

REFERENCE

ASME PTC 19.3TW : 2010

CERTIFICATE

ISO 9001 : 2008

ISO 14001 : 2004

BS OHSAS 18001 : 2007

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INFORMATION

The thermowell described in the operating instructions has been manufactured using state-of-the-art technology. All components are subject to stringent quality and environmental criteria and safe-guarding our skilled personnel during production. Our integrated management systems are certified to ISO 9001:2008, ISO 14001:2004 & BS OHSAS 18001:2007.

These operating instructions contain important information on handling the thermowell. Working safely requires that all safety instructions and work instructions are observed.

Observe the relevant local accident prevention regulations and general safety regulations for the thermowell's range of use.

The operating instructions are part of the instruments and must be kept in the immediate vicinity of the thermowell and readily accessible to skilled personnel at any time.

Skilled personal must have carefully read and understood the operating instruction manual prior to beginning of the mounting.

Manufacturer's liability is void in the case of any damage caused by using the product contrary to its intended use, non-compliance with these operating instructions, assignment of insufficient qualified skilled personnel or unauthorized modifications to the thermowell.

This instruction manual is subject to change without notice and the manufacturer reserves all rights.



WARNING! / CAUTION!

.....indicates potentially dangerous situations.



INFORMATION

.....Indicates recommendations and information for efficient and trouble-free operation.

SAFETY



WARNING!

Before installation, commissioning and operation ensure that the appropriate thermowell has been selected in terms of measuring range, design and specific measuring conditions.

Before installation, commissioning and operation ensure that the thermowell material used is chemically resistant / neutral to the medium being measured and that it withstands the mechanical stresses from the process.

Non-observance can result in serious injury and/or damage to equipment.

For hazardous media such as oxygen, acetylene, flammable or toxic gases or liquids, and refrigeration plants, compressors, etc., in addition to all standard regulations, the appropriate existing codes or regulations must also be followed.

Make sure that the thermowell is sufficiently earthed.

3e

Residual media on dismantled thermowells can result in a risk to persons, the environment and the equipment. Take sufficient precautionary measures.

3f



INTENDED USE

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CAUTION!

Thermowells are used to protect temperature sensors from the process conditions. Furthermore, thermowells enable the removal of the temperature sensor without having to shut down the process; and they guard against damage to either the environment or to personnel, which might be caused by escaping process media.

4a

The thermowell has been designed and built solely for the intended use described here, and may only be used accordingly.

4b

The technical specifications contained in these operating instructions must be observed. Should the thermowell be improperly handled or operated outside of its technical specifications, it has to be inspected immediately.

4c

The manufacturer shall not be liable for claims of any type based on operation contrary to the intended use.

4d

COMMISSIONING & OPERATION

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MOUNTING

During mounting (especially with ceramic thermowells) the thermowells should not be subjected to thermal shocks or mechanical impacts.

Insert the thermowell into the process adapter without forcing or damaging it. The thermowell must not be bent or altered in order to mount it.

The exception is the retrospective machining of the support ring in order that the thermowell is supported free of play within the nozzle ("interference fit"). The retrospective adjustment of a support ring with a loose fit is not permissible. In general, thermowells with a support ring are not recommended within ASME PTC 19.3 TW 2010 and are outside of the scope of the standard.



It is recommended to mount the temperature measuring instrument into the thermowell using a suitable sealing material to avoid, for example, humidity ingress.



In general, the tip of the thermowell should be placed in the middle third of the pipe, though the position may differ in special cases. It must be ensured that the measuring element (Pt100, thermocouple, bimetal, etc.) is completely exposed to the medium and is not shielded by the flange stubs. If, as a result of a small pipe diameter, this cannot be ensured, a pipe expansion can be inserted around the measuring point.

Threaded thermowells: When using parallel threads, a suitable seal should be used when mounting. Tapered threads can be sealed by suitable seals or an additional welded seam. The correct tightening torques and suitable tools (e.g. spanner) should be used.

Weld-in thermowells: Weld-in thermowells can be mounted into the process directly (pipe or vessel wall) or by using a welding socket. Make sure that the weld seam is clean and that suitable equipment is used. If necessary, heat-treat the weld seams.

Flanged thermowells: The flange dimensions of the thermowell must match those of the mating flange on the process side. The seals used must be suitable for the process and the flange geometries (cross-check the project specification). The correct tightening torques and suitable tools (e.g. spanner) should be used for installation. For thermowells with a collar, make sure that it matches the inner diameter of the coupling and is supported by it. In the case of an interference collar, they should be adapted to the inner diameter of the coupling.



The insertion length and the diameter of the thermowell are dependent on the process conditions, especially on the flow rate of the measured medium.

MAINTENANCE

WARNING!

Dismounting

Only disconnect thermowells once the system has been depressurized!

Risk of burns!

Let the instrument cool down sufficiently before dismounting it!

When dismounting it, there is a risk that dangerously hot pressure media may escape.

Residual media on dismantled thermowells can result in a risk to persons, the environment and equipment. Take sufficient precautionary measures.

Maintenance

In general, thermowells are maintenance-free.

We recommend a visual check of the thermowell for leaks and damages at regular intervals.

Make sure that the seal is in perfect condition!