



PreVenTest

Online test system for Safety Valves

Pressure safety valves are installed on process equipment to release excess pressure due to upset process operations, external fires and other hazards. Or simply said; the safety valve serves to protect life and property. Failure of pressure safety valves to function properly when needed could result in the over pressure of vessels, exchangers, boilers, or other equipment they where installed to protect. It is essential to maintain your pressure safety valves and relief valves in good condition.

Periodically testing is one of the most important elements to proof that the safety valves will provide the so important protection.

ON-LINE TESTING

Obviously, the most desirable type of test is one that subjects the pressure relief valve to the full operating conditions that it is to endure in practice. The PreVenTest system enables you to test your spring operated safety valves on site without interrupting the process operation. With this so called 'hot testing' the safety valve stays on-line and no dismantling of the valve or plant shut-down is required.

HOW DOES IT WORK..?

The PreVenTest system is a robust, but ingenious build test system, existing of a universal test bracket and intelligent hard- & software. The light weight 'airplane' Aluminium test bracket is easily adopted to the valve size and is quickly positioned on top of the bonnet. After you have entered or selected the valve diameter and process pressure, the program automatically selects and

recommends the correct and most accurate configuration of the bracket and sensors. Prior to the test the valve data can be entered new or taken from the valve management database. The individual valve records are efficiently organized by customer, plant or unit and are quickly and intuitively located by the valve tag number, manufacturer serial number or by a user-defined number. The valve management system enables you to enter details, comments and even include a (digital) picture of each valve.





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After positioning the bracket on the gas, liquid or steam safety valve, the test bracket is safely controlled from a distance up to 50 meters. The Ventil PreVenTest system proportionally generates force and automatically raises the spindle to the 'cracking' point (lift from the nozzle). The moment that the disc commences to lift, is automatically detected and system release the force to let the disc to reseat again.



During the test a combination of accurate, calibrated sensors measure the force, lift, acoustics and (if possible) the process pressure.

The easy operated Ventil PreVenTest program directly shows the found test data in a clear combination of graphics and values. The information enables the operator to accurately identify the settings of the tested safety valve.



DATA REGISTRATION

From the information recorded during testing the following information can be obtained;

- Valve set pressure
- Spring adjustment
- Displacement of the valve
- Re-seat pressure*
- The effect of the nozzle ring*
- The effect of the guide ring*

* Indication only

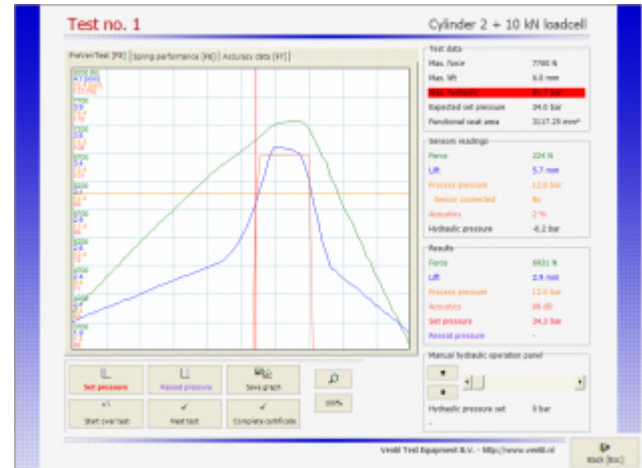


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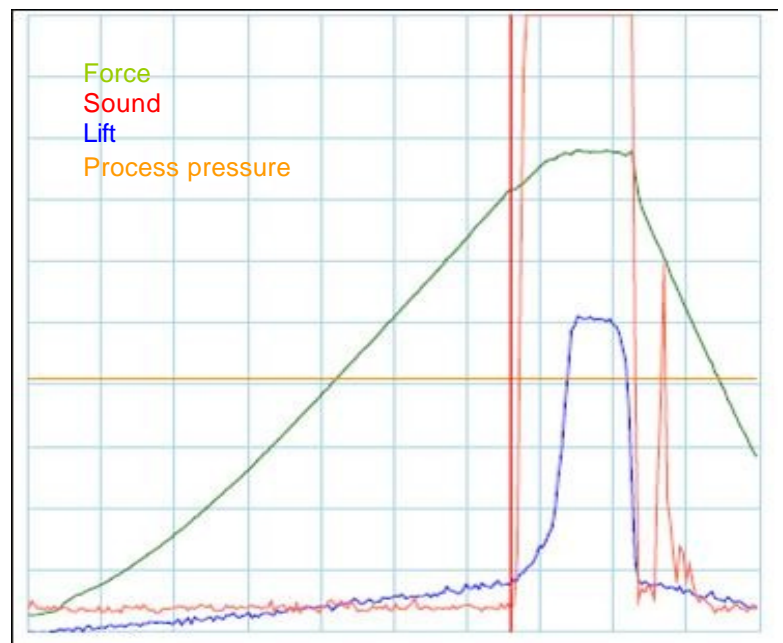
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GRAPH ANALYSES

After the valve disc has re-seated, the PreVenTest system automatically stops the test and prompts the test results in clear figures and graphics. The easy operated program enables you to zoom in to graphs and carefully analyse the found values and determine the critical points. After the test the found test results are automatically stored in the database and are available for future reference.



The PreVenTest program enables the operator to execute a series of 3 tests to ensure the consequent and reliable performance of the valve and accuracy of the test results. Finally the results of each individual test and an average of the 3 are shown. The tolerance, based on the min. and max. dimensions of the seat and disc, is given with the results. Finally a full size test certificate can be printed to provide you and your customer with the important proof and problem solving information. The test certificate can be previewed and printed in the Windows structure.



The 'report generator' enables you to design and prepare the design and lay-out of the certificate.

ATEX EXPLOSION PROOF

The Ventil PreVenTest system for testing safety valves is classified as: II 2G IIC c T4. Under this classification, the bracket can be used in Zone 1 and the control box with laptop, can be used in Zone 2. The PreVenTest system was tested and certified by Lloyds according to the stipulations of the ATEX Machine Directive (98/37/EC), the EMC Directive (89/336/EC its most recently amended form).



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EMERGENCY SHUT-DOWN

In case a dangerous or unexpected situation occurs, the operator can activate the emergency shut down. The function of the hydraulic operation system converts the force and closes the valve.

LIGHT WEIGHT & PORTABLE

The Ventil PVT is supplied in 2 robust carrying cases;

Carrying case 1: Operating system and electronics.

Carrying case 2: The bracket, tools, adapters and accessories.

PACKAGE SUPPLY

The Ventil PreVenTest system is supplied ready for use, including all required hard- & software and the special industrial, Windows XP laptop computer.

CONNECTIONS

The Ventil PVT requires a 100V - 240V 50-60 Hz. electrical connection. Battery pack available on request.

ADVANTAGES

- ✓ Testing all common, spring operated safety valves online, no dismantling of the safety valve required.
- ✓ Reducing, or even Preventing plant shut-down.
- ✓ Compact, light weight and portable system.
- ✓ Prevent uncontrolled lift by lift restrictor.
- ✓ Emergency shut-down of the Safety valve.
- ✓ Latest soft- & hardware technology, easily connected to your Windows XP network.
- ✓ No Nonsense tool' very easy to install and operate.



For more information, contact:

VENTIL TEST EQUIPMENT

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