



ANALYZE THE VIBE

Harness the value of monitoring, trending, and diagnosing signs of wear

New developments in industrial vibration monitoring and analysis make predicting maintenance easier and less expensive than before. Robust functionality, affordable designs, and outsourced services allow more companies to harness the value of monitoring, trending, and diagnosing signs of wear before failure occurs.

Monitoring large rotating equipment requires a rugged system design and built-in safety features. The Trio CX7 from Azima DLI is a durable, wireless vibration data collector and machine condition analyzer that allows voice-activated data collection, saving the operator from entering unsafe locations or physically handling the equipment. Digital video and photos can be forwarded to analysts or submitted with diagnostics reports. Azima DLI's Trio CA6 is a midrange, cloud-based vibration data collector and machine condition analyzer.

"Traditional, purpose-built, dedicated data collectors have distinct limitations and just cannot adapt to today's increasing predictive maintenance requirements and rapidly evolving computing environments," says Ken Piety, vice president of technology for Azima DLI.

Wireless designs avoid the expense of installing cabling. VibConnect RF is a wireless condition monitoring system for rotating machine components that also detects damage caused by cavitation. Manufactured by Pruftechnik (www.pruftechnik.com) and distributed in the United States by Ludeca, VibConnect RF enables the assessment of machine vibration, temperature, and bearing condition.

"VibConnect RF offers a very reliable and cost-effective means to monitor bearing condition and the temperature and vibration of critical equipment for defects that can result in decreased reliability," says Alex Nino, application engineer for Ludeca.

The cost-conscious Protect Wireless system from Vibration Specialty Corp. (VSC) allows 24/7 online monitoring and diagnostics of machine and facility conditions. It enables internal vibration analysts or predictive service providers like VSC to remotely diagnose data from a smart device or computer.

"Protect Wireless captures any type of sensor measurements from DC to 40 kHz with 24-bit resolution and an effective resolution of -110 dB," says Jerry Duffy, product engineer for VSC.

Siemens' new vibration multiplexer module, Vib-Mux, adds inputs for vibration sensors to the Siplus CMS2000

condition monitoring system. Up to 16 IEPE vibration sensors now can be connected per system, eight sensors per module, and two modules per system. "Vibration analysis is one of the best methods for the early detection of mechanical failure," says Christian Neugebauer, product manager, Siplus CMS, Siemens Industry Automation.

Self-powered vibration sensors prevent the need for replacement batteries and accompanying labor costs. Inertia Technology launched a new wireless network platform for

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vibration monitoring and control at Hannover Messe 2013 that features a network of intelligent, wireless sensors that power themselves using harvested vibration energy.

"This platform represents the result of the research performed in the European project WiBrate, where Inertia Technology, together with major industrial partners — Honeywell, Fiat, LMS/Siemens and Perpetuum — deliver an integrated solution for wireless, self-powered vibration monitoring and control," says Mihai Marin-Perianu, managing director of Inertia Technology.

The PdM Solutions program at VibrAlign (www.vibralign.com) employs Vibration Institute-certified analysts and trainers and the latest technologies for predictive maintenance. Machine conditions are analyzed remotely, and maintenance recommendations are delivered to in-house technicians for corrective action.

"VibrAlign's service company, PdM Solutions, partners with AzimaDLI for vibration analysis technology needs," says Steve Matthews, business manager for PdM Solutions. ☺

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