

Westlock Controls: Valve monitoring and smart automation

Helping to reduce the risk of downtime while increasing safety

As it is in every industry, the passing of time presents new technologies, evolved systems and advanced processes that offer productivity, cost and other operational improvements. As for the fluid handling industry, that evolution involves the introduction of increasingly sophisticated and complex flow control systems that not only have an impact on productivity and costs, but maintenance downtime and safety, as well.

By Sarah Bradley

However, with new valve technologies comes the need for advanced valve monitoring and control solutions that offer increased reliability. That's where Westlock Controls comes in. Westlock has been a long-time provider of switchboxes and position transmitters, but its more recent innovations include a range of advanced solutions for the networking, monitoring and control of process valves. And like its product offering, Westlock's operations have too evolved, resulting in a recent change in ownership that has offered a whole new range of benefits to its customers. Yet, its focus remains providing future-proof solutions that will stand the test of time for its customers.

30 Years of innovation

From its inception in 1984, Westlock has been committed to the development of innovative solutions for the monitoring and control of process valves. Founded by Frank Sinclair as a means of promoting and selling his new product idea, Westlock introduced

the Beacon visual position indicator which was patented one year later. Since then, the company's momentum has only continued to grow, later spawning the introduction of integrated switches and solenoid valves, and now an offering of advanced networked and digital control solutions.

Today, Westlock has more than 8 million devices in service around the world and is considered a leader in this space, as only a handful of suppliers are capable of offering as complete a range of sophisticated solutions. In fact, its ability to satisfy the advanced requirements of its customers has resulted in the wide adoption of Westlock products on all pneumatic valve applications. As part of its mission, Westlock uses emerging technologies to anticipate and set next-generation flow control management standards that offer improved maintenance and operational efficiencies.

Last year, Westlock Controls was acquired by diversified industrial manufacturing com-

pany Crane Co. which operates one of the largest names in the fluid handling industry, Crane ChemPharma & Energy. Operating as an independent business within CP&E, Westlock will be able to continue developing new technologies that further enhance its product portfolio, while benefitting from Crane's reach and the added ability to provide its customers a more comprehensive set of solutions that span multiple valve needs.

It's all about range

Westlock's product offering runs the gamut when it comes to valve monitoring and control. From digital and network control monitors, to position transmitters and smart positioners, its solutions span a broad range of needs and are intended to work seamlessly with both on/off and modulating valves and actuators. With Westlock products in place, operators can automate their valve package, obtain more information about the installed base, reduce costs and increase safety.

Serving customers across some of the most diverse applications and industries, including the chemical, refining, oil & gas, food and beverage, pharmaceutical and power market segments, Westlock's portfolio of products meets the latest global approvals for hazardous certification and functional safety, ranging from explosion-proof/ flame-proof to intrinsically safe while being up to SIL3 capable. Its products include valve monitors and switches; network control monitors that seamlessly integrate valve monitoring with the plant's control system; valve control monitors capable of improving plant efficiency; positioners with both analogue and digital networking capabilities; position transmitters that enable the smart and discrete control of valves; and the Intelis family of industrial control field Network Control Monitors.

Digital Epic 2: valve monitoring, smart automation

Digital EPIC-2 is an intelligent valve position transmitter that offers discrete position control. Its reliable, non-contact position feedback with digital communication via HART® 7 protocol and DTM technology allow seamless integration into any control system, enabling remote configuration, calibration and diagnostics. Featuring advanced safety functions, the Digital EPIC-2 is capable of performing Emergency Shutdown Monitoring (ESM), simple Partial Stroke Testing (PST) implementation, and Solenoid Operated Valve Testing (SOVT), making it better equipped to preserve the integrity of critical safety systems. Its predictive diagnostics and intelligent alarms can pinpoint the root cause of problems to predict necessary valve maintenance before it fails, lowering the total cost of ownership and ensuring effective valve maintenance and operational integrity.

A control transmitter that provides continuous feedback via electrical signal with the ability to open and close the valve between 0%- 100% of open, through the use of an integrated pneumatic solenoid.





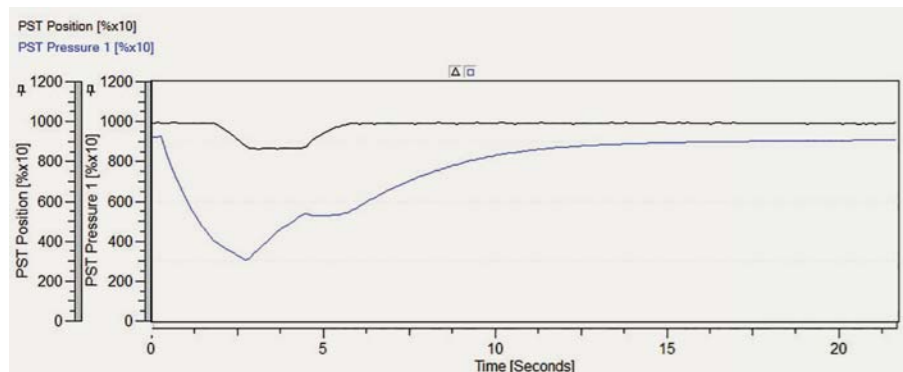
A new era in valve monitoring & control

With over 30 years of product introductions, Westlock continues to innovate to offer future-proof solutions capable of withstanding the changing complexity and requirements of flow control systems. Representing an evolution in both valve monitoring and control, Westlock has recently introduced two second-generation products: The Digital EPIC-2 and the K20 Electro-Pneumatic Positioner.

Offering expanded features beyond its predecessor, the Digital EPIC-2 is an intelligent valve position transmitter that provides discrete position control. Its reliable, non-contact position feedback with digital communication via HART® 7 protocol and DTM technology allow seamless integration into any control system, enabling remote configuration, calibration and diagnostics. Featuring advanced safety functions not previously available on the first-generation introduction, the Digital EPIC-2 is capable of performing Emergency Shutdown Monitoring (ESM), simple Partial Stroke Testing

(PST) implementation, and Solenoid Operated Valve Testing (SOVT), making it better equipped to preserve the integrity of critical safety systems. Its predictive diagnostics and intelligent alarms can pinpoint the root cause of problems to predict necessary valve maintenance before it fails, lowering the total cost of ownership and ensuring effective valve maintenance and operational integrity. Westlock is one of only a few companies that offer digital control transmitters, and its has differentiated itself from the pack by incorporating unique features into the Digital EPIC-2, like the ability to record valve signatures before and while the valve is functioning in the process line.

Having previously introduced the K10 electro-pneumatic positioner, the first of its kind to allow calibration at the push of a button, Westlock incorporated added benefits into its latest K20 Electro-Pneumatic Positioner. Also designed to complete calibration in just minutes, the K20 can display results on its new LCD display. Position measurement is done by an off-set, shaft-driven non-contact Hall Effect Sensor replacing mechanical



potentiometers and gears. It also features additional limit switch options and integrated position transmitter, allowing for more flexibility in application.

Expanded capabilities

Recently acquired by Crane, Westlock will maintain its 33,000-sq. ft. headquartered location in Saddle Brook, NJ where its various teams reside, including product management, purchasing, product engineering, finance, new product development, the engineering test lab, customer service and inside sales. The facility is ISO 9001 and OSHA VPP Star certified. With sales and service facilities in the United States, United Kingdom and Brazil, as well as distributors located on every continent, Westlock's global footprint has positioned the company for continued growth.

Each of Westlock's specialist actuation and control teams have unique cross-functional expertise in valve automation, safety applications, process control and digital communication, allowing them to provide a more efficient and heightened level of service across the key focus areas. These teams are just one example of Westlock's commitment to its mission, but in fact the entire company is dedicated to delivering the solutions that will drive plant efficiency forward in the future, no matter how complex flow control systems become.

Westlock K20 electro-pneumatic positioners certified to NEC, CEC, ATEX, IECEx standards to meet intrinsically safe and non-incendive options

The K20 represents the next phase in Westlock's mission to present a more effective and economical electro-pneumatic positioner solution. Designed to complete calibration in just minutes and independently adjust the positioner, the K20 performs position measuring by an off-set, Hall Effect Sensor. Non-contact Hall Effect sensor eliminates geared mechanical potentiometer for extended product life, reduced maintenance and improved performance under vibration.



The legacy of Beacon

In 1984, Frank Sinclair, founded Westlock Controls to promote and sell his new patented product idea, the Beacon Visual Position Indicator. Revolutionary for its time and representing the first advanced "remote" monitoring of valves, the Beacon allowed plant personnel to remotely determine the position on a valve and actuator from up to 100 feet. It was the foundation for many of the products today that utilize digital and network monitoring. Westlock is proud to offer the Beacon as part of its product portfolio. Providing a true measure of valve performance, this staple product enables highly visual 360° position and flow path monitoring for actuated valves, gear operators, dampers and three-way control assemblies, displaying flow path while monitoring valve position. Manufactured from high impact strength, corrosion and UV resistant clear co-polyester, the Beacon now offers instant visual recognition of the valve's position from all vantage points up to 150 feet (50 meters), contributing to a safer work environment for plant personnel. Offering positive mechanical monitoring of multiport control valves, it eliminates the guesswork and reduces costs at system start-up. With a tensile strength of 7,600, UV resistance and heat deflection temperature of 151°F, the Beacon is capable of operating in temperatures ranging from -40 °F to 180°F and is unaffected by a broad range of chemical reagents.

