

**TECHNICAL INQUIRY
PTC 19.3**

SUBJECT: Application of PTC 19.3 TW-2010 to thermowells with coatings and thermowells with very large flanges

Question 1: Can the PTC 19.3 TW-2010 be applied to thermowells which are either fully or partly coated with stellite?

Answer 1: No. As noted in PTC 19.3 TW-2010 Section 1-2 SCOPE, “thermowells fabricated by welding, including flame spray or weld overlays, at any place along the length of the shank or at the tip are outside the scope of this Standard.”

The application of the overlay to a barstock thermowell may affect any number of critical attributes such as natural frequency, damping, external geometry, material properties, or, the surface finish. If the changes to these attributes are not accounted for in the calculations, the result could be that an inappropriately designed thermowell is installed

Question 2: Can the PTC 19.3 TW-2010 be applied to thermowells constructed using very large flanges (e.g. 6 ") for pipe connection?

Answer 2: Yes. All B16.5 flanges and thermowells constructed per B40-200 are covered by PTC 19.3 TW-2010.

Question 3: Can the PTC 19.3 TW-2010 be applied to thermowells mounted at special locations such as “Tees”?

Answer 3: Tees that effectively create an elbow installation for the thermowell should be assessed per section 6-10.7 with special attention paid to the direction of the flow. Tees that effectively allow insertion of the thermowell in a straight run should be assessed as any other thermowell installation with consideration provided to the shielded length created by use of the tee.

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