



Temperature measurement

ScrutonWell[®] design for thermowells



Smart in sensing

The ScrutonWell® offers you a great solution

Standard thermowell stem designs in approximately 30 % of applications will not pass calculations according to ASME PTC 19.3 TW-2016.

Standard thermowell

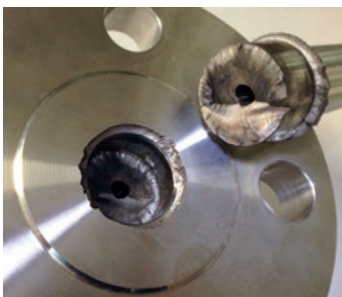


In certain flow conditions, a Kármán vortex street can form behind the thermowell stem when it is subjected to a flow within a pipeline. This vortex street consists of two rows of vortices with opposite directions of rotation, which detach themselves to the left and the right of the thermowell out of phase, and this can instigate the thermowell to vibrate.

Thermowell in ScrutonWell® design



The helical strakes arranged around the thermowell stem of the ScrutonWell® design, break up the flow and thus impede the formation of a clearly defined Kármán vortex street. Through the reduced amplitudes of the diffused vortices, vibrational excitation of the thermowell is avoided.



Fatigue failure by dynamic stress



Radiography of a WIKA ScrutonWell® to assure 100 % quality

Advantages of the ScrutonWell®

High security
for your application

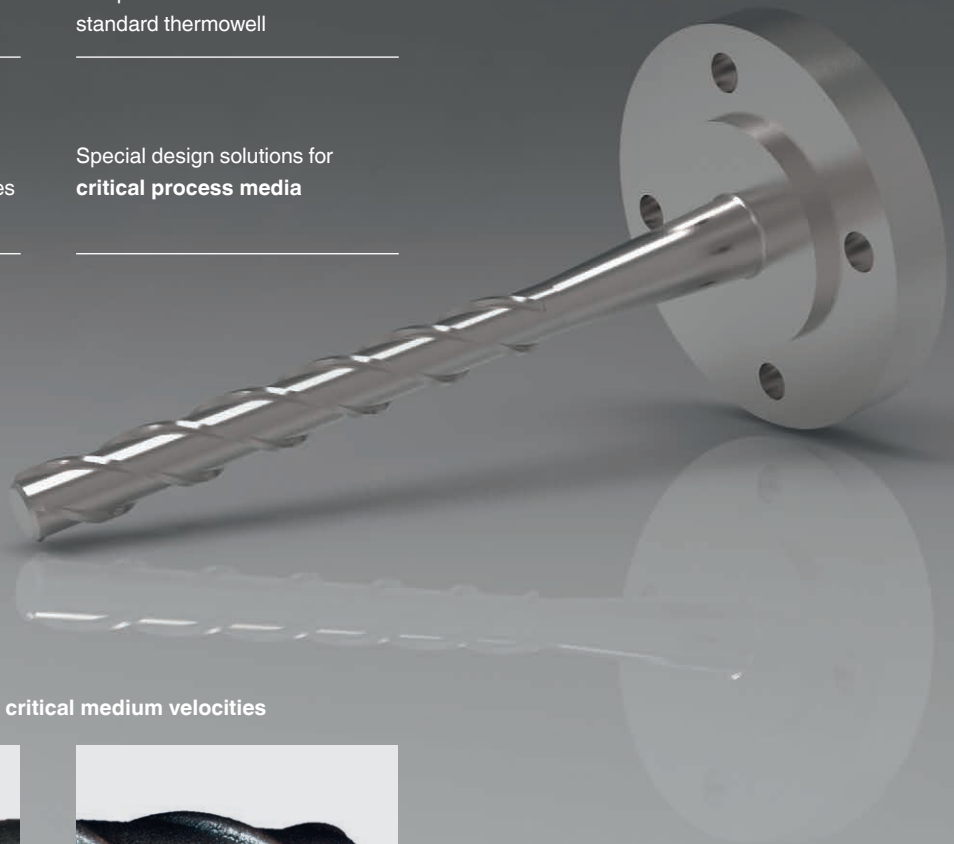
Increased profitability
by higher flow rates

Cost saving aspects
by standard installation

Easy maintenance
comparable to a
standard thermowell

Verified design
by flow testing at several institutes

Special design solutions for
critical process media



For abrasive process loads in critical medium velocities



For high corrosive process loads in critical flow conditions



ScrutonWell®

Flow test

The effectiveness of the ScrutonWell® design was verified by flow testing at NEL (Glasgow, UK) and the Institute for Mechanics and Fluidynamics at Technical University of Freiberg (Germany).

These tests demonstrated the superior performance of the ScrutonWell® in comparison to a standard thermowell in critical flow conditions.

The damping ratio of the ScrutonWell® by more than 90 % was verified in various test conditions.

