THERMOWELL
FOR HEATING THERMOMETER

THERMOWELL OF STAMPED OR WELDED TUBE FOR HEATING THERMOMETER

The thermowells are usually used to protect the thermometer from the effects of pressure and to allow the change, replacement or revision of the thermometers without having to empty / depressurize the containers or pipes.
They are essential in heating thermometers because the bulb of the thermometer is not watertight.
The thermal transfer between the thermowell and the thermometer will be ensured by contact, mineral oil, aluminium powder or any other substance with the properties suitable for the transmission of the temperature. The air must be eliminated because it is heat insulator.

Constructive characteristics:

The material usually used in its construction is brass or stainless steel AISI 316.
The length of the immersion is built according to the length of the bulb of the thermometer, fixed to it by a screw threaded in the hexagonal of the thermowell.

Recommendations for use:

The working pressure of the thermowell decreases with temperature and depends on the dangerousness and chemical aggressiveness of the process.
In general we can use the thermowells with the following recommendation:
Brass thermowell: 160ºC, PN 25 bar
Stainless steel thermowell AISI316: 400ºC, PN 40
Bear in mind that the above details are for minimum thickness of brass thermowell and 1 mm tube.

Thermowell dimensions:

The hexagonal containing the screw in order to fix the thermometer has a height of 6.5 mm. The threaded area is 14 mm for ½ connections. You need to add the length of the smooth area of the thermowell. Usually the threaded area + the smooth area has lengths of 50 mm or 100 mm. Other lengths are optional, always according to the length of the thermometer bulb

Welding:

All the weldings used in the fabrication of the stainless steel thermowell are TIG weldings

Thermowell diameters:

They are manufactured for thermometer of bulb 8 (model 620). The inner diameter of the 620 thermowell in brass is 8.4 mm and the outer 11 mm and 10 mm for stainless steel.
They are also manufactured for the 621 model (vertical) but in this case only in stainless steel. The internal diameter is 9.5 mm and the outer diameter is 12 mm.

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