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| <b>Inhouse information</b>   | No. 002    |
| <b>Application of DIN EN ISO 10497 fire safe type testing for HEROSE-Safety valves</b> | Bl 1 von 1 |

**1. Scope of application DIN EN ISO 10497:**

The standard DIN EN ISO 10497 determines the requirements of type testing (type examination) and the appropriate process on pressure strength of valves at fire safe testing.

In the scope of application (section 1) safety valves are not explicit excluded.

**2. Short description of the test:**

As mentioned in the test description in section 5.2 the valves will be filled up with water in closed position and then they will be pressurized. For the period of 30 min the valve shall completely encircled by flames. In the area around the valve the temperature has to be in the range of 750 °C to 1.000 °C (1382 °F to 1832 °F).

The maximum leakage rates mentioned in sec. 6, tab. 1 shall not be exceeded during and after testing.

**3. Application to HEROSE-Safety valves:**

- Basically a valve with a body material made from brass cannot be approved because the body of the valve will smelt due to the high temperatures during the tests (Smelting temperature Rg5: approx. 950°C / 1742 ° F).
- Due to the high temperatures the spring inside the valve will lose the strength. As a result the set pressure of the valve goes down and it is not impossible that the safety valve will open completely during the test.

**4. Conclusion:**

The standard DIN EN ISO 10497 relates only to closing valves (e.g. globe valves, ball valves, butterfly valves, etc.).

The application for safety valves must be excluded due to the fact that it is not possible to carry out sensible practicable tests for safety valves.

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