PASSING THE TEST

Absolut Vodka uses a meter diagnostic tool that assesses flowmeter performance and integrity without disrupting the production process.

Goodbye to downtime

By deploying SMV, Absolut Vodka says it has been able to reduce downtime. Prior to implementation of the SMV system, Absolut Vodka had to pull its flowmeters from the production line and ship them to the supplier for external verification and calibration twice a year. That required Absolut Vodka to shutting down production for at least two weeks each time it sent the meters to the supplier. In addition, the flowmeters could be damaged in transit. And most of the time, the supplier found that the flowmeters were performing efficiently and accurately.

“Not only was it costly and time consuming, but it often involved removing flowmeters when they were, in fact, working correctly,” says Pär Björklund, distillery engineer at The Absolut Company – Pernod Ricard, the parent company of Absolut Vodka. “We needed a solution that eliminated the need to unnecessarily pull and away instruments that were still accurate and reliable.”

“The Smart Meter Verification, we don’t need to remove the flowmeters and send them away,” he adds. “We can test the flowmeter is working correctly during full production. That’s one of the biggest benefits for having it, because it costs lots of money to stop the plant and lose productivity.”

Digital connectivity

SMV also creates a safer work environment for Absolut Vodka employees. In addition to running the SMV process by using the local display of the transmitter of each flowmeter in the plant, technicians can conduct the meter verification process and recalibrate the flowmeter remotely from a computer away from the plant floor. The flowmeters are wirelessly connected to Emerson’s AMS Device Manager software and Smart Meter Verification SNAP-ON application via the Emerson ThUM Adapter. When the Smart Meter Verification SNAP-ON application is launched from the AMS Device Manager, the SNAP-ON application checks and captures device configuration and zero calibration level, sensor structure, electronics, and signal processing for complete verification of meter performance. It also trends and reports test results for test traceability and easy data management.

“Our technicians can verify and document the performance and overall health of our flowmeters from the comfort of the control room,” Björklund says. “We are reducing the personal exposure for manual operations. If a worker drops the flowmeter, he can get some hot liquid or steam in the pipes or something like that. So it is a safety issue.”

The AMS Device Manager and Smart Meter Verification SNAP-ON application not only allow for remote monitoring of the flowmeters, but also offer predictive diagnostics. The proactive tool provides SMV allows Absolut Vodka to test the flowmeters inline twice a month without any downtime. Technicians schedule and automate the tests, which can verify and check the calibration of the meters in 90 seconds within a 0.1 percent accuracy, according to Björklund. If the tests determine a problem with the flowmeter calibration, technicians can recalibrate the meter inline without halting production.

More SMV on the way

Because SMV has been able to increase uptime and accurately gauge the performance of the flowmeters at the Absolut Vodka plant, Björklund says that the company will gradually replace its older flowmeters with Emerson’s Micro Motion Coriolis Mass Flowmeters and Rosemount Magnetic Flowmeters to measure mass and volumetric flow of the plant’s liquids. Both types of flowmeters are equipped with Emerson’s patented Smart Meter Verification (SMV) system, an in situ, on-demand diagnostic tool that validates the operation of the flowmeter, verifying meter health and calibration without removing it from the production line. Using on-board diagnostics, SMV tests the flowmeter’s components and key performance indicators, such as tube stiffness, transmitters, sensors, cable signals and output parameters, by comparing a baseline signature to the factory baseline.