

Next generation of plant optimisation

The SVI3 Digital Valve Positioner marks a new era in smart valve instrumentation with the introduction of Online Valve Diagnostics, says MARK O'NEILL from Masoneilan Digital Positioners and Instrumentation at Baker Hughes

We live in a world where supercomputers fit into our pockets, watches measure and track heart rate, and vehicles monitor and alert for required servicing. Sensors are helping to connect vital pieces of information with humans in support of maximising efficiency of everyday life. Understanding changes in operating conditions and performance of devices is critical to taking action before a breakdown occurs. If you are not measuring and tracking a system, you are only guessing and missing your optimal performance.

Dresser AI Rushaid Valve & Instrument Co Ltd (Darvico) is a joint venture of Baker Hughes Company & Al Rushiad Group, having two major brands Masoneilan Control valves and Consolidated Safety relief valves, focusing in Saudi market.

Masoneilan, a Baker Hughes Company, has been a pioneer in digital valve instrumentation since the mid 1990's. For more than 20 years, from the original SVI to the SVI2AP, we have listened to our customers and advanced the benchmark capabilities of valve positioners. Yesterday's devices that simply move a valve are now a distant memory compared to today's intelligent controller with microprocessors, connected sensors, and bi-directional communication.

Technology advancements helped support intelligence into the valve on a reactive basis, utilising offline comparative analysis techniques and past performance



SVI3 digital valve positioner: simple interface

trends to understand issues. However, this historical analysis approach comes with a downside, requiring advanced scheduling, taking processes offline, and reliance upon trained expertise for analysis.

Today, the SVI3 Digital Valve Positioner marks a new era in smart valve instrumentation with the introduction of a full suite of Online Valve Diagnostics, designed to improve plant efficiency and process uptime. The Online Valve Diagnostics consist of 17 Key Performance Indicators (KPIs) which are continuously calculated while the valve is in service, providing real insights to actual operating performance of the valve system without the need to take a process offline.

With simple configuration of alerts, the SVI3 will automatically notify plant personnel as KPIs begin to drift out of the allowable range, bringing attention to specific situations before they become a problem. Additionally, internal memory has been expanded, providing an industry

leading 1 years' worth of data storage for trending and analysis – thus, collecting and storing data to give operators a safety window for analysis even for those valves in the fleet that were excluded from a planned diagnostic program. Maintenance activities can now simply be prioritised across the fleet, utilising actual operating data over time to drive decision making, ensuring that the valves which need servicing are scheduled.

Today's SVI3 utilises a new modular platform designed to be future proof with capability to add-on upgraded performance modules at a later date to further enhance performance. Diagnostics, user interfaces, communications, and Input/Output sensors, which may have not been originally specified or purchased, can always be upgraded in the field via the 'snap-on' upgrade module capability.

Packaged into a simple and easy to use interface, the SVI3 eliminates the need for a valve expert to install and operate. Simple actuator mounting, single button 'Smart Cal' automated calibration, and streamlined digital interfaces for all leading control systems, make for effortless installation and commissioning.

The Masoneilan SVI has always been the go-to-choice for operation in the harshest of applications due to its robust construction and control performance. The new low ambient temperature rating of -55 degrees C expands the range of installation climates, supporting the coldest Arctic environments. Control performance remains best in class with a 15 per cent greater volume delivery for faster actuation, while air consumption has been reduced by 40 per cent, supporting plant-wide emissions reductions.

Take the guesswork out of operation and maintenance of your valve fleet. Masoneilan SVI3 simplifies ease of operation and provides intelligence on the performance of valves to increase efficiency and uptime. ■



SVI3: ease of operation