

SETPOINT™ SYSTEM ADDS ROLLING ELEMENT BEARING MONITORING

DEC 4, 2012 - HOUSTON, TX – Metrix Instrument Company today announced that its SETPOINT Machinery Protection System now supports multiple frequency passbands and acceleration enveloping, commonly used to monitor rolling element bearing condition.

Rolling element bearing (REB) support is the most recent in a long succession of completed and planned system upgrades. SETPOINT was launched in 2011 with functionality to support basic turbo machinery measurements. Supported machine types were expanded in April 2012 to include hydro-turbines, and again in July 2012 to include large steam turbine-generator sets, reciprocating compressors, and aero-derivative gas turbines.

Rolling element bearings generate vibration frequencies that are governed primarily by bearing geometry. As bearing faults develop, monitoring of the frequency bands that coincide with specific bearing components allows more sensitive monitoring and earlier advanced warning to facilitate maintenance. It also gives insight into root cause of the bearing failure, such as machinery misalignment or unbalance, bearing lubricant breakdown, running hours in excess of L10 life, pitting, spalling, electrostatic discharge, or other causes.

When a channel in the SETPOINT System’s Universal Monitoring Module (UMM) is configured for enveloped acceleration, it now returns the following seven parameters:

- Overall acceleration amplitude
- Enveloped acceleration amplitude, filtered to Outer Race Ball Pass (ORBP) frequency
- Enveloped acceleration amplitude, filtered to Inner Race Ball Pass (IRBP) frequency
- Enveloped acceleration amplitude, filtered to Cage frequency (also known as Fundamental Train Frequency or FTF)
- Enveloped acceleration amplitude, filtered to Ball Spin frequency
- Enveloped acceleration amplitude, filtered to 2X Ball Spin frequency
- Sensor bias voltage



Using bearing tables for the particular bearing geometry, bandpass filter corners for each of the above parameters can be set. Alarms can also be set independently for each parameter. Users can then alarm and trend the vibration levels within these frequency bands for a sophisticated and effective monitoring strategy.

Acceleration enveloping is a widely accepted and field-proven signal conditioning method that allows very low-amplitude signal components to be accurately extracted and isolated from the much larger overall vibration signal. This allows earlier advance warning of bearing degradation and more proactive maintenance planning.

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Experience Value

These new measurement capabilities can be enabled in existing hardware in the field by downloading the appropriate firmware and reconfiguring the new channel types as desired.

About Metrix... Metrix Instrument Company (www.metrixvibration.com) is a leading supplier of machinery protection and condition monitoring products and services to industrial customers worldwide. Founded in 1965, Metrix was the first company to offer vibration transmitters, allowing vibration to be more easily integrated with existing plant control and monitoring systems accepting process measurement inputs via industry-standard 4-20mA signals. The company does business in more than 50 countries worldwide and, in addition to vibration transmitters, offers a comprehensive portfolio of vibration sensors, electronic and mechanical vibration switches, permanent monitoring systems, and associated field services for machinery diagnostics, system installation and maintenance, and training. A Roper Industries business, Metrix is headquartered in Houston, Texas. In addition to a global network of qualified sales and service partners, Metrix maintains factory-direct sales and service offices in Nevada, Texas, Pennsylvania, New Jersey, Florida, Ohio, China, Germany, Venezuela, and the U.K.

For More Information...

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