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UltraCheck Valve & EMPATH Motor Diagnostic Systems

Protect your assets with the complete suite of valve and motor diagnostics

Challenge

Utilities are seeking ways to increase reliability and lower costs associated with valve and motor diagnostics.

Solution

Framatome has developed a complete suite of valve and motor diagnostics with a common software structure. The Universal Signal Analysis (USA) software used for each diagnostic system has the same “look and feel” allowing users who have been trained on one system to become proficient with any of the other systems with minimal training.

Air-operated valve diagnostics

The UltraCheck “A” system utilizes pressure sensors, displacement transducers, and electrical control signals to quickly determine the operational condition of pneumatically- or hydraulically-actuated linear or quarter-turn valves. With up to 16 channels of input, the UltraCheck “A” system focuses maintenance activities on specific aspects of problem valves to eliminate wasted time and money from unnecessary disassembly and repair efforts.

Check valve diagnostics

The UltraCheck “C” system employs acoustic, magnetic and ultrasonic technologies to non-intrusively ascertain the operability of check valves used in the transport of liquids, gases or steam. This system can be used on any style or size stainless or carbon steel valve to verify the valve is working properly, eliminating the need for disassembly and visual inspection.

Leak detection

Determine the presence of leakage past valve seats with the UltraCheck “L” system. Quick, easy sensor installation and simple, user-friendly software provides users with an automated leakage assessment to help identify and eliminate process losses through leaking valves.



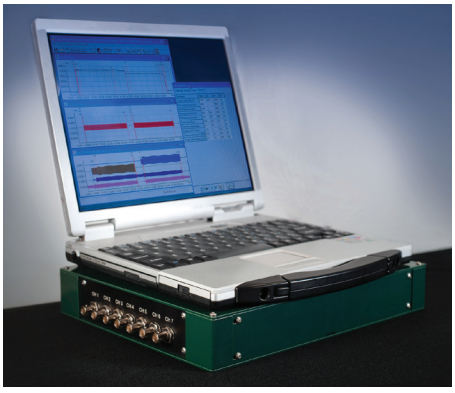
Customer benefits

- Become proficient with minimal training
- Eliminate wasted time and money from unnecessary disassembly and repair efforts
- Identify and eliminate process losses through leaking valves
- Collect data without the need to go to the valve
- Accurate traceable data for relief valve set points
- Direct access to predict actuator output thrust
- Pinpoint potential problems without being a motor expert
- Increase reliability



Motor-operated valve diagnostics

The UltraCheck “M” system combines sensors for torque and thrust, displacement, current, voltage, and switch signals to quickly assess problems in valve and actuator assemblies or the electric motors that drive them. Additional technology available with this system allows users to collect data at the motor control center to predict actuator torque and thrust without the need to go to the valve.



Relief valve data acquisition

Finally, a method to collect and analyze accurate, traceable data for relief valve set points. By combining several technologies (acoustics, displacement and pressure), set point values can be more accurately determined than with traditional methods using pressure gauges with a maximum pressure indication. The UltraCheck “RV” system software has all of the specification requirements from the ASME Boiler and Pressure Vessel Code incorporated to help users evaluate relief valve performance.

Spring pack testing

Test spring packs characterize spring performance and pre-determine actuator output capability. The UltraCheck “SPT” system provides force and displacement measurement to assure spring performance is optimal for the installed application. Data from this system can be directly accessed by the UltraCheck “M” system to predict actuator output thrust.



Electric motor diagnostics

Analyze problems in AC and DC motors of any size or their driven loads by monitoring all phases of current and voltage from the motor control center. The EMPATH system provides a thorough analysis of high- and low-frequency data to pinpoint potential problems so you don’t have to be a motor expert. The system is completely invisible to the motor being monitored, quick to set up and very simple to use.



Framatome remains committed to delivering safe, qualified and dependable solutions that support your plant’s operational success. *Count on it.*

For more information, visit npc.framatome.com
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