

## **NEW DEVICE ELIMINATES DOWNTIME ON PROCESS PLANT**

The Stroke-Test from Smith Flow Control is a novel device for testing critical valves without shutting down the process flow. This means the revenue stream is not interrupted, while also ensuring plant operators comply with industry safety standards.

To maximise revenue, operators are under pressure to keep plant running 24 hours a day, seven days a week, without interruption. To do this safely, it is necessary to periodically test all automated emergency shutdown and other critical valves. Testing the valves normally requires them to be shut down, stopping the process flow and also stopping the revenue stream. The Stroke-Test eliminates this problem by allowing plant operators to do both.

The system operates by 'valve partial stroke testing', which allows a safety system to close a valve only partially. So, when a Stroke-Test is fitted to a valve, it limits the movement of the actuator to within pre-set travel limits, for example 20 degrees. This means that all the valve control elements, such as solenoids, positioners and relays are tested, without the valve having to fully close.

Since the valve is only partially closed during the test, the flow coefficient is not significantly affected and process flow continues. If the valve is inoperable due to a mechanical failure, misalignment, or some other control anomaly, it will be detected during the partial stroke test.

The main benefit of the Stroke-Test is its simplicity: because it is wholly mechanical, it does not need to be integrated into the control loop, as would be necessary with an electrical system. Being mechanical, it is also much more

economical to install and operate than an electrical or controls-driven system. Finally, the Stroke-Test is built for the most demanding environments: it is vibration-resistant, corrosion protected and independently certified to IP67 to prevent water ingress. Stainless steel trim is used for all keys, shafts and sockets, and it is permanently lubricated, sealed and requires no routine maintenance.

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**Reader enquiries:**

Smith Flow Control Ltd  
6 Waterside Business Park  
Eastways Industrial Estate  
Witham, Essex CM8 3YQ  
United Kingdom  
Tel: +44 (0) 1376 517901, Fax: +44 (0) 1376 518720  
E-mail: [sales@smithflowcontrol.com](mailto:sales@smithflowcontrol.com)  
Website: [www.smithflowcontrol.com](http://www.smithflowcontrol.com)

**Editorial contact and  
colour separation charges:**

Damian Corbet  
Halma Public Relations  
The Castell Building, 217 Kingsbury Road  
London NW9 9HP  
United Kingdom  
Tel: +44 (0) 20 8511 1821, Fax: +44 (0) 20 8205 0055  
E-mail: [dcorbet@halmapr.com](mailto:dcorbet@halmapr.com)

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