



Industrie Service

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Report

on the test of a negative / gauge pressure transmitter with digital readout on a PC.

Date: 2013-09-17

Our reference:
IS-TAF-MUC/scb

Report no. S 1191-00/13
Order no. 2014405

Test laboratory

TÜV SÜD Industrie Service GmbH
Abteilung Feuerungs- und Wärmetechnik
Calibration laboratory D-K-14153-01-00

Document:
S11910013.doc

Subject of test

Negative / gauge pressure transmitter with digital readout on a PC

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This document includes
3 pages and 3 enclosures

Customer

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Germany

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Scope

Determination of the measurement accuracy at
three different temperatures and of the one hour
and one day zero drift.

The test results refer exclusively
to the units under test.

Expert

Dipl.-Ing. (Univ.) Horst Schaubé

Period of test

July 2013

Basis of test

DAkks-DKD-R 6-1:2010



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1 Scope

The measurement accuracy for the pressure transmitter has to be determined at the following transmitter temperatures: Ambient temperature (23 °C), -30 °C and 50 °C.

The one hour and the one day zero drift have to be determined at atmospheric pressure and for a transmitter temperature of 23 °C.

2 Basis of test

DAkkS-DKD-R 6-1:2010, "Calibration of pressure measuring devices"

3 Measuring and test equipment

<i>Equipment ID</i>	<i>Equipment</i>	<i>Description</i>
Standard N1	Pressure reference standard	Dead weight tester
Standard N9	Pressure reference standard	Plunger for pressure
QS-33-02M 0020	Data acquisition system	Ahlborn Almemo 2290-8
QS-33-02 M1091	Temperature sensor	Thermocouple type K

4 List of enclosed documents (calibration certificates)

- No. 131279 Calibration certificate for the calibration at 23 °C
- No. 131280 Calibration certificate for the calibration at -30 °C
- No. 131281 Calibration certificate for the calibration at 50 °C

5 Performance of test

In order to determine the measurement accuracy of the transmitter it was put into a climate cabinet and was calibrated for each temperature over the whole measurement range from -30 mbar up to 30 mbar.

In order to determine the one hour and the one day zero drift the transmitter was stored at atmospheric pressure in the calibration laboratory at ambient temperature (23 °C) for two days and the measured values of the pressure have been recorded every hour during 5 hours on the first day and after 24 hours during five hours on the second day.

All measurements have been performed in a calibration laboratory which is accredited according to DIN EN 17025 by Deutsche Akkreditierungsstelle GmbH (DAkkS), registered number D-K-14153-01-00.



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6 Test results

The deviations from the forced pressures during the calibration are shown in the enclosed calibration certificates. The maximums of the absolute values of the deviations from the forced pressures are:

At a transmitter temperature of 23 °C: 0,133 mbar (at -30 mbar);
at a transmitter temperature of -30 °C: 0,277 mbar (at 30 mbar);
at a transmitter temperature of 50 °C: 0,235 mbar (at -30 mbar).

Measured drifts:

One hour zero drift: 0,000 mbar
One day zero drift: 0,036 mbar

Feuerungs- und Wärmetechnik

A handwritten signature in blue ink, appearing to read 'J. Steiglechner'.

Johannes Steiglechner
Leiter
Feuerungs- und Wärmetechnik

The Expert

A handwritten signature in blue ink, appearing to read 'H. Schaub'.

Horst Schaub