



Redundant valve manifold helps chemical plant meet SIL standards

Requirement

A chemical manufacturer needed a reliable air control valve unit for their safety instrumented system (SIS) to monitor and deliver pneumatic directional control to process valves. They also required a simple component that could be installed in close proximity to the process valve it controls and a system with safe access should repairs be needed. Existing panel designs were complicated and, due to their size, often required remote installation, creating confusion for plant operators and increasing the risk of error. In summary, the customer required a control unit that was robust, simple to read and easy to service.

Solution

Norgren (now IMI Precision Engineering) was already supplying robust valves that meet ANSI 84 and IEC 61 508 safety integrity level (SIL) standards. To meet this specific requirement, engineers designed a simplified valve manifold with two SIL valves in redundant mode and an SIL-rated bypass valve with a lockout feature. This IMI Norgren redundant valve manifold has four visual indicators that make it easy for the operator to see that the unit is working properly or, if not, where the problem lies. Should a malfunction be detected, the operator can fix the problem without impacting the system: the bypass valve enables safe servicing while the process continues.

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