MVX Real-time Monitoring Systems

CONDITION-BASED MAINTENANCE FOR CRITICAL MACHINES

acoem
CREATING ENVIRONMENTS OF POSSIBILITY

The reliability of critical machines is an essential factor for all industrial companies. The slightest unexpected shutdown results in direct production losses, and the associated maintenance issues (logistics, spare parts, etc.) can be significant. MVX is a multi-channel real-time monitoring system that enables the onset of faults to be detected early, thus providing peace of mind for industrial operators.

MVX
Monitoring and diagnostics for critical machinery

SMART MONITORING

The smart measurement and processing functions built into MVX are used to collect the highly qualified information required to monitor and diagnose your most critical machinery.

With MVX, kinematic complexity and the variability of operating conditions are no longer an issue.

SMART DESIGN

With 8 to 32 channels within the same sized instrument, MVX can receive vibration, electrical, oil or process information, and adapt to your mode of condition-based maintenance.

The system can be extended virtually to several hundred channels via communication interfaces with PLCs.

→ MIGHTY AND POWERFUL FOR COMPLEX MACHINES

A RESPONSE TO ANY CHALLENGE

MVX can detect and capture transient sub-millisecond phenomena over 100% of the signal. Time signals are recorded using a «pre-trigger» on all relevant channels so that the event can be analyzed retrospectively.
Its real-time processing capabilities make it possible to:
- capture and record a transient phenomenon on a turbine for subsequent analysis
- control a rolling mill based on its vibration behavior.

MONITORING OF LOW SPEED SHAFTS

MVX offers an unrivaled solution for the monitoring of low speed shafts with a smart Shock Finder indicator.
Abnormal impacts on shafts turning at very low speeds (from just a few rpm) are detected early and fully automatically.
Real-time management of variable operating conditions enables MVX to escalate data required for analysis and allowing comparison over time.

ANALYSIS PRODUCTIVITY

MVX will notify you in real time of any event requiring your intervention, by e-mail, text message or digital output.
The stored data, associated with operating conditions, is highly qualified: no false alarms!

« Reports are accessible in just a few clicks, navigating from a map of the world to a detailed view of a machine. »

MVX
A cost-effective solution to technical challenges

Wagon tipplers are a perfect example: the purpose of the one in this photo is to load boats by overturning the wagons that arrive from the mines.

They operate at variable speed, with acceleration and deceleration phases. The impacts generated by mechanical faults must be distinguished from «normal» impacts relating to their operation, and the low-energy vibrations generated by the slow-rotating parts are drowned out by the vibrations generated by other parts of the machine.

MVX features all of the tools required to reliably monitor this type of equipment.

→ INTEGRATED AND CONNECTED

A CENTRALIZED SYSTEM

The data acquired by MVX is automatically stored in the NEST software platform. Analysis of and access to the condition of production sites is simple: reports are accessible in just a few clicks, navigating from a map of the world to a detailed view of a machine. Wherever measurements have come from (a FALCON portable instrument, an EAGLE online wireless sensor, or an MVX online cabled monitoring system), the data is accessible via the same interface from any connected computer.

« With **MVX***, kinematic complexity and the variability of operational conditions are no longer an issue. »*

EASY TO DEPLOY

MVX communicates and transfers its results in automatically and reliably to the NEST software via a secure Ethernet link. Operators can choose to use the local cabled network, a Wi-Fi network, or over the Internet via a 3G link, for example.

INTEGRATED INTO YOUR ENVIRONMENT

MVX can be fully integrated into your environment. Process information is retrieved directly from the PLCs, eliminating any duplication of data. The advanced indicators defined can be transmitted in order improve process management, and maintenance management is optimized thanks to an interface with the CMMS system.

Shock Finder automatic filtering
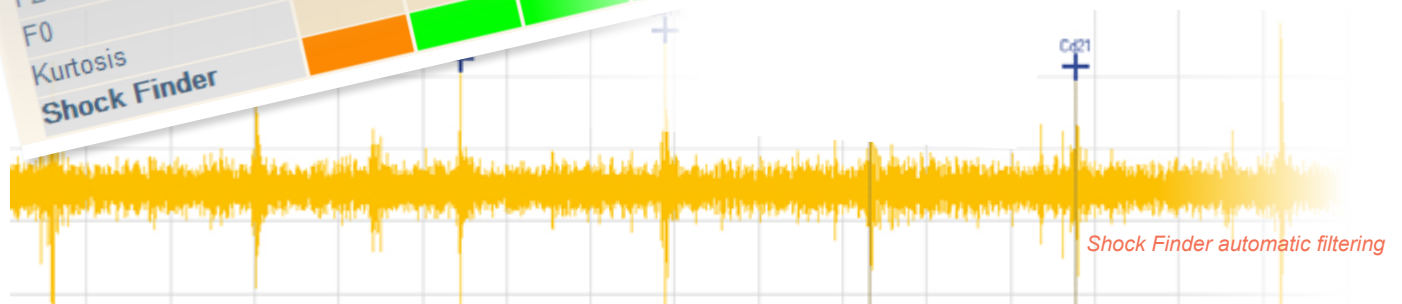
→ A UNIQUE SYSTEM WITH INFINITE CAPABILITIES

SMART MONITORING

- Real-time monitoring of one or more machines
- Storage of measurements required for analysis: the right information at the right time.
- Easy analysis of complex machines through management of operating conditions
- Early detection of faults on slow shafts with Shock Finder

COMMUNICATION

- Two-way communication with PLCs
- Alerts by e-mail / logic outputs
- Management of sub-optimal communication conditions (3G) for isolated machines

FLEXIBLE

- All types of sensor
- 8 to 32 channels
- Number of channels can be extended for process information using Modbus and OPC interfaces
- Option: portable version for temporary monitoring (VMS)

ALL IN ONE

- Monitoring of vibrations
- Monitoring of oil (quality, particle count)
- Correlations with process information

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Creating environments of possibility

In today's fast–moving world, the environment is increasingly impacted.
The Acoem Group is committed to sustainable development
and help companies and public authorities limit their environmental impact
by offering products and services that:

– Prevent and control air, noise and vibration pollution;
– Increase the productivity and reliability of industrial machinery;
– Contribute to the development of effective, robust & noiseless products;
– Protect soldiers, sites and vehicles in military theaters of operation.

The Acoem Group is based in Limonest, France, and has 17 subsidiaries
and offices around the world. The Group generates an annual
turnover over €100 million and currently employs 750+ people globally.

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