

HM_013

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To whom it may concern

Functional safety – Safety Integrity Level – SIL

Procedural equipment in the industry must be work safe, because it has a high danger potential for human and environment. In the standards DIN EN 61508 and DIN EN 61511 are the requirements defined for functional safety of electric, electronic systems and safety-related systems. These standards describe four safety levels, the Safety Integrity Levels 1 - 4.

These SIL steps looks to the quality of the complete system and not on a single component.

- **Manually operated valves** could not used in this kind of systems and are not suitable according these standards.
- **Safety valves** are not a part of standard work processes and not to test for functional safety according SIL. It do not succumb to control related safety by standard processes, it is the last mechanical safety part.
- **Final controlling device** as mechanical equipment (valves, actuator, positioner) are not directly classifiable according SIL.

The relevant european guidelines for valves are the 97/23/EC - Pressure Equipment Directive and / or the 99/36/EC - Council Directive on transportable pressure equipment.

Additional to this directives are the HEROSE valves according the standards DIN EN 1626 „Cryo Vessels – Valves for cryogenic use“ tested with minimum 2000 make-and-brake cycles.

Safety valves are according EN ISO 4126-1 and AD-2000 A2 type approval tested. That connoted, the safe function and flow capacity of the safety valves are controlled continuous by the notified body (TÜV Nord).

Result:

A classification of the HEROSE valves according SIL is not reasonable.

For more informationen show at the VDMA SIL – introduction.

<http://www.vdma.org>



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