PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Modern Surveying Calibration & Testing Labs

6, Main Gazna Road, Erbil, Kurdistan Iraq

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

ISO/IEC 17025:2017

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 April 2017):

Chemical, Dimensional, Electrical, Mass, Force and Weighing Device, Mechanical, Thermodynamic and Time & Frequency Calibration

(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. 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:

Tracy Szerszen
President

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

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
September 17, 2020	November 11, 2022	December 31, 2024
Revision Date:	*Accreditation No.:*	*Certificate No.:*
October 30, 2023	106457	L22-797-R1

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlabs.com

Certificate of Accreditation: Supplement

Modern Surveying Calibration & Testing Labs

6, Main Gazna Road, Erbil, Kurdistan, Iraq

Contact Name: Charanjith PR Phone: 97-156-118-8358

Accreditation is granted to the facility to perform the following calibrations:

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Pressure Gauge Differential Pressure Indicator Pressure Sensors Pressure Transducer Pressure Transmitter FO	Up to 1 000 mBar	0.001 %	Automated Pressure Calibrator-Additel- ADT761-D Standard Pressure Gauge/ Modules Fluke & Additel MSL/CP/P/04 Based on DKD-R-6-1
	1 Bar to 40 Bar	0.002 5 %	Automated Pressure Calibrator Additel-ADT761-HA Standard Pressure Gauge/ Modules Fluke & Additel MSL/CP/P/04 Based on DKD-R-6-1
	40 Bar to 200 Bar	0.005 %	Pressure Balance DH-Budenberg - CPB 5800 Standard Pressure Gauge/ Modules Fluke & Additel MSL/CP/P/04 Based on DKD-R-6-1
Pressure Gauge Differential Pressure Indicator Pressure Sensors Pressure Transducer Pressure Transmitter FO	200 Bar to 1 200 bar	0.006 %	Pressure Balance DH-Budenberg - CPB 5800 Standard Pressure Gauge/ Modules Fluke & Additel MSL/CP/P/04 Based on DKD-R-6-1
Vacuum Gauges Vacuum Transducer Vacuum Transmitters Vacuum Sensors FO	-900 mBar to -0.00 mBar	0.001 %	Automated Pressure Calibrator-Additel- ADT761-D Standard Pressure Gauge/ Modules Fluke & Additel MSL/CP/P/04 Based on DKD-R-6-1
Liquid Flow Meters (Volumetric Flow Rate) FO	46 l/min to 465 l/min	0.35 % of Reading	Coriolis Flow Meter Promass F 300 DN40 / 1 1/2" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	49 l/min to 2 496 l/min	0.27 % of Reading	Coriolis Flow Meter 3" MSL/CP/FL/ 02 API MPMS 4.5, API MPMS 4.8
	33 l/min to 3 392 l/min	0.34 % of Reading	Coriolis Flow Meter Promass Q 300 4" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	86 l/min to 7 159 l/min	0.12 % of Reading	Coriolis Flow Meter Promass Q 300 6", MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	150 l/min to 7 190 l/min	0.17 % of Reading	Coriolis Flow Meter Promass Q 300 8" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8

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Liquid Flowmeter (Liquid Volume) FO	20 l to 233 l	0.35 % of Reading	Coriolis Flow Meter Promass F 300 DN40 / 1 1/2" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	25 l to 1 268 l	0.27 % of Reading	Coriolis Flow Meter 3" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	22 l to 1 724 l	0.34 % of Reading	Coriolis Flow Meter Promass Q 300 4" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	43 l to 3 639 l	0.12 % of Reading	Coriolis Flow Meter Promass Q 300 6", MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	75 l to 3 652 l	0.17 % of Reading	Coriolis Flow Meter Promass Q 300 8" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
Liquid Flow Meters (Mass Flow Rate) FO	46 Kg/min to 464 Kg/min	0.35 % of Reading	Coriolis Flow Meter 1-1/2" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	49 Kg/min to 2 483 Kg/min	0.18 % of Reading	Coriolis Flow Meter 3" to 8" and MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	99 Kg/min to 3 295 Kg/min	0.34 % of Reading	Coriolis Flow Meter 4" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	86 Kg/min to 7 130 Kg/min	0.12 % of Reading	Coriolis Flow Meter 6" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	215 Kg/min to 7 177 Kg/min	0.1 % of Reading	Coriolis Flow Meter 8" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
Liquid Flowmeter (Liquid Mass) FO	20 kg to 233 Kg	0.35 % of Reading	Coriolis Flow Meter Promass F 300 DN40 / 1 1/2" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	50 kg to 1 512 Kg	0.18 % of Reading	Coriolis Flow Meter Promass Q 300 3" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	50 kg to 2 514 Kg	0.34 % of Reading	Coriolis Flow Meter Promass Q 300 4" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	43 kg to 3 626 Kg	0.12 % of Reading	Coriolis Flow Meter Promass F 300 6", MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
	150 kg to 3 948 Kg	0.1 % of Reading	Coriolis Flow Meter Promass Q 300 8" MSL/CP/FL/ 02 ,API MPMS 4.5, API MPMS 4.8
Liquid Flow Meters (Volumetric Flow Rate) FO	318 m3/h to 2 000 m3/h	0.07 % of Reading	Small Volume Prover & API MPMS 4.5, API MPMS 4.8
Liquid Flowmeter (Liquid Volume) FO	283 l to 15 000 l	0.07 % of Reading	Small Volume Prover, API MPMS 4.5, API MPMS 4.8

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Prover Base Volume (Pipe Prover, Compact prover, Tank Prover) To Contain [FO]	75 gal	0.029 % of Reading	Water Draw System and API MPMS 4.9.2, API MPMS 12.2.4, API MPMS 4.3.7

Thermodynamic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Dry Block Calibrators [F]	-40 °C to 140 °C	0.039 °C	Fluke Black Stack 1560 with modules 2560,2561,2562,2565 & 2566, SPRT Fluke 5698 PRTs Fluke-5626 & Fluke 5628, EURAMET Calibration Guide No.13
	140 °C to 300 °C	0.078 °C	
	300 °C to 400 °C	0.12 °C	
	400 °C to 650 °C	0.16 °C	
Infrared Thermometers [F]	-30 °C	2 °C	Portable Infrared Calibrator-Fluke 9133 ASTM E2847
	-25 °C	1.8 °C	
	-20 °C	1.6 °C	
	-10 °C	1.1 °C	
	-5 °C	0.94 °C	
	0 °C	0.72 °C	
	23 °C	0.31 °C	
	50 °C	0.67 °C	
	75 °C	1.1 °C	
	100 °C	1.5 °C	
	125 °C	1.9 °C	
	150 °C	2.3 °C	
Temperature Chamber [FO] System Accuracy Test	-40 °C to -18 °C	0.58 °C	Fluke-2638A Hydra Series III Data Acquisition System DATA Logger Rotronics-HL-20D High Temperature Data Logger-Madgetech-Hi Temp 140 Thermocouple Wire- PRT Sensor BS EN 60068-3-5
	-18 °C to 0 °C	0.58 °C	
	Up to 8 °C	0.58 °C	
	8 °C to 45 °C	0.1 °C	
	45 °C to 100 °C	0.1 °C	
	100 °C to 250 °C	0.13 °C	
Temperature Chamber [FO] Thermal Uniformity Survey	-40 °C to -18 °C	0.96 °C	
	-18 °C to 0 °C	2.1 °C	
	Up to 8 °C	2.1 °C	
	8 °C to 45 °C	0.14 °C	
	45 °C to 100 °C	0.21 °C	
	100 °C to 250 °C	0.32 °C	

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Digital Thermometer with RTD and/or Thermocouple FO	-40 °C to 0 °C	0.046 °C	PRT Fluke 5626 & 5628, Black Stack Thermometer Read Out – Fluke-1560 SPRT Module Fluke- 2560. High TempPRT Module Fluke-2561 Precision Thermocouple Module Fluke-2565 Precision Baths: Fluke 6331, 7381, Multi-function Calibrator Wika-CTM9100-150 Metrology Wells: Fluke 9170, 9173 Type S Thermocouple Standard-Fluke 5650 MSL/CP/T/05
	Up to 50 °C	0.046 °C	
	Up to 50 °C	0.046 °C	
	100 °C to 175 °C	0.074 °C	
	50 °C to 100 °C	0.057 °C	
	100 °C to 175 °C	0.074 °C	
	175 °C to 250 °C	0.076 °C	
	250 °C to 400 °C	0.16 °C	
	400 °C to 600 °C	0.2 °C	

Dimensional

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Outside Micrometer F	Up to 25 mm Resolution: 0.001 mm	(2.6 + 0.12 L) µm	Gauge Block Set-Mitutoyo- 516-106-10
	Up to 25 mm Resolution: 0.01 mm	(5.8+0.05 L) µm	Gauge Block Set-Tesa BS:870
Inside Micrometer F	Up to 25 mm Resolution: 0.01 mm	(6.5 + 0.15 L) µm	Gauge Block Set-Mitutoyo- 516-106-10 Gauge Block Set-Tesa BS:959
Depth Micrometer F	Up to 25 mm Resolution: 0.01 mm	(5.8 + 0.01 L) µm	Gauge Block Set-Tesa BS:6468
Calipers (Vernier, Dial & Digital) FO	Up to 600 mm Resolution 0.01 mm	(6.1 + 0.3 L) µm	Caliper checker Mitutoyo- 515-556-2 BS:887
	Up to 300 mm Resolution 0.02 mm	(11 + 0.22 L) µm	
	Up to 600 mm Resolution 0.05 mm	(28 + 0.08 L) µm	
Measuring Tapes F	Up to 30 m	(580 + 0.12 L) µm	Measuring Scale & Tape Calibration System Octagon MSTC-1000 OIML: R 35-1 OIML: R 35-2
Steel Ruler F	Up to 1 000 mm	580 µm	
Indicator (Dial/Digital) F	Up to 100 mm	6 µm	Dial Indication Tester- Mitutoyo 170-102-12 Gauge Block Set-Tesa MSL/CP/D/07 Based on BS EN ISO 463
Ultrasonic Thickness Gauge F	2.5 mm to 20 mm	10 µm	Five Step Block ASTM-E317

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Electrical

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Equipment to Measure DC Voltage FO	Up to 330 mV	25 µV/V + 1 µV	Multi-Product Calibrator - Fluke 5522A MSL/CP/E/01
	0.33 V to 3.3 V	14 µV/V + 2 µV	
	3.3 V to 30 V	9 µV/V + 20 µV	
	30 V to 330 V	12 µV/V + 150 µV	
	330 V to 1000 V	12 µV/V + 1.5 mV	
Equipment to Measure AC Voltage FO	Up to 33 mV @ 45 Hz to 1 kHz	600 µV/V + 6 µV	Multi-Product Calibrator - Fluke 5522A MSL/CP/E/01
	33 mV to 330 mV @ 45 Hz to 1 kHz	120 µV/V + 8 µV	
	0.33 V to 3.3 V @ 45 Hz to 1 kHz	82 µV/V + 160 µV	
	3.3 V to 33 V @ 45 Hz to 1 kHz	55 µV/V + 600 µV	
	33 V to 330 V @ 45 Hz to 1 kHz	65 µV/V + 2 000 µV	
	330 V to 1 000 V @ 45 Hz to 1 kHz	90 µV/V + 10 mV	
Equipment to Measure DC Current FO	100 µA to 330 µA	4 µA/A + 0.02 µA	Multi-Product Calibrator - Fluke 5522A MSL/CP/E/01
	0.33 mA to 3.3 mA	25 µA/A + 0.05 µA	
	3.3 mA to 33 mA	25 µA/A + 0.25 µA	
	33 mA to 330 mA	25 µA/A + 2.5 µA	
	0.33 A to 1.1 A	41 µA/A + 40 µA	
	1.1 A to 3 A	50 µA/A + 40 µA	
	3 A to 11 A	470 µA/A + 750 µA	
	11 A to 20 A	800 µA/A + 1 500 µA	
Clamp - On Meters to Measure DC Current FO	10 A to 16.5 A	0.19 % + 1.6 mA	Multi-Product Calibrator - Fluke 5522A Fluke 5500A (Coil) MSL/CP/E/01
	16.5 A to 150 A	0.19 % + 12 mA	
	150 A to 1 000 A	0.19 % + 39 mA	
Clamp - On Meters to Measure AC Current FO	10 A to 16.5 A @ 45 Hz to 1 kHz	0.22 % + 2.33 mA	Multi-Product Calibrator - Fluke 5522A Fluke 5500A (Coil) MSL/CP/E/01
	16.5 A to 150 A @ 45 Hz to 1 kHz	0.22 % + 19.38 mA	
	150 A to 1 000 A @ 45Hz to 1 kHz	0.22 % + 69.77 mA	

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Electrical

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Equipment to Measure AC Current [FO]	29 µA + 330 µA @ 45 Hz to1 kHz	0.12 % + 0.1 µA	Multi-Product Calibrator - Fluke 5522A MSL/CP/E/01
	0.33 mA to 3.3 mA @ 45Hz to 1 kHz	0.11 % + 0.15 µA	
	3.3 mA to 33 mA @ 45 Hz to 1 kHz	0.048 % + 2 µA	
	33 mA to 330 mA @ 45 Hz to 1 kHz	0.05 % + 20 µA	
	0.33 A to 1.1 A @ 45 Hz to 1 kHz	0.06 % + 0.1 mA	
	1.1 A to 3 A @ 45 Hz to 1 kHz	0.08 + 0.1 mA	
	3 A to 11 A @ 45 Hz to 1 kHz	0.09 % + 2 mA	
	11 A to 20 A @ 45 Hz to 1 kHz	0.2 % + 5 mA	
Equipment to Measure Capacitance [F]	0.19 nF to 0.399 9 nF	0.61 % + 0.01 nF	Multi-Product Calibrator - Fluke 5522A MSL/CP/E/01
	0.4 nF to 1.099 9 nF	0.58 % + 0.01 nF	
	1.1 nF to 3.299 9 nF	0.58 % + 0.01 nF	
	3.3 nF to 10.999 9 nF	0.30 % + 0.01 nF	
	11 nF to 32.999 9 nF	0.30 % + 0.1 nF	
	33 nF to 109.999 nF	0.30 % + 0.1 nF	
	110 nF to 329.999 nF	0.30 % + 0.3 nF	
	0.33 µF to 1.099 99 µF	0.30 % + 1 nF	
	1.1 µF to 3.299 99 µF	0.30 % + 3 nF	
	3.3 µF to 10.999 9 µF	0.30 % + 10 nF	
	11 µF to 32.999 9 µF	0.47 % + 30 nF	
	33 µF to 109.999 µF	0.54 % + 100 nF	
	110 µF to 329.999 µF	0.52 % + 300 nF	
	0.33 mF to 1.099 99 mF	0.52 % + 1 µF	
	1.1 mF to 3.299 99 mF	0.52 % + 3 µF	
	3.3 mF to 10.999 9 mF	0.52 % + 10 µF	
	11 mF to 32.999 9 mF	0.87 % + 30 µF	
	33 mF to 110 mF	1.3 % + 100 µF	
	33 mF to 110 mF	1.3 % + 100 µF	

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Electrical

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Equipment to Measure Resistance (Fixed Points) [F]	1 mΩ	0.000 1 mΩ	Burster- 1240 Calibration Resistor MSL/CP/E/01
	10 mΩ	0.001 mΩ	
	100 mΩ	0.01 mΩ	
	1 Ω	0.000 011 Ω	Fluke 742 A Resistance Standards MSL/CP/E/01
	10 Ω	0.001 Ω	
	100 Ω	0.01 Ω	
	1 KΩ	0.000 08 KΩ	
	10 KΩ	0.000 8 KΩ	
	1 MΩ	0.008 KΩ	
	10 MΩ	0.002 MΩ	
Equipment to Measure Resistance [F]	0.1 Ω to 11 Ω	0.006 % + 0.5 mΩ	Multi-Product Calibrator - Fluke 5522A MSL/CP/E/01
	11 Ω to 33 Ω	0.001 % + 1 mΩ	
	33 Ω to 110 Ω	0.001 % + 4 mΩ	
	110 Ω to 330 Ω	0.001 % + 4 mΩ	
	0.33 KΩ to 1.1 KΩ	0.001 % + 4 mΩ	
	1.1 KΩ to 3.3 KΩ	0.001 % + 4 mΩ	
	3.3 KΩ to 11 KΩ	0.001 % + 1 Ω	
	11 KΩ to 33 KΩ	0.08 % + 4 Ω	
	33 KΩ to 110 KΩ	0.001 % + 4 Ω	
	110 KΩ to 330 KΩ	0.001 % + 11 Ω	
	0.33 MΩ to 1.1 MΩ	0.001 % + 36 Ω	
	1.1 MΩ to 3.3 MΩ	0.006 % + 0.2 kΩ	
	3.3 MΩ to 11 MΩ	0.036 % + 1.5 kΩ	
	11 MΩ to 33 MΩ	0.1 % + 8.3 kΩ	
	33 MΩ to 110 MΩ	0.01 % + 55 kΩ	
	110 MΩ to 330 MΩ	0.01 % + 0.1 MΩ	
	330 MΩ to 1 100 MΩ	0.74 % + 0.1 MΩ	
Equipment to Measure Inductance [F] @ 1 kHz	10 µH to 10 mH	1 % + 1.5 µH	Programmable Inductance Substituter IET Labs- PLS -1492 MSL/CP/E/01
	10 mH to 100 mH	1 % + 1.5 µH	
	100 mH to 1 H	2 % + 1.5 µH	
	1 H to 10 H	2 % + 1.5 µH	

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Electrica

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Equipment to Output AC Current [F]	1 µA to 200 µA @ 45 Hz to 1 KHz	0.054 % + 20 nA	Reference Multimeter Fluke -8508A MSL/CP/E/01
	0.2 mA to 2 mA @ 45 Hz to 1 KHz	0.032 % + 0.2 µA	
	2 mA to 20 mA @ 45 Hz to 1 KHz	0.033 % + 2 µA	
	20 mA to 200 mA @ 45 Hz to 1 KHz	0.031 % + 20 µA	
	0.2 A to 2 A @ 45 Hz to 1 KHz	0.063 % + 0.2 mA	
	2 A to 20 A @ 45 Hz to 1 KHz	0.84 % + 2 mA	
Equipment to Output DC Current [F]	1 µA to 200 µA	42 µA/A + 0.023 µA	Reference Multimeter Fluke -8508A MSL/CP/E/01
	0.2 mA to 2 mA	26 µA/A + 0.003 µA	
	2 mA to 20 mA	28 µA/A + 0.03 µA	
	20 mA to 200 mA	28 µA/A + 0.03 µA	
	0.2 A to 2 A	220 µA/A + 0.02 µA	
	2 A to 20 A	0.48 mA/A + 0.4 mA	
Equipment to Output AC Voltage [F]	1 mv to 200 mv @ 45 Hz to 1 kHz	0.011 % + 0.002 mV	Reference Multimeter Fluke -8508A MSL/CP/E/01
	0.2 V to 2 V @ 45 Hz to 1 kHz	0.008 6 % + 20 µV	
	2 V to 20 V @ 45 Hz to 1 kHz	0.008 6 % + 0.2 mV	
	20 V to 200 V @ 45 Hz to 1 kHz	0.009 % + 2 mV	
	200 V to 1 000 V @ 45 Hz to 1kHz	0.011 % + 2 mV	
Equipment to Output DC Voltage [F]	1 mv to 200 mv	10 µV/V + 0.07 µV	Reference Multimeter Fluke -8508A MSL/CP/E/01
	0.2 V to 2 V	5 µV/V + 1.4 µV	
	2 V to 20 V	5 µV/V + 40 µV	
	20 V to 200 V	8 µV/V + 36 µV	
	200 V to 1 000 V	10 µV/V + 0.49 mV	
Equipment to Output Inductance [F]	100 µH to 1 mH	0.12 %	Precision RLC Digibridge IET Labs- 1693 MSL/CP/E/01
	1 mH to 1 H	0.035 %	
	1 H to 5 H	0.014 %	
	5 H to 10 H	0.25 %	

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Equipment to Output Resistance [F]	1 mΩ to 2 Ω	0.002 % Rdg	Reference Multimeter Fluke -8508A MSL/CP/E/01
	2 Ω to 20 Ω	0.002 % Rdg	
	20 Ω to 200 Ω	0.000 9 % Rdg	
	0.2 KΩ to 2 KΩ	0.001 % Rdg	
	2 kΩ to 20 KΩ	0.001 % Rdg	
	20 KΩ to 200 KΩ	0.001 % Rdg	
	0.2 MΩ to 2 MΩ	0.001 % Rdg	
	2 MΩ to 20 MΩ	0.003 % Rdg	
	20 MΩ to 200 MΩ	0.009 % Rdg	
	0.2 GΩ to 2 GΩ	0.1 % Rdg	
Equipment to Output Capacitance [F] @ 1 kHz	Up to 10 pF	0.37 % + 0.002 pF	Precision RLC Digibridge ET Labs- 1693 MSL/CP/E/01
	10 pF to 100 pF	0.014 % + 0.003 pF	
	100 pF to 1 000 pF	0.007 % + 0.01 pF	
	1 nF to 10 nF @ 1 kHz	0.010 % + 0.08 pF	
	10 nF to 100 nF @ 1 kHz	0.016 % Rdg	
	100 nF to 1 000 nF	0.01 % Rdg	
	1 µF to 10 µF @ 1 kHz	0.01 % Rdg	
	10 µF to 100 µF @ 1 kHz	0.008 % Rdg	
	100 µF to 1 000 µF	0.02 % Rdg	
	1 000 µF to 10 000 µF	0.10 % Rdg	
Calibration of Temperature Indicators and Simulators by Electrical Simulation and Measurement (Type J) [F]	-210 °C to -100 °C	0.21 °C	Multi-Product Calibrator - Fluke 5522A EURAMET cg-11
	-100 °C to -30 °C	0.12 °C	
	-30 °C to 150 °C	0.08 °C	
	150 °C to 760 °C	0.12 °C	
	760 °C to 1 200 °C	0.18 °C	
Calibration of Temperature Indicators and Simulators by Electrical Simulation and Measurement (Type K) [F]	-200 °C to -100 °C	0.25 °C	Multi-Product Calibrator - Fluke 5522A EURAMET cg-11
	-100 °C to -25 °C	0.12 °C	
	-25 °C to 120 °C	0.09 °C	
	120 °C to 1 000 °C	0.19 °C	
	1 000 °C to 1 372 °C	0.57 °C	
Calibration of Temperature Indicators and Simulators by Electrical Simulation and Measurement (Type R) [F]	Up to 250 °C	0.21 °C	Multi-Product Calibrator - Fluke 5522A EURAMET cg-11
	250 °C to 400 °C	0.27 °C	
	400 °C to 1 000 °C	0.35 °C	
	1 000 °C to 1 767 °C	0.47 °C	

Certificate of Accreditation: Supplement

Modern Surveying Calibration & Testing Labs

6, Main Gazna Road, Erbil, Kurdistan, Iraq

Contact Name: Charanjith PR Phone: 97-156-118-8358

Accreditation is granted to the facility to perform the following calibrations:

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Calibration of Temperature Indicators and Simulators by Electrical Simulation and Measurement (Type S)[F]	Up to 250 °C	0.38 °C	Multi-Product Calibrator - Fluke 5522A EURAMET cg-11
	250 °C to 1 000 °C	0.29 °C	
	1 000 °C to 1 400 °C	0.41 °C	
	1 400 °C to 1 767 °C	0.49 °C	

Time & Frequency

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Timer, Stopwatches & Chart Speed [FO]	10 s to 36 000 s	0.04 s	Timer/Counter/Analyzer: 300MHz-Tektronix-FCA3100 NIST 960-12 Special Publication

Mass, Force and Weighing Device

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Vertical Cylindrical Tank [O]	100 m^3 to 50 000 m^3	0.1 % of volume	Total station Measuring Tape Dipping Tape Ultrasonic Thickness Gauge ISO 7507-1 & ISO 7507-2

Chemical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Density Meter [FO]	0.65 g/cm3 to 1.8 g/cm3	0.000 1 g/cm^3	Density Standard SolutionMSL-CP-A-02

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Modern Surveying Calibration & Testing Labs
6, Main Gazna Road, Erbil, Kurdistan, Iraq
Contact Name: Charanjith PR Phone: 97-156-118-8358

Accreditation is granted to the facility to perform the following calibrations:

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically 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.

2. The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.

3. The presence of a superscript F means that the laboratory performs calibration of the indicated parameter at its fixed location.

4. The presence of a superscript O means that the laboratory performs calibration of the indicated parameter onsite at customer locations. onsite at customer locations.

5. The presence of a superscript FO means that the laboratory performs calibration of the indicated parameter both at its fixed location and onsite at customer locations.

6. Measurement uncertainties obtained for calibrations performed at customer sites can be expected to be larger than the measurement uncertainties obtained at the laboratories fixed location for similar calibrations. This is due to the effects of transportation of the standards and equipment and upon environmental conditions at the customer site which are typically not controlled as closely as at the laboratories fixed location.

7. The term L represents length in meter.

8. The term T represents temperature in ºC or ºF as appropriate to the uncertainty statement.