

Combined Cycle Plant Achieves a 143% Return on Investment with a Fisher® Diagnostic Solution

RESULTS

- Saved \$33,500, year to year, by eliminating the need for outside control valve repair services
- Saved one hour of labor per valve by using ValveLink™ software's Batch Runner for calibration
- Saved \$25,000 by using FIELDVUE™ diagnostics to avoid unnecessary repairs to turbine bypass control valves
- Saved a total of \$68,000 on the 2011 outage alone



FIELDVUE™ digital valve controllers are used in combination with ValveLink™ software to monitor control valve performance. With Performance Diagnostic capabilities, the instruments provide real-time, online data that may be collected and analyzed for any signs of degradation.

APPLICATION

Turbine bypass control

CUSTOMER

A gas-fired, combined cycle plant

CHALLENGE

In 2008, a leading power producer purchased a partially-completed, generating facility and continued its revamp. When the plant began operating in June 2010, it was fired by clean-burning natural gas and producing 740 megawatts of electricity.

To maintain peak efficiency, plant personnel needed a better way to maintain a large population of control valves. A scheduled outage in 2010 cost more than \$68,000, including contracted repair services. In late 2011, they invested in an online control and monitoring system featuring Emerson equipment.

SOLUTION

During a scheduled outage in 2011, the plant's maintenance team upgraded to Fisher® FIELDVUE™ digital valve controllers with Performance Diagnostics. They also installed a 300-tag software system that included AMS Device Manager and AMS ValveLink SNAP-ON™ with Calibration Assistant and Batch Runner.

The combination of Emerson resources enabled them to reduce costs in several areas.



- The availability of online diagnostics and real-time control valve performance data allowed the team to determine which specific control valves need to be repaired and, in many cases, why. During the 2010 outage, the site spent \$33,500 on outage services. In 2011, after utilizing Emerson diagnostics, no outside services were required.
- ValveLink software's Batch Runner enabled plant personnel to automatically upload the latest, HART®-enhanced device descriptor language (EDDL) to its existing FIELDVUE instruments. This tool enabled them to set up tasks and services for multiple tags and saved them an estimated one hour per control valve during the outage. Batch Runner also enabled them to set up tasks and services for multiple tags without adding any additional people.
- The combination of FIELDVUE instruments and ValveLink software also helped them identify a problem on one control valve assembly as a bad I/P, which was replaced. Plant personnel avoided the \$1,400 cost of opening and inspecting the valve.
- In 2011, plant personnel completed the annual outage without contracting any repair services for turbine bypass control valves. Instead, they used Emerson diagnostic tools to analyze each control valve assembly. The diagnostic solution saved them an estimated \$25,000 (spent in 2010 on repair services).

RESULT

For an initial investment of \$48,000, the plant saved more than \$68,700 during its 2011 outage alone. The Emerson equipment not only paid for itself but also delivered a 143% return on investment.

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