Temperature switch and controller testing at the bench

A temperature switch is a device that protects a thermal system by sensing temperature and closing or opening a switch to shut down a process or equipment if the temperature is outside the safe range.

Temperature switches are often calibrated or tested for safety reasons to determine how accurate and repeatable the device is. The temperature at which a switch activates is called the set point and is an important value that needs to be verified during testing.

Another critical safety related value is called the deadband. Below the low end of the deadband, the heating system turns on. Above the high end of the deadband, the heating system turns off.

Switch tests may be operated manually or automatically. If the electronics are not built into the dry-well for a switch test, then a DMM will be needed to determine the open/close condition. Metrology Wells and most Field Metrology Wells have built-in routines to automate switch testing.

Suggested test tools

9142, 9143, 9144 Field Metrology Wells

See pg 17

6102 Micro-Bath Thermometer Calibrator

See pg 19

7103 Micro-Bath Thermometer Calibrator

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