Lonza AG

Automated inline self-calibration at Lonza

Full monitoring throughout bioprocess

Lonza

Lonza, a company founded in 1897 in the Swiss Alps, is one of the world's leading and most trusted suppliers to the pharmaceutical, biotechnology and specialty raw materials markets. New technologies are utilized to develop products that enable safer and healthier living.

"Our bioprocess plants require temperature sensors that are 100% reliable. With its automatic inline self-calibration function at 118°C, the TrustSens is a safe bet for us. The early detection of temperature deviations ensures early fault detection. Easy handling and straightforward commissioning mean we can save a good deal of time and money."

Christian Ebener, Automation Manager, Bioproduction, Lonza, Visp

Christian Ebener

Lonza AG, Visp

For Lonza, process reliability and product quality are paramount. Fully automated and traceable calibration during the process can reduce the risk of undetected measurement errors to a minimum.

Customer requirements Plant downtime and calibration times should be reduced to a minimum. To keep the risks in bioproduction as low as possible, an increase in calibration frequency is required. It should be possible to save time on installation, maintenance and monitoring and to perform these tasks safely and reliably. All specifications require a high level of product quality.

Solution The self-calibrating iTHERM TrustSens temperature sensor was used for test purposes over a period of four months in a buffer tank located in a pilot plant fermenter in the bioprocess plant. The advantage of this sensor is that it performs an automated inline self-calibration at 118°C during each SIP process (Steam in Place) and reports any deviations to the distributed control system using the HART protocol. The average deviation of 0.03°C is also 10 times better than the maximum permitted error of a standard Pt100 class AA sensor.

Benefits

- Early detection of temperature drifts
- Straightforward visual monitoring via LED
- Short calibration intervals reduce the risk of incorrect temperature measurements
- Maximum process safety and plant availability
- Accuracy of 0.03°C is 10 times better than that of a standard Pt100 class AA sensor
- Fully automated and traceable storage of last 350 calibrations

Endress+Hauser

People for Process Automation

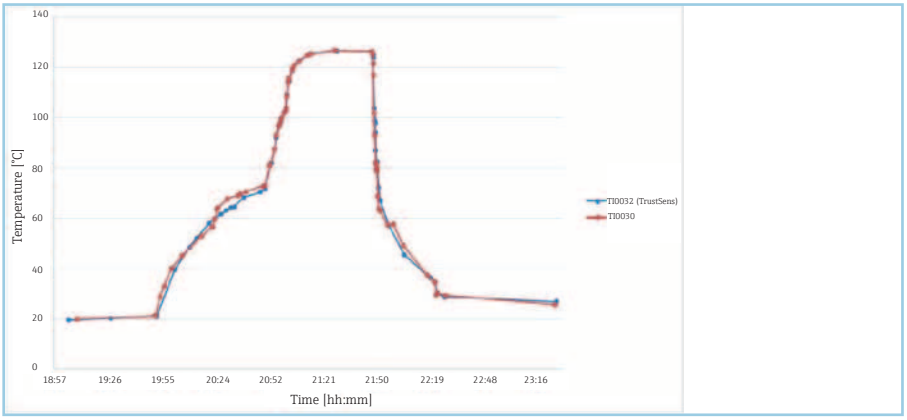
Scope of delivery

Buffer tank:
- 1 TrustSens TM371-AA1M1C4F7G0A1AJFKA
- Ingold process connection, 25 x 30 mm
- Thermowell 9 mm, reduced, 5.3 x 20 mm
- Immersion length: 90 mm
- Calibration point: 118 °C

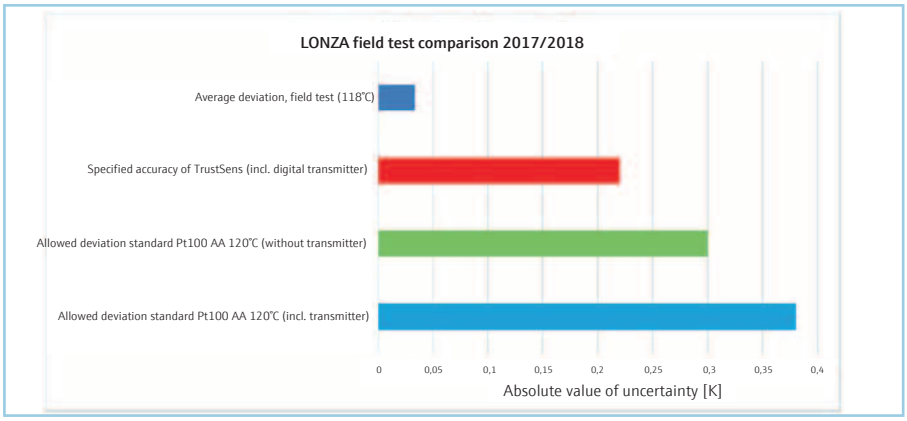
Pilot plant fermenter:
- 1 TrustSens TM371-AA1M1C4F7G0A1AJFKA
- Ingold process connection, 25 x 30 mm
- Thermowell 9 mm, reduced, 5.3 x 20 mm
- Immersion length: 90 mm
- Calibration point: 118 °C

Buffer tank

Pilot plant fermenter



Temperature graph for SIP (Steaming in Place)



Accuracy comparison of TrustSens and Pt100 Class AA

www.addresses.endress.com

CS01577T/20/EN/01.19

Endress+Hauser

People for Process Automation