Move from reactive to predictive control valve maintenance using diagnostic services that improve plant reliability and performance.

- Identify process control equipment that needs maintenance before issues occur
- Maximize uptime and schedule downtime more effectively
- Extend asset life and achieve valve lifecycle qoals through preventive maintenance
- Increase your plant's overall health and safety while managing turnaround scope

Diagnostic Services

Of all the automation-related equipment in your plant, control valves may have the greatest impact on process reliability and performance. So, how do you keep a fixed asset, like a process plant, operating at an optimum throughput year after year, decade after decade?

Whether your maintenance is reactive, preventive, or predictive, Emerson has the experience and expertise to help you diagnose your complete assembly (control valve, actuator, and instrument). Emerson will work with you to develop a maintenance plan that can help you minimize variability, process upsets, and downtime.

On-line and off-line diagnostic services give you greater insight into the health of your control valves by uncovering performance degradation and maintenance issues before they affect your process. This enables you to better prioritize your routine maintenance and scheduled turnarounds and outages—greatly impacting your plant's reliability and performance.

Diagnostic services are performed by Emerson trained and certified technicians who provide a clear, concise report indicating asset health and areas of potential risk. Additional on-demand services are performed for valves that may require minor adjustments or calibrations, tuning your plant's assets as the diagnostic tests are completed.

Whenever possible, a calibration or repair is made immediately. Otherwise, a record of the issue is noted and repaired during your next scheduled outage.



Non-intrusive, Non-disruptive Problem Solving

Using non-intrusive, non-disruptive diagnostic tools, problems can be solved by determining the root cause for the degradation of control valve performance. On-line and off-line diagnostics include the following perceptive technologies:

Valve Seat Leak Detection - An on-line diagnostic tool that uses state-of-the-art acoustic emission valve seat leak testing. Tests are performed on the valves that typically remain closed and cannot be stroked during a pre-outage walk-down.

FIELDVUE™ Instruments - Regardless of FIELDVUE instrument diagnostic level, you have on-line and off-line diagnostic capabilities to help uncover valve performance degradation and maintenance issues before it affects your process—all from a single location.

FlowScanner™**Valve Diagnostic System** - Features off-line, in-depth diagnostics, wireless technology, and portability which make it the essential tool for diagnosing valves in hazardous environments.





Anticipate the Future, Impact the Performance

Control valves located in hard-to-reach or hazardous locations are often left to run until the next turnaround, which means performance issues may be ignored.

Using diagnostic services as part of your preventive maintenance plan provides early identification of performance issues. On-line, in-service diagnostics help you predict the ongoing and future health of your control valves to keep them in operation longer—increasing overall plant availability. Valves no longer need to be pulled from service just to be inspected for potential issues, allowing you to extend turnaround intervals and schedule downtime maintenance more effectively.



Ongoing diagnostics can uncover issues and maintenance can be scheduled to address:

- Improper valve packing
- Pneumatic actuator leakage
- Air supply issues
- Sticking
- Increased packing friction
- Process material buildup
- Shaft seizure

- Stem or shaft fractures or bending
- Bearing corrosion
- Actuator spring break or permanent set
- Slow air exhaust

Preventive, Predictive, and Effective

When it comes to the health of your plant and processes, never underestimate the value of predictive maintenance. Emerson can help deliver long-term reliability throughout your plant's lifecycle using diagnostic services to detail when devices should be repaired or replaced. In addition, properly maintained and calibrated equipment results in optimal plant performance, reduced maintenance costs, and environmental health and safety compliance. Using our preventive diagnostic tools to identify maintenance priorities, Emerson can help you develop a comprehensive lifecycle maintenance plan for your plant.

To leverage the power of predictive maintenance and diagnostic services, contact your local Emerson sales office.









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