Using a precision thermometer for single point process temperature verification

It's not always possible or practical to remove instruments from a process for calibration. In situ verification at a single point may be the only way to know whether an instrument is performing as expected. A single point verification is most effective over a narrow temperature range and when combined with other trends and information related to the process and equipment. It also requires the process not to be in a dynamic state of change.

In a single point process temperature verification, a temperature standard such a reference PRT connected to a readout such as a 1523A is placed in thermal equilibrium with the sensor of the instrument to be verified without removing it from the process. Usually this is accomplished with a test well that is installed in a location adjacent to the sensor to be tested.

The reading from the temperature standard is compared to the reading on the panel meter, controller, or transmitter to determine the error and prove the tolerance condition of the loop.

Suggested test tools

1523-P1
Reference
Thermometer

See pg 20

1524-P1
Reference
Thermometer

See pg 20

1551A Ex "Stik"
Thermometer
Readout

See pg 20

1552A Ex "Stik"
Thermometer
Readout

See pg 20