PROFESSIONAL REVIEW

Power facility significantly reduces calibration time with automatic pressure calibrator

Job role: Instrumentation supervisor

Company: U.S. coal-fired power generation plant

Tools: Fluke 729 Automatic Pressure Calibrator

Key benefits:

- Faster calibration
- Fewer tools to carry
- Automatic documentation

A coal-fired power plant in the United States depends on a strong preventive maintenance program to keep its processes running safely and efficiently. Performing accurate and consistent pressure calibration on process instrumentation is an integral part of that program.

The plant's instrumentation calibration crew is responsible for both maintaining and troubleshooting hundreds of transmitters and pressure switches, which monitor and control everything from catalytic processes to emissions. When the facility needed to replace a decades-old documenting process calibrator, the plant's instrumentation supervisor went in search of a next generation pressure calibrator to help improve efficiency. That search led it to the Fluke 729 Automatic Pressure Calibrator.

Next generation pressure calibration

"We chose the 729 Automatic Pressure Calibrator because it has an automatic pump, plus the latest standards, and it automatically saves calibration results," says the supervisor.

The automatic capabilities extend beyond the internal automatic pump that controls and regulates pressure. The Fluke 729 also includes automatic internal fine pressure adjustment that helps compensate for minor leaks in hoses and test setups. For example, stored compressed air and miniature air valves control pressure for descending step tests by releasing air from the test port.

Increased workload throughput

After using the Fluke 729 for a few months, the calibration staff began to see efficiency gains. "With the 729, we can automatically test multiple pressure points in one set up," says the supervisor. "We're able to get straight to the depression set point without having to bleed the pressure and pump it back up, which definitely makes us more efficient."

The instrumentation technicians also take advantage of the Autostep function on the 729 to set a sequence of calibration steps that run automatically. The supervisor estimates that the combination of automatic capabilities and multiple built-in functions enable technicians to calibrate approximately 20% more instruments per route during preventive maintenance, and also expedites troubleshooting. And that's while still using a paper-based documentation system.

"With the 729, we can automatically test multiple pressure points in one set up. We're able to get straight to the depression set point without having to bleed the pressure and pump it back up, which definitely makes us more efficient."

To further increase efficiency, the supervisor is planning to implement DPCTrack2™ Calibration Management Software so that the facility can move away from paper-based documentation. With DPC Track2, technicians will be able to upload and manage documented calibration results directly to a PC rather than record it to a paper work order. This will make it easier to manage instrumentation, create scheduled tests and reports, and look at the history of each instrument to trace back a problem if necessary. Fluke tests estimate that using the 729 for route-based maintenance, along with paperless workflows, and documentation software can lead to time savings of up to 50%.

True multi-function efficiency

In the power plant, instrumentation technicians use the 729 both out in the field and in the service shop. After a work order is issued, operations isolates the target device and takes it offline. "If we can pump it up out in the field we will, but certain devices we need to bring back to the shop," says the supervisor.

Either way, the 729 does the work of multiple tools. Previously, to test a transmitter or switch, the technician would have to connect the target device to a power supply and a Hart Communicator. That isn't necessary with the Fluke 729. "The 729 powers up the loop itself and has Hart communication built in so we don't have to worry about those things," the supervisor explains. "We use the 729's HART communication to verify the range of the transmitter. Then we set the number of test points we want to run, set the percent of error, and hit the start button. The 729 automatically does the rest."

Not only does the 729 save time; its multi-function capabilities save space in the tool bag. "Rather than taking a pressure calibrator, Hart communicator, hand pump, and extra pressure modules, all the technicians are taking is the 729, which saves time and hassle," says the supervisor.

©2017 Fluke Corporation. Specifications subject to change without notice. 11/2017 6010248a-en
Modification of this document is not permitted without written permission from Fluke Corporation.