FIELDVUE™ DVC6200f Instrument Resists Vibration, Improves Valve Performance at SECCO Complex

RESULTS

- Saved SECCO plant $40,000 per year by avoiding repairs and downtime on one, critical valve
- Provided linkage-less, non-contact position feedback
- Enabled FOUNDATION™ fieldbus communications and diagnostics/alerts

The Fisher division offers more than 1500 mounting kits that allow the direct attachment of the FIELDVUE instrument to many different models and sizes of control valves. The SECCO chemical complex added a FIELDVUE DVC6200f digital valve controller to a non-Fisher steam-service valve. The inset photo (lower left) provides a view of the instrument from above.

APPLICATION

Non-Fisher, steam-service valve

CUSTOMER

Shanghai Ethylene Cracker Complex (SECCO) in China

CHALLENGE

The world's largest integrated chemical facility, the Shanghai Ethylene Cracker Complex (SECCO) in China, contains thousands of control valves in varying brands, types, and sizes. The SECCO complex includes a naptha-fed ethylene cracker and ten downstream derivative plants. Most of the control valves installed throughout the complex operate as intended, meaning they provide stable control, respond to signal changes, and reach set point smoothly, without stiction or overshoot.

Occasionally, a valve causes a problem. In one case, pipeline vibration was destroying a steam-service valve's instrumentation. Because it was not feasible to change the process or piping, SECCO operators were replacing the positioner—every three months. The cost of replacement instruments plus lost production and labor routinely exceeded $40,000 per year for this single valve.

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Process Management

SOLUTION

Emerson Process Management's local sales office, Star Controls, studied the problem and suggested that SECCO replace the unit with a FIELDVUE™ DVC6200f digital valve controller featuring linkage-less, non-contact position feedback and FOUNDATION™ fieldbus communication capabilities. Instead of relying on a physical connection between the position-sensing element and the valve stem, the new device uses a magnetic array to detect valve position. There are no parts to wear out, and the instrument can tolerate vibration, even at high levels. Used in conjunction with ValveLink™ software, the FIELDVUE instrument provides prompt notification of current or potential valve issues.

RESULTS

The FIELDVUE DVC6200f instrument was installed in March 2010. Since then, the site has had no performance or maintenance issues with the valve.

"The FIELDVUE DVC6200f instrument continues to perform with good accuracy and reliability. It has paid for itself many times since it was installed."

Maintenance Engineer

Shanghai Ethylene Cracker Complex
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