



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc., has assessed the Laboratory of:

***Pyro Service Company
25812 John R Road
Madison Heights, MI 48071***

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2005

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated January 2009):

***Calibration of Time, Humidity, and Temperature Instrumentation including Chart Recorders, Thermocouples, Process Controllers, and Portable Calibrators/Indicators;
System Accuracy Tests and Temperature Uniformity Surveys
(As detailed in the supplement)***

Such testing and/or calibration services shall only be offered at or from the address given above. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

The validity of this certificate is mandated through ongoing surveillance.

Tracy Szerszen
President/Operations Manager

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

Initial Accreditation Date:
December 05, 2002

Accreditation No.:
59165

Issue Date:
May 08, 2011

Certificate No.:
L11-65

Expiration Date:
May 07, 2013

Page No.:
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Certificate of Accreditation: Supplement

Pyro Service Company
 25812 John R Road
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Accreditation is granted to this facility to perform the following calibrations:

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type K Measure	-200 °C to 1 372 °C	0.5 °C	Electrical Simulation of Thermocouple Output Fluke 741B
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type J Measure	-210 °C to -100 °C	0.5 °C	
	-100 °C to 800 °C	0.4 °C	
	800 °C to 1 200 °C	0.4 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type N Measure	-200 °C to -100 °C	0.7 °C	
	-100 °C to 900 °C	0.6 °C	
	900 °C to 1 300 °C	0.6 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type S Measure	-20 °C to 1 676 °C	1.5 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type R Measure	-20 °C to 1 767 °C	1.5 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type T Measure	-250 °C to 400 °C	0.9 °C	
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 385, 100 Ω Measure	-200 °C to 0 °C	0.2 °C	Electrical Simulation of RTD Output Fluke 741B
	0 °C to 400 °C	0.3 °C	
	400 °C to 800 °C	0.4 °C	
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 3926, 100 Ω Measure	-200 °C to 0 °C	0.2 °C	
	0 °C to 630 °C	0.3 °C	



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Temperature Calibration, Indication, and Control Equipment used with RTD Ni 672, 120 Ω Measure	-200 $^{\circ}\text{C}$ to 260 $^{\circ}\text{C}$	0.2 $^{\circ}\text{C}$	Electrical Simulation of RTD Output Fluke 741B
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 385, 200 Ω Measure	-200 $^{\circ}\text{C}$ to 0 $^{\circ}\text{C}$	0.2 $^{\circ}\text{C}$	
	0 $^{\circ}\text{C}$ to 400 $^{\circ}\text{C}$	0.3 $^{\circ}\text{C}$	
	400 $^{\circ}\text{C}$ to 630 $^{\circ}\text{C}$	0.4 $^{\circ}\text{C}$	
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 385, 500 Ω Measure	-200 $^{\circ}\text{C}$ to 0 $^{\circ}\text{C}$	0.2 $^{\circ}\text{C}$	
	0 $^{\circ}\text{C}$ to 400 $^{\circ}\text{C}$	0.3 $^{\circ}\text{C}$	
	400 $^{\circ}\text{C}$ to 630 $^{\circ}\text{C}$	0.4 $^{\circ}\text{C}$	
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 385, 1 000 Ω Measure	-200 $^{\circ}\text{C}$ to 0 $^{\circ}\text{C}$	0.2 $^{\circ}\text{C}$	
	0 $^{\circ}\text{C}$ to 400 $^{\circ}\text{C}$	0.3 $^{\circ}\text{C}$	
	400 $^{\circ}\text{C}$ to 630 $^{\circ}\text{C}$	0.4 $^{\circ}\text{C}$	
Temperature Calibration, Indication, and Control Equipment used with RTD Cu 427, 10 Ω Measure	-100 $^{\circ}\text{C}$ to 260 $^{\circ}\text{C}$	1.0 $^{\circ}\text{C}$	
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 3926 100 Ω Measure	-200 $^{\circ}\text{C}$ to -190 $^{\circ}\text{C}$	0.2 $^{\circ}\text{C}$	
	-190 $^{\circ}\text{C}$ to 0 $^{\circ}\text{C}$	0.2 $^{\circ}\text{C}$	
	0 $^{\circ}\text{C}$ to 630 $^{\circ}\text{C}$	0.3 $^{\circ}\text{C}$	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type K - Generate	-200 $^{\circ}\text{C}$ to 1 372 $^{\circ}\text{C}$	0.6 $^{\circ}\text{C}$	Electrical Simulation of Thermocouple Output Fluke 741B
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type J - Generate	-210 $^{\circ}\text{C}$ to 1 200 $^{\circ}\text{C}$	0.4 $^{\circ}\text{C}$	



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Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type N Generate	-200 °C to 1 300 °C	0.7 °C	Electrical Simulation of Thermocouple Output Fluke 741B
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type S Generate	-20 °C to 1 676 °C	1.3 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type R Generate	-20 °C to 1 767 °C	1.2 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type T Generate	-250 °C to 400 °C	0.6 °C	
Temperature Calibration, Indication, and Control Equipment used with RTD Type Pt 385, 100 Ω Generate	-200 °C to 800 °C	0.8 °C	Electrical Simulation of RTD Output Fluke 741B
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 3926, 100 Ω Generate	-200 °C to 630 °C	0.6 °C	
Temperature Calibration, Indication, and Control Equipment used with RTD Ni 672, 120 Ω Generate	-200 °C to 260 °C	0.3 °C	
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 385, 200 Ω Generate	-200 °C to 630 °C	0.8 °C	



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Temperature Calibration, Indication, and Control Equipment used with RTD Pt 385, 500 Ω Generate	-200 °C to 630 °C	0.8 °C	Electrical Simulation of RTD Output Fluke 741B
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 385, 1 000 Ω Generate	-200 °C to 630 °C	0.8 °C	
Temperature Calibration, Indication, and Control Equipment used with RTD Cu 427, 10 Ω Generate	-100 °C to 260 °C	2.1 °C	
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 3 196, 100 Ω Generate	-200 °C to -630 °C	0.8 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type K Measure	-200 °C to 1 372 °C	0.3 °C	Electrical Simulation of Thermocouple Output Tegam 845
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type J Measure	-210 °C to 760 °C	0.3 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type N Measure	-200 °C to 1 300 °C	0.3 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type S Measure	0 °C to 1 768 °C	0.6 °C	



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Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type R - Measure	0 °C to 1 768 °C	0.6 °C	Electrical Simulation of Thermocouple Output Tegam 845
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type T - Measure	-200 °C to 400 °C	0.3 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type K Generate	-200 °C to 1 372 °C	0.3 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type J Generate	-210 °C to 760 °C	0.3 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type N Generate	-200 °C to 1 300 °C	0.3 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type S Generate	0 °C to 1 768 °C	0.6 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type R Generate	0 °C to 1 768 °C	0.6 °C	
Temperature Calibration, Indication, and Control Equipment used with Thermocouple Type T Generate	-200 °C to 400 °C	0.3 °C	



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Equipment Output Electrical Potential - DC	50 mV to 200 mV	0.025 mV	Fluke 8842A
	0.11 V to 1 000 V	0.11 V	
Equipment Output Electrical Current - DC	7.8 mA to 2 000 mA	2.6 mA	
Equipment to Measure Electrical Resistance	2.2 k Ω to 1 000 k Ω	0.72 k Ω	

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represent the smallest measurement uncertainties attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is expressed at a confidence level of 95 % using a coverage factor k (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.