



INTERNATIONAL  
ACCREDITATION  
SERVICE®

# CERTIFICATE OF ACCREDITATION

*This is to attest that*

**UNIVERSAL INSPECTION CO. LTD,**  
ROAD 3419, BLOCK 334, BUILDING 655, AL MAHUZ  
MANAMA, 334, BAHRAIN

**Calibration Laboratory CL-217**

has met the requirements of AC204, *IAS Accreditation Criteria for Calibration Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date September 26, 2024

Expiration Date February 1, 2026



A handwritten signature in black ink, reading 'Raj Nathan'.

**President**

Visit [www.iasonline.org](http://www.iasonline.org) for current accreditation information.

# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | [www.iasonline.org](http://www.iasonline.org)

## UNIVERSAL INSPECTION CO. LTD,

[www.ui.com.sa](http://www.ui.com.sa)

**Contact Name** Mr. Dinesh Kumar Kesavan

**Contact Phone** +966-508836773

**Accredited to** ISO/IEC 17025:2017

**Effective Date** September 26, 2024

### CALIBRATION AND MEASUREMENT CAPABILITY (CMC)\*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY <sup>1,2</sup> (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
<b>Dimensional</b>			
Vernier Caliper (Digital, Dial, Analog)	Up to 600 mm	17 µm	Using Caliper Checker & Length Bar by Direct Method (Based on JIS B 7507)
Height Gauge (Digital/Analog)	Up to 600 mm	12 µm	Using Caliper Checker & Length Bar by Direct method (Based on JIS B 7517)
External Micrometer	Up to 25 mm 25 mm to 50 mm	2 µm 4 µm	Using Gauge Blocks & Length Bars by Direct Method (Based on BS 870)
Plunger Dial Gauge, Lever Dial Gauge (Digital/Analog)	Up to 25 mm	6 µm	Using Dial Gauge Calibrator by Direct method (Based on JIS B 7503)
Coating Thickness Gauge	Up to 1 mm	3.4 µm	Using Standard Foils by Direct Method (Based on AS 3894.3-2002, Clause 9.3.1)
<b>Mechanical</b>			
Torque Wrench	20 N·m to 200 N·m 200 N·m to 1000 N·m	2.4 N·m 1.2 N·m	Using Torque Wrench Calibration System by Direct method (Based on ISO 6789)
Pressure Gauge / Pressure Transmitter (Hydraulic)	1000 psi to 15000 psi 15000 psi to 25000 psi	2.7 psi 3.8 psi	Using Precision Test Gauge and Hydraulic Pressure Calibration Pump by Comparison method (Based on DKD R 6-1 & BS EN 837)
Pressure Gauge - Pneumatic	1 bar to 50 bar	0.03 bar	Using Precision Pressure Gauge and Pressure Pump by Comparison Method (Based on BS EN 837)

\* If information in this CMC is presented in non-SI units, the conversion factors stated in NIST Special Publication 811 "Guide for the Use of the International System of Units (SI)" apply.

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Vacuum Gauge	-0.95 bar to 0 bar	0.03 bar	Using Precision Compound Gauge and Vacuum Pump by Comparison Method (based on ISO 3567)
Sound Level Meter (1 kHz)	114 dB	1 dB	Using Sound Level Calibrator by Direct method (Based on OIML R58)
<b>Thermal</b>			
Infrared Thermometer	50 °C to 500 °C	1.6 °C	Using Black Body Furnace (e=0.98) by Direct Method (Based on ASTM E2847)
Thermocouple / Resistance Temperature Detector (RTD), Temperature Controller/ Indicator with sensor, Temperature Recorder with sensor, Digital Data Logger with sensor, Thermometer with sensor, Temperature Transmitter	50 °C to 600 °C	1.0 °C	Using PRT with temp calibrator and Temperature Bath/ Dry block by Comparison Method (Based on EURAMET-CG-11)
Thermo-hygrometer	20 %RH to 90 %RH @ (30 °C to 50 °C)  20 °C to 50 °C @ (30 %RH to 90 %RH)	1.3 %RH  0.32 °C	Using Humidity Calibrator by Direct method (Based on NIST SP-250-83)
Temperature Bath, Oven, Furnace, Temperature Calibrator (Single Sensor Method)	50 °C to 600 °C	1.1 °C	Resistance Temperature Detector (RTD)/ S-Type Thermocouple with Temperature Calibrator by Direct method (Based on ASTM E145)
<b>Electrical – DC/LF</b>			
DC Voltage Source <sup>3</sup>	1 mV to 20 mV 20 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 240 V 240 V to 1000 V	0.02 mV 0.04 mV 0.09 mV 1.3 mV 9.7 mV 0.2 V	Using Electrical Multifunction Calibrator by Direct (Based on Euramet CG-15)
DC Voltage Measure <sup>4</sup>	10 mV to 100 mV 100 mV to 1 V 1 V to 10 V 10 V to 100 V 100 V to 1000 V	9.2 mV 0.5 mV 0.9 mV 5.6 mV 73 mV	Using Precision Multimeter By Direct Method

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AC Voltage Source <sup>3</sup> (50 Hz)	1 mV to 20 mV 20 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1000 V	0.08 mV 0.3 mV 1.1 mV 11 mV 0.2 V 0.9 V	Using Electrical Multifunction Calibrator by Direct (Based on Euramet CG-15)
AC Voltage Measure <sup>4</sup> (50 Hz)	0 mV to 100 mV 100 mV to 1 V 1 V to 10 V 10 V to 100 V 100 V to 1000 V	0.03 mV 0.03 mV 2.5 mV 26 mV 0.4 V	Using Precision Multimeter By Direct Method
DC Current Source <sup>3</sup>	20 µA to 200 µA 200 µA to 2 mA 2 mA to 20 mA 20 mA to 200 mA 200 mA to 2 A 2 A to 20 A	0.04 µA 0.7 µA 7.2 µA 0.04 mA 0.5 mA 9 mA	Using Electrical Multifunction Calibrator by Direct (Based on Euramet CG-15)
DC Current Measure <sup>4</sup>	10 µA to 200 µA 200 µA to 100 µA 100 µA to 1 mA 1 mA to 10 mA 10 mA to 100 mA 100 mA to 400 mA 400 mA to 1 A 1 A to 3 A 3 A to 10 A	0.1 µA 0.7 µA 8.2 µA 0.07 mA 0.5 mA 0.9 mA 1.4 mA 6.4 mA 0.01 A	Using Precision Multimeter By Direct Method
AC Current Source <sup>3</sup> (50 Hz)	30 µA to 20 mA 20 mA to 200 mA 200 mA to 2 A 2 A to 20 A	0.03 µA 0.15 A 11 mA 52 mA	Using Electrical Multifunction Calibrator by Direct (Based on Euramet CG-15)
AC Current Measure <sup>4</sup> (50 Hz)	30 µA to 100 µA 100 µA to 100 mA 100 mA to 400 mA 400 mA to 1 A 1 A to 3 A 3 A to 10 A	0.4 µA 0.05 mA 0.34 mA 0.25 mA 3.1 mA 4.4 mA	Using Precision Multimeter By Direct Method
DC Resistance Source <sup>3</sup>	10 Ω to 100 Ω 0 kΩ to 1 kΩ 1 kΩ to 10 kΩ 10 kΩ to 100 kΩ 100 kΩ to 1 MΩ 1 MΩ to 50 MΩ	0.5 mΩ 0.35 Ω 3.5 Ω 35 Ω 1 kΩ 18 kΩ	Using Electrical Multifunction Calibrator by Direct Method (Based on Euramet CG-15)
DC Resistance Measure <sup>4</sup>	10 Ω to 1000 Ω 1 kΩ to 10 kΩ 10 kΩ to 100 kΩ 100 kΩ to 1 MΩ	2 mΩ 1.8 Ω 3.6 kΩ 3.6 kΩ	Using Electrical Multifunction Calibrator by Direct Method

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	1 MΩ to 10 MΩ 10 MΩ to 100 MΩ	0.023 MΩ 0.30 MΩ	
Holiday Detector	0 V to 30 kV	1.7 kV	Using AC/DC High Voltage Probe & High Voltage Divider by Direct method (Based on ASTM D5162)
Pin Hole Detector	0 V to 90 V	0.012 V	Using Precision Multimeter by Direct method (Based on NACE RP0188-99, ASTM D5162)
Electric & Diesel Welding Machine	Up to 600 A	3.9 A	Using ESAB Check Master 9000 by Direct Method (Based on BS EN 50504:2008)
Electrical Simulation of Thermocouples – Measure and Source Mode K-Type	-200 °C to 1300 °C	0.5 °C	Using Temperature Calibrator by Direct method (Based on Euramet CG-11)
<b>Time and Frequency</b>			
Tachometer (Contact)	200 rpm to 1000 rpm 1000 rpm to 10000 rpm	1.5 rpm 2.7 rpm	Using Tachometer Calibrator by Direct method (Based on SANAS TR-45-01)
<b>Chemical &amp; Gas</b>			
Portable Gas Detector (Multigas)	O <sub>2</sub> : 18 % CH <sub>4</sub> : 2.5 % (50 % LEL) CO: 100 ppm H <sub>2</sub> S: 25 ppm	2.1 % 2.5 % 5 % 5 %	Using Standard Gases by Direct method
Oxygen Analyzer	O <sub>2</sub> : 20.9 %	2.1 %	Using Standard Gases by Direct method
pH Meter	4.00 pH 7.00 pH 10.00 pH	0.5 pH 0.5 pH 0.5 pH	Using Buffer solution for Direct Method
Conductivity Meter (TDS)	84 µS/cm 1413 µS/cm	0.7 µS/cm 14 µS/cm	Using Buffer solution for Direct Method

<sup>1</sup>The uncertainty covered by the Calibration and Measurement Capability (CMC) is expressed as the expanded uncertainty having a coverage probability of approximately 95 %. It is the smallest measurement uncertainty that a laboratory can achieve within its scope of accreditation when performing calibrations of a best existing device. The measurement uncertainty reported on a calibration certificate may be greater than that provided in the CMC due to the behavior of the calibration item and other factors that may contribute to the uncertainty of a specific calibration.

<sup>2</sup>When uncertainty is stated in relative terms (such as percent, a multiplier expressed as a decimal fraction or in scientific notation), it is in relation to instrument reading or instrument output, as appropriate, unless otherwise indicated.

<sup>3</sup>Capability is suitable for the calibration of measuring devices in the stated ranges.

<sup>4</sup>Capability is suitable for the calibration of devices intended to generate the indicated quantity in the stated ranges.