"Softer" values increasingly important to temperature sensors

"Softer" values are playing more and more of a key role in temperature sensors.

"It's no longer unusual for us to invest more work time in testing and documenting a sensor than in actually making it," explains Margareta Forsberg, sales engineer with Pentronic.

This trend has been driven by increasing demands for proven measurement performance and other properties that must be documented in various ways.

A lot of expertise and testing is already incorporated into every Pentronic sensor. For example, most sensors undergo a traceable final inspection and are equipped with the resulting certificate. These measures increase value for the customer but also require resources.

Jonny Heimler displays various certificates.

CUSTOMER DEMANDS

As well as these standardised procedures, Pentronic also provides a whole range of additional measures according to the customer's wishes. Margareta Forsberg gives some examples:

"They could be material certificates, pressure tests, license welding, drop tests, documented electropolishing, sheath integrity tests (testing welds and materials for leakage) and accredited calibration."

Some tests are customer specific while others are included in Pentronic's regular range of services. The latter includes the certification of sensors in accordance with requirements specified by classification societies, government agencies, industry associations, and similar bodies.

Jonny Heimler is in charge of the certification of temperature sensors. He displays a list of the certificates which Pentronic currently holds.

"Our sensor designs are approved in three areas: to meet hygienic standards, to comply with import regulations for certain countries, and for maritime shipping," he explains.

CLASSIFIED SENSORS

Within the field of maritime shipping alone, Pentronic maintains classifications with seven classification societies, which are a type of insurance company. In the field of hygiene, that is, food and pharmaceuticals, the company has sensors certified in accordance with 3A for the United States, EHEDG for Europe, and the Sanitary Certificate for Russia. Import regulations include Pattern Approval Russia, which is at a level above GOST.

Classifying or certifying a single sensor type can cost up to a five-figure sum in euros plus subsequent annual fees to maintain the certification. Other requirements that are becoming increasingly common are a certificate of the sensor's material composition in accordance with EN 10204-3.1b and a corresponding certificate for measurement readings.

More stringent requirements naturally also increase the cost of a sensor, but they also increase its value to the customer and reduce costs at the next stage of the chain. In some cases, testing and documentation are a requirement before a temperature sensor is permitted to be used at all.