

## Diagnostic Capabilities Target Valves, Save Time During Cargill Plant's Planned Outage

Kirk Bruce is the Maintenance, Instrument & Electrical Supervisor at Cargill's corn-wet milling plant in Eddyville, Iowa. He and his team are responsible for thousands of control valves. The Vitamin E processing line represents about one-fifth of the plant's total instrumentation, but this area includes some of their most critical applications.

"We use and value FIELDVUE® Digital Valve Controllers in this area," Kirk says, "but until recently, we had not taken full advantage of their functionality or realized the potential diagnostic and data-gathering capabilities of the AMS ValveLink® software."

When the Vitamin E line lost several experienced people to other jobs within the plant, Kirk and his team realized they needed more help keeping track of instruments. Fisher's Local Business Partner, R. S. Stover, stepped in to help Cargill-Eddyville and eventually assumed a "project management" role. John Fuller of Stover worked with Kirk to inventory their current capabilities and to identify any necessary upgrades. Two other Stover employees, John Witte and Arturo Medina, began to serve as the plant's Asset Managers.

The Cargill-Eddyville site adopted a more progressive approach to automation and a willingness to apply new technology, in addition to the digital instruments already in place. Its control system includes multiple FOUNDATION™ fieldbus segments, DeviceNet, Profibus DP, and a 2000-tag Asset Management Solution (AMS) with ValveLink® SNAP-ON™ applications software. The site has also standardized on Advanced Diagnostic (AD) versions of the FIELDVUE Digital Valve Controllers.

Kirk says, "We are not yet in a predictive maintenance mode, but we're much closer than we were a year ago. It's a big plant. As word of our success in the Vitamin E area spreads, I expect the roll-out to continue, particularly into the older areas of the plant."

Kirk's team has been able to demonstrate and document the value of Fisher's diagnostic capabilities. During a planned outage in late September 2001, they set out to monitor and diagnose 300 control valves. With Fisher's unique combination of digital devices and software in one area, the valves literally told the maintenance team whether or not they required attention. Thus, they targeted 45 valves (out of the possible 300) for detailed diagnostics and service.

"Though it's hard to calculate the actual benefits, there's no question that diagnostic capabilities, like the Alert Record, saved us considerable time and money compared to traditional methods," Kirk said. "Our operators used the software to plot instrument (valve) performance and pin-point where and when a problem occurs. We found leaks, seal problems, and even a melted cable."

Meanwhile, the Vitamin E line met its initial objectives for the instrument upgrade and more efficient maintenance. "The AMS ValveLink software more than paid for itself during this outage," Kirk said. "We're convinced that there's money to be made by more closely monitoring and improving control valve performance, and Fisher has some of the best tools in the industry to improve diagnostics, increase system availability, and lower production costs." ■

