability is ideal for addressing unexpected or intermittent conditions as well as routine concerns on the plant floor. The FactoryTalk TeamONE smartphone app from Rockwell Automation focuses on increasing worker productivity by providing near-instantaneous incident and device data and allowing for collaboration among plant-floor, engineering and IT workers. Incidents are posted in the iOS or Android app and shared with others for analysis; the identified solution is then posted for execution.

"We are able to drive a reduction in mean-time-to-repair through team collaboration, live device diagnostics, and interactive machine alarms," says Kyle Reissner, mobility platform leader at Rockwell Automation.

WALK-AROUND CONDITION MONITORING

Solutions designed for walk-around condition monitoring let analysts spend less time collecting data and more time analyzing it. GE's Bently Nevada SCOUT200 Series is a rugged system that features a lightweight hip-mounted wireless vibration data collector (the intrinsically safe SCOUT220-IS model or COMMTEST220 non-IS-rated model) that



streams data via Bluetooth to a durable Android smartphone. The system has full connectivity with GE's System 1 software for diagnostics.

"Portables provide a solid foundation and are a valuable component in any condition monitoring program," says Chris McMillen, GE distributed hardware product manager.

The small, military-grade, IP67-rated Auguscope from Augury records vibration and ultrasonic sensor data for

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mechanical diagnostics, leak detection, pump cavitation, and steam-trap issues. The technician attaches a magnetic sensor to the machine's body and initiates recording from his or her smartphone. That data is sent to Augury's servers for analysis.

If you can use Facebook or Twitter, then you can use the Auguscope, suggests Saar Yoskovitz, CEO and co-founder of Augury. "The Auguscope app combines an extremely intuitive user interface with cloud-based algorithms to deliver real-time machine diagnostics and treatment recommendations to users' smartphones," he says.

The TRIO line of vibration data collectors and analyzers from Azima DLI can be worn on a belt, carried, or slung over the shoulder by technicians or operators. TRIO features four simultaneous channels of vibration data and a dedicated tachometer, plus wireless Bluetooth acquisition and voice recognition technology that allows routine or complex troubleshooting data to be collected from a safe distance.

Putting the data in the cloud gets more people involved in diagnosis and repair decisions. "Data is data; it is what you do with it that really matters," explains Michael DeMaria, director of product management and training at Azima DLI.

IMI Sensors manufactures a suite of accelerometers to optimize walk-around vibration monitoring routes. The sensors include 5000g+ shock protection to guard against damage from accidental overloads during sensor mounting and removal. Integral magnetic bases and/or cables minimize sensor installation time at each individual route stop. Coiled cables and breakaway connectors enhance convenience and safety for the technician.

"IMI Sensors provides tools that facilitate expeditious measurements while ensuring the safety of the technician," says Meredith Christman, product manager at IMI Sensors.

The OM-DAQXL Series data logger from Omega Engineering is a handheld

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29830 Beck Road, Wixom, MI 48393 MI: (248) 624-5555, IN: (219) 662-6800, NJ: (856) 423-2211, LA: (225) 622-1666, TX: (281) 471-7761, CA: (562) 490-3277 www.nlbcorp.com • e-mail: nlbmktg@nlbusa.com multichannel touchscreen data logger available with eight or 16 universal inputs. It is suited for automation environments in which high-speed measurements are needed – for example, in chemical, water treatment, or HVAC process monitoring facilities.

In the plastics industry, for example, the OM-DAQXL can be used to measure temperature sensors (thermocouples or RTDs) and pressure transducers used in various types of plastics processing machinery, including injection-molding machines and extruders, says Anthony Corvini, DAS and automation product manager at Omega Engineering.

MOVABLE CONDITION SENSORS

With Fluke Condition Monitoring, rugged wireless sensors for voltage, current, temperature, and power can be easily connected and left in place or disconnected and moved where needed. A gateway receives the sensor signals from up to 30 feet away and sends the measurements and alarms to cloud-based software that is viewable from a computer or mobile device.

"The Fluke Condition Monitoring system allows maintenance managers to see more of what is going on in their plant without needing more people," says Weishung Liu, Fluke product planner. "They can even monitor from their couch." •

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