The American Association for Laboratory Accreditation

World Class Accreditation

Accredited Laboratory

A2LA has accredited

INDUSTRONICS SERVICE COMPANY

South Windsor, CT

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and any additional program requirements in the field of calibration. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 30th day of July 2009.

President & CEO
For the Accreditation Council
Certificate Number 1619.01
Valid to July 31, 2011

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005
& ANSI/NCSL Z540-1-1994

INDUSTRONICS SERVICE COMPANY
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CALIBRATION

Valid To: July 31, 2011 Certificate Number: 1619.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1]:

I. Chemical

Parameter/Equipment	Range	Best Uncertainty[2] (±)	Comments
pH[3]	(4, 7, 14) pH units	0.05 pH units	Buffers at 4, 7, and 10 pH
Oxygen Reduction Potential, Fixed Points[3]	200 mV 600 mV	10 mV 20 mV	ORP test solutions

II. Electrical – DC/Low Frequency

Parameter/Equipment	Range	Best Uncertainty[2] (±)	Comments
DC Voltage[3] –			
Generate	(0 to 11) V	5 mV	Fluke 701,702, 743
Measure	(0 to 11) V	7 mV	

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Parameter/Equipment	Range	Best Uncertainty[2] (±)	Comments
DC Current[3] –			
Generate	(0 to 22) mA	0.013 mA	Fluke 701,702, 743
Measure	(0 to 30) mA	0.018 mA	
Electrical Calibration of RTD Indicating Devices[3] –			
Pt 385, 100 Ω	-200 °C to 800 °C	0.8 °C	Fluke 701,702, 743
Pt 3926, 100 Ω	-200 °C to 630 °C	0.5 °C	
PtNi 672, 120 Ω	-80 °C to 260 °C	0.3 °C	
Electrical Calibration of Thermocouple Indicating Devices[3] –			
Type E	-250 °C to 1000 °C	1.5 °C	Fluke 701,702, 743
Type N	-200 °C to 1300 °C	1.2 °C	
Type J	-210 °C to 1200 °C	0.8 °C	
Type K	-200 °C to 1372 °C	1 °C	
Type T	-250 °C to 400 °C	1.9 °C	
Type B	600 °C to 1820 °C	1.5 °C	
Type R & S	0 °C to 1767 °C	1.7 °C	
Type C	0 °C to 2316 °C	2.2 °C	

III. Mechanical

Parameter/Equipment	Range	Best Uncertainty[2] (±)	Comments
Pressure[3] – Measure			Fluke 700 w/ module:
	(100 to 1500) psi	0.8 psi	700P09
	(15 to 100) psi	0.05 psi	700P06
	(1 to 15) psi	0.008 psi	700P04
	(0 to 1) psi	0.003 psi	700P02
Vacuum[3] – Measure	Atmosphere to 10^{-2} torr	2.7 % of reading	Inficon/Leybold
	(10^{-2} to 10^{-6}) torr	6.8 % of reading	

IV. Thermodynamic

Parameter/Equipment	Range	Best Uncertainty[2] (±)	Comments
Temperature – Measure & Measuring Equipment	(32 to 2200) °F	1.8 °F	Type S thermocouple measurement system
	(-130 to 787) °F	1.5 °F	Type T thermocouple measurement system and dry well furnace
	(788 to 2200) °F	1.8 °F	Type S thermocouple measurement system and dry well furnace
Dew point and Relative Humidity	(-100 to 32) °F	0.63 °F	General Eastern M4-RH hygrometer
	(33 to 60) °F	0.5 °F	

V. Time & Frequency

Parameter/Equipment	Range	Best Uncertainty[2] (±)	Comments
Time Elapsed[3]	1 min to 1 hr	0.2 s	Digital stopwatch

[1] This laboratory offers commercial and field calibration service.

[2] "Best Uncertainty" is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards of nearly ideal measuring equipment. Best uncertainties represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The best uncertainty of a specific calibration performed by the laboratory may be greater than the best uncertainty due to the behavior of the customer's device, to the environment and to influences from the circumstances of the specific calibration.

[3] Field calibration service is available for this calibration and this laboratory meets A2LA *R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations. Please note the uncertainties achievable on a customer's site can normally be expected to be larger than the Best Measurement Capabilities (BMC) that the accredited laboratory has been assigned as Best Uncertainty on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the calibration uncertainty being larger than the BMC.