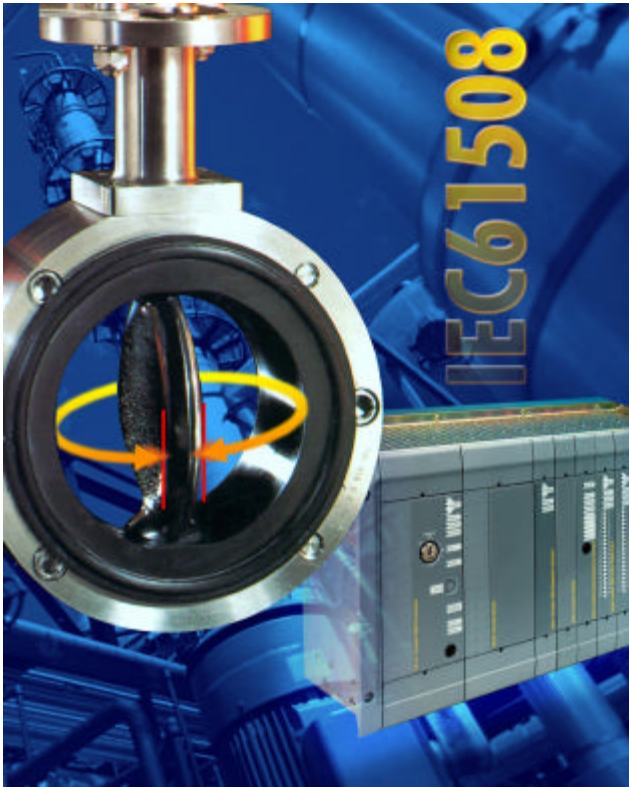


Product news

Shut-down valve test package dramatically increases process safety at minimal cost

ICS Triplex has announced a package of hardware and software additions for the **Trusted™** TMR emergency shut down (ESD) system that increases the system Safety Integrity Level (SIL) at almost no additional cost by periodically testing the valve and actuator sub-system - WITHOUT closing the valve and so shutting down the process.

IEC 61508 now makes it clear that for a Protection System to claim a SIL the shut-down valve has to be included in the overall assessment. Unfortunately, the valves and their actuators are mechanical devices that can stick, corrode and be blocked by foreign bodies, they are in



fact the biggest single cause of fail dangerous situations. The simplest approach to testing the valve is to operate it periodically, however, economic considerations make actually operating a shut down valve to test it, and therefore stopping the process, highly undesirable. To be effective any testing on the valve must be regular. ICS Triplex solution checks the valve operation by initiating a partial shut down guaranteed not to be more than a predetermined movement. By checking for valve movement and restoring the output to normal before the valve has moved more than a few percent of its travel, it achieves the test objectives without a process interruption.

This partial travel test is accurately controlled at the real valve speed to check for any hidden failure of the solenoid, actuator or valve body itself. To do this the system must provide very accurate control of the output and monitor movement times to the millisecond, something that ICS Trusted, with its intelligent I/O modules, is uniquely able to deliver.

Apart from an additional software module, the ICS Triplex **Trusted™** valve test solution consists of a single flexible hardware I/O card that combines the necessary mix of digital input/output channels on one small card. Testing by the high integrity Trusted system can give a fault coverage of more than 85% for the final element without compromising system integrity or adding to system complexity.