

IntegrationFacts

Partial stroke testing during operation

Valve manufacturer



Overview

Characteristics

- Automatic partial stroke test
- Automatic pneumatics test
- Online status information
- Online diagnosis via FDT/DTM or EDDL
- Predictive maintenance

HIMA safety systems

- HIMax
- HIQuad
- HIMatrix
- Planar4, Planar F

Valve system

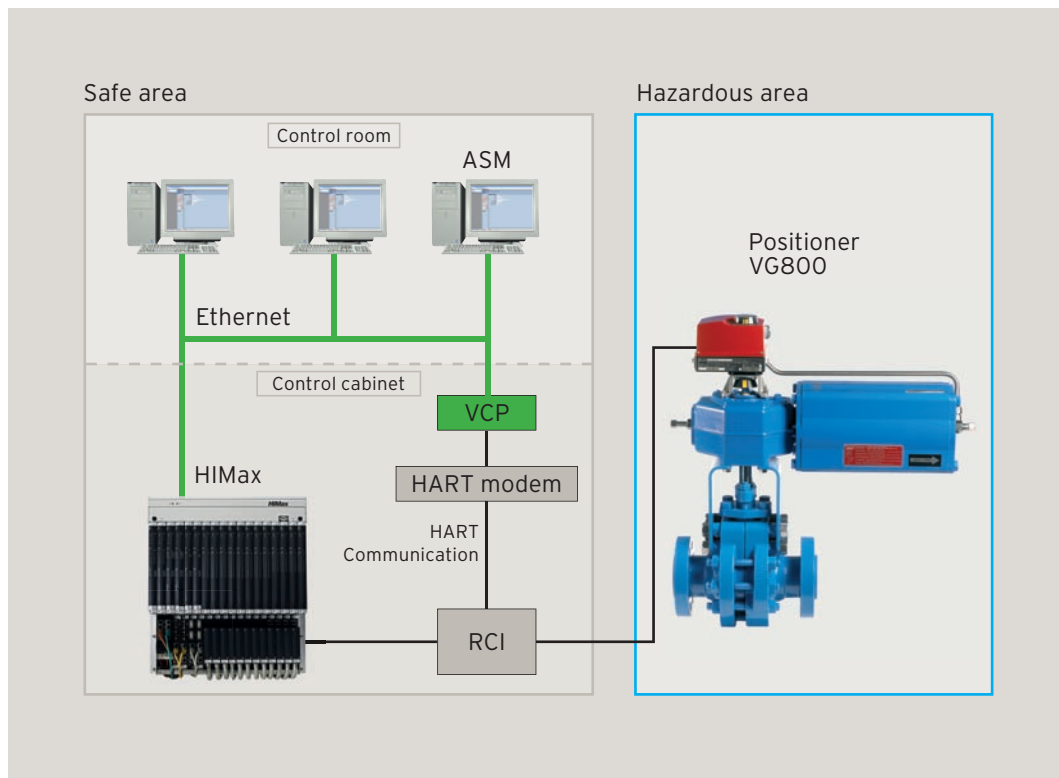
- Neles ValvGuard™
- Certified based on IEC 61508
- Installation possible on any safety armature, independent of the manufacturer, valve and drive type

Control

Two-wire 24 VDC

Communication

HART



Neles ValvGuard™ and HIMA safety systems

Reduce maintenance costs with smart diagnostics

The Neles ValvGuard system (consisting of RCI unit and VG800 positioner) from Metso Automation is used with emergency shutdown and venting valves (ESD/ESV) as an automatic testing and monitoring system.

Through the interaction of the HIMax safety system, Neles ValvGuard can perform automatic partial stroke and pneumatics tests. Each test is monitored using a range of threshold values. The tests provide diagnostic data (such as load factor and break-away pressure), which is stored in Neles ValvGuard and can be retrieved at any time.

During a partial stroke test, the ESD or ESV valve is moved slightly from its corresponding final position so that the medium flow is not affected. The control room receives unambiguous information (online status) about the valve state (OK, Test, Alarm) from the HIMA safety controller. Unnecessary and costly manual tests are thereby avoided and the proof test interval can be prolonged without compromising the safety standards of the plant. Suitable EDDL files and device DTMs allow integration of the ValvGuard system via RS485 and HART into all common asset management systems.



SAFETY
NONSTOP

Details

The RCI (Remote Communication Interface) unit in the Neles ValvGuard system serves as the interface to the safety system. A suitable binary output in the safety controller is used to supply the RCI and open or close the magnet valve for the safety function.

The partial stroke tests are automatically performed in a predefined time interval and information about running tests, valve status and position are reliably reported back to the HIMA system via the RCI and binary inputs. This information can be used by the safety system to react in accordance with the HAZOP safety considerations. Irrespective of the safety function, the Neles ValvGuard system also uses a DTM or EDDL file in HART communication to provide extensive diagnostic information. This information fulfils modern asset management requirements up to condition monitoring.

HIMA safety systems use open standards to allow simple integration of any number of field devices and other units commonly used by customers - while maintaining all functionalities and all valve/PES combination options.

Protocol

- HART
- TCP/IP
- EDDL or FDT/DTM

Functions

- Automatic partial stroke test for valve diagnosis
- Automatic pneumatics test

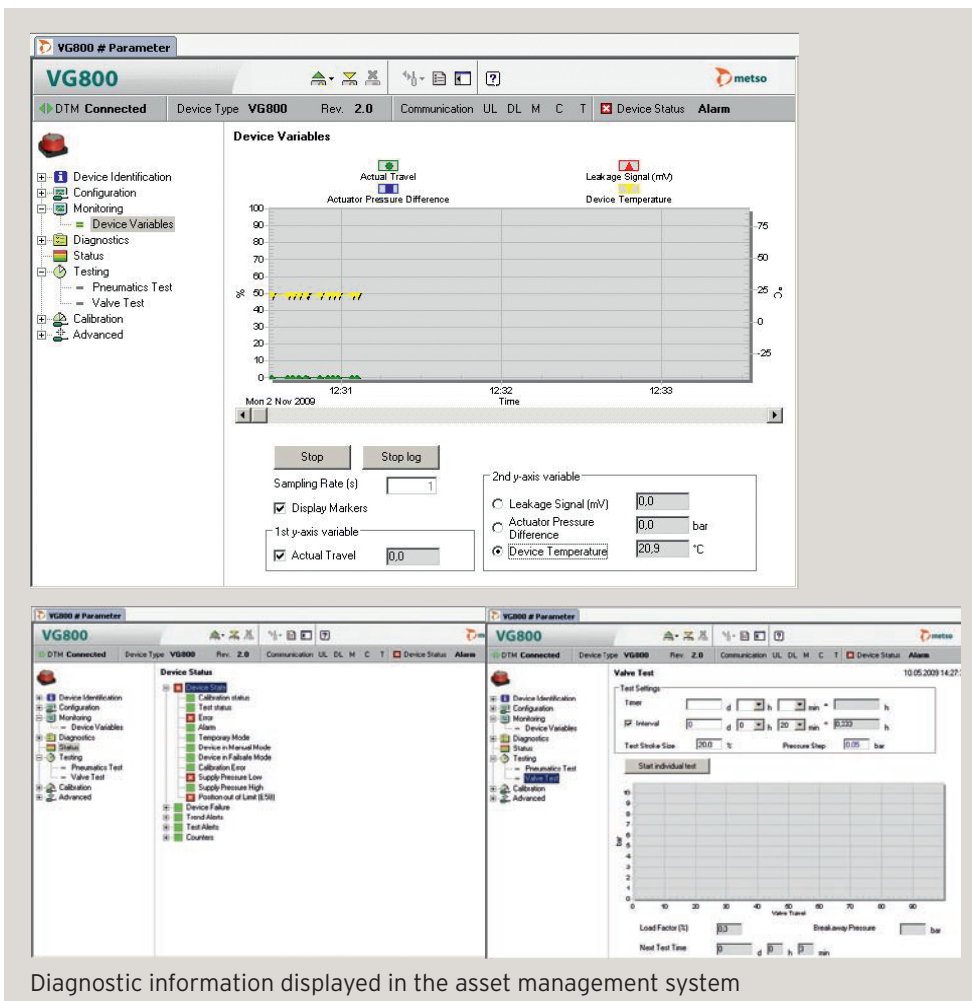
Contact

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General information

- www.hima.com
- www.metso.com



Diagnostic information displayed in the asset management system

