

## CERTIFICATE OF ACCREDITATION

This is to attest that

## GLORY TECHNOLOGY CALIBRATION AND INSPECTION COMPANY – A DIVISION OF GLORY TECHNOLOGY CONTRACTING COMPANY

SHOP NO 16, FIRST INDUSTRIAL SUPPORT AREA AL JUBAIL, 35717, SAUDI ARABIA

#### **Calibration Laboratory CL-196**

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 February 19, 2024

Expiration Date August 1, 2025



President

International Accreditation Service, Inc.

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# GLORY TECHNOLOGY CALIBRATION AND INSPECTION COMPANY – A DIVISION OF GLORY TECHNOLOGY CONTRACTING COMPANY

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Accredited to ISO/IEC 17025:2017

Effective Date February 19, 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)
	Dimens	ional	
Digital Caliper	Up to 1000 mm	10 μm	Caliper Checker, Long Gauge Block by direct method (based on ISO 13385-1)
Height Gauge	Up to 300 mm	10 μm	Caliper Checker by direct method (based on BS 1643)
External Micrometer	Up to 150 mm	2 μm	Gauge Block Sets Grade '0' & '1' by direct method (based on ISO 3611)
Internal Micrometer	Up to 300 mm	9 µm	Internal Micro Checker by direct method (Based on BS 959)
Plunger Dial Gauge	Up to 25 mm	2.5 µm	Electronic Dial Gauge Calibrator by Direct method (Based on ISO 463)
Lever Dial Gauge	Up to 0.14 mm 0.14 mm to 0.80 mm	2.5 μm 6.3 μm	Electronic Dial Gauge Calibrator by direct method (Based on ISO 9493)
Feeler Gauge/Standard Foil	Up to 5.14 mm	2.8 µm	Digital External Micrometer by direct method (based on BS 957)
Thickness Gauge	Up to 25 mm 25 mm to 100 mm	6.6 μm 64 μm	Gauge Block Set Grade '1' by direct method (Based on ISO 463)
Coating Thickness Gauge (Ferrous & Non-Ferrous)	Up to 1000 μm 1000 μm to 5000 μm	1.4 μm 5.7 μm	Standard Foils by direct method (Based on ISO 2178)

<sup>\*</sup> 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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MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY <sup>1,2</sup> (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
	Mechani	cal	
Sound Level Meter	94 dB and 114 dB (1 kHz)	0.65 dB	Sound Level Calibrator by Direct Method (Based on OIML-R-58)
Torque Wrenches	10 N·m to 100 N·m 100 N·m to 1000 N·m 1000 N·m to 2000 N·m	0.70 % 0.46 % 0.55 %	Electronic Torque Wrench Tester by direct method (Based ISO 6789-1)
Non-Contact Tachometer	60 rpm to 1000 rpm 1000 rpm to 10000 rpm 10000 rpm to 30000 rpm 30000 rpm to 60000 rpm	0.28 rpm 0.72 rpm 1.3 rpm 2.3 rpm	Multi Product Calibrator with Optical Tachometer Calibrator by direct method (Based SANAS TR 45-01)
Pneumatic Pressure Measuring Devices – Dial / Digital Pressure Gauge, Pressure Transmitter with or without Indicator, Pressure Transducer with/without Indicator, Pressure Switch, Pressure Recorder, Safety Relief Valve, Pressure Calibrator, Pressure Module		7 mbar 9 mbar	Reference Digital Pressure Gauge by comparison method (Based on DKD R-6-1)
Hydraulic Pressure Measuring Devices - Dial/Digital Pressure Gauge, Pressure Transmitter with or without Indicator, Pressure Transducer with or without Indicator, Pressure Switch, Pressure Recorder, Safety Relief Valve, Pressure Calibrator, Pressure Module		0.17 bar 2.1 bar	Pressure Transmitter, Process Calibrator, Reference Pressure Gauge by comparison method (Based on DKD R-6-1)
Vacuum Gauges	-1 bar to 0 bar	16 mbar	Reference Digital Pressure Gauge by comparison method (Based on DKD R-6-2)
Thermal			
Thermocouple, Resistance Temperature Detector (RTD), Temperature Controller with Sensor,	-30 °C to 140 °C 140 °C to 660 °C	0.31 °C 0.51 °C	Dry Block Calibrators & Temperature Calibrator by Direct method (Based on IEC 60751 & IEC 60584)

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MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY <sup>1,2</sup> (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Temperature Indicator with Sensor, Temperature Recorder with Sensor, Digital Data Logger with Sensor, Thermometer with Sensor, Temperature Transmitter			
Temperature Gauge	0 °C to 100 °C 100 °C to 300 °C	0.61 °C 2.9 °C	Dry Block Calibrators by direct method (Based on BS EN 13190)
Infrared Thermometer	30 °C to 400 °C 400 °C to 650 °C	0.52 °C 1.7 °C	Black Body kit with Thermocouple 'N' Type by Comparison method by Direct Method (Based on ASTM E2847)
Thermo-Hygrometer, Thermo-Hygrometer Probe with Indicator (Analog/Digital)	Temp- 10 °C to 50 °C Relative Humidity - 20 %RH to 90 %RH 10 °C to 50 °C	0.72 °C 2 %RH	Temperature and Humidity Meter with Sensor and Temperature & Humidity Calibrator by Comparison method (Based on NIST SP- 250)
Oven, Incubator, Water Bath, Refrigerator, Freezer (Single sensor method)	-10 °C to 200 °C 200 °C to 400 °C	0.68 °C 1.1 °C	Resistance Temperature Detector (RTD) & Temperature Calibrator by Direct method (Based on ASTM E145)
Oven, Incubator, Freezer, Environmental Chamber Mapping – 9 sensor method	-10 °C to 200 °C 200 °C to 400 °C	1.7 °C 2.2 °C	Resistance Temperature Detector (RTD), Thermocouple 'N' Type and Digital Temperature Recorder by Direct Method (Based on DKD-R-5-7)
Electrical – DC/LF			
DC or AC Welding Machine	0 V to 100 V 0 A to 600 A	0.27 V 1.0 A	Welding Machine Calibrator by direct method (Based on BS EN 50504 SMP)
Holiday Detector Dielectric Tester	0 kV to 35 kV DC	0.06 kV DC	High Voltage Probe, Digital Multimeter by Direct method (Based on ASTM D 5162)
DC Voltage-Generate <sup>3</sup>	0 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1000 V	0.01 mV 0.12 mV 0.05 mV 4.3 mV 28 mV	Multi Product Electrical Calibrator by Direct method (Based on Euramet CG-15)

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MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY <sup>1,2</sup> (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
DC Current-Generate <sup>3</sup>	0 μA to 200 μA 200 μA to 200 mA 200 mA to 2 A 2 A to 10 A	0.03 µA 0.02 mA 1 mA 6 mA	Multi Product Electrical Calibrator by Direct method (Based on Euramet CG-15)
	0 A to 100 A 100 A to 500 A 500 A to 1100 A	0.08 A 0.26 A 0.46 A	Multi Product Electrical Calibrator with Turn Current Coil by Direct method (Based on Euramet CG-15)
AC Voltage- Generate <sup>3</sup>	0 mV to 200 mV (10 Hz to 20 kHz)	0.06 mV	Multi Product Electrical Calibrator by Direct method (Based on Euramet CG-15)
	200 mV to 2 V (10 Hz to 100 kHz)	0.57 mV	(based on Euramet oo 15)
	2 V to 20 V (10 Hz to 100 kHz)	5.7 mV	
	20 V to 200 V (40 Hz to 20 kHz)	76 mV	
	200 V to 1000 V (40 Hz to 10 kHz)	0.5 V	
AC Current Generate <sup>3</sup>	25 μA to 200 μA (40 Hz to 10 kHz)	0.50 μΑ	Multi Product Electrical Calibrator with Turn Current Coil by Direct method (Based
	200 µA to 2 mA (10 Hz to 10 kHz)	2 μΑ	on Euramet CG-15)
	2 mA to 20 mA (10 Hz to 10 kHz)	0.02 mA	
	20 mA to 200 mA (10 Hz to 10 kHz)	0.12 mA	
	200 mA to 2 A (10 Hz to 2 kHz)	2 mA	
	2 A to 10 A (10 Hz to 1 kHz)	39 mA	
AC Current Generate <sup>3</sup>	(60 Hz) 0 A to 100 A 100 A to 500 A 500 A to 1100 A	0.18 A 0.85 A 1.9 A	Multi Product Electrical Calibrator with Turn Current Coil by Direct method (Based on Euramet CG-15)
Frequency Generate <sup>3</sup>	10 Hz to 100 Hz 100 Hz to 1 kHz 1 kHz to 100 kHz	0.2 mHz 0.2 Hz 2.5 Hz	Multi Product Electrical Calibrator by Direct method (Based on Euramet CG-15)

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MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY <sup>1,2</sup> (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
DC Resistance Generate <sup>3</sup> (Fixed Values)	0.178 Ω 10 Ω 100 Ω 1 kΩ 10 kΩ 100 kΩ 1 MΩ 10 MΩ 100 MΩ	$\begin{array}{c} 5.8 \text{ m}\Omega \\ 12 \text{ m}\Omega \\ 16 \text{ m}\Omega \\ 0.1 \Omega \\ 1.1 \Omega \\ 11 \Omega \\ 0.2 \text{ k}\Omega \\ 1.2 \text{ k}\Omega \\ 0.76 \text{ M}\Omega \\ \end{array}$	Multi Product Electrical Calibrator by Direct method (Based on Euramet CG-15)
	0.01 Ω to 1 Ω 1 Ω to 100 Ω 100 Ω to 1 kΩ 1 kΩ to 1 MΩ	6 mΩ $0.1$ Ω $1$ Ω $0.2$ kΩ	Decade Resistance Box by Direct method (Based on Euramet CG-15)
Insulation Resistance (Fixed Values)	(1 kV) 100 kΩ 1 MΩ	0.59 kΩ 1 kΩ	Insulation Tester Calibrator by Direct method (Based on Euramet CG-15)
	(10 kV) 10 MΩ 100 MΩ 1 GΩ 10 GΩ 100 GΩ 1 TΩ	74 kΩ 0.74 MΩ 9 MΩ 94 MΩ 1.7 GΩ 0.07 TΩ	
Capacitance Generate <sup>3</sup> (Fixed Values)	(1 kHz) 10 nF 20 nF 50 nF 100 nF 1 µF	0.06 nF 0.11 nF 0.28 nF 0.56 nF 1 nF	Multi Product Electrical Calibrator by Direct method (Based on Euramet CG-15)
DC Voltage Measure <sup>4</sup>	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	0.01 mV 0.05 mV 0.4 mV 5 mV 54 mV	6 ½ Digit Multimeter by direct method (Based on GTEC/WI/058)
DC Current Measure⁴	0 μA to 100 μA 100 μA to 1 mA 1 mA to 100 mA 100 mA to 1 A 1 A to 3 A 3 A to 10 A	0.06 µA 1 µA 0.06 mA 1 mA 5 mA 15 mA	6 ½ Digit Multimeter by direct method (Based on GTEC/WI/058)
AC Voltage Measure <sup>4</sup>	(10 Hz to 300 kHz) 0 mV to 100 mV 100 mV to 1 V 1 V to 10 V	0.09 mV 1 mV 8 mV	6 ½ Digit Multimeter by direct method (Based on GTEC/WI/058)

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MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY <sup>1,2</sup> (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
AC Voltage Measure <sup>4</sup> (continued)	(10 Hz to 300 kHz) 10 V to 100 V 100 V to 750 V	0.08 V 0.61 V	6 ½ Digit Multimeter by direct method (Based on GTEC/WI/058)
AC Current Measure <sup>4</sup>	(10 Hz to 5 kHz) 0 μA to 100 μA 100 μA to 100 mA 100 mA to 1 A 1 A to 3 A 3 A to 10 A	0.17 µA 0.16 mA 2 mA 12 mA 23 mA	6 ½ Digit Multimeter by direct method (Based on GTEC/WI/058)
Frequency Measure <sup>4</sup>	3 Hz to 300 kHz	0.58 Hz	6 ½ Digit Multimeter by direct method (Based on GTEC/WI/058)
DC Resistance Measure <sup>4</sup>	0 Ω to 100 Ω 100 Ω to 1 kΩ 1 kΩ to 10 kΩ 10 kΩ to 100 kΩ 100 kΩ to 1 MΩ 1 MΩ to 10 MΩ 10 MΩ to 100 MΩ 100 MΩ to 1 GΩ	12 mΩ 0.05 Ω 0.53 Ω 5.4 Ω 0.09 kΩ 3 kΩ 0.35 MΩ 0.04 GΩ	6 ½ Digit Multimeter by direct method (Based on GTEC/WI/058)
Capacitance Measure <sup>4</sup>	0 nF to 100 nF 100 nF to 1 μF 1 μF to 100 μF	0.47 nF 5 nF 0.47 μF	6 ½ Digit Multimeter by direct method (Based on GTEC/WI/058)
Electrical Simulation Measure & Generate Mode Resistance Temperature Detector (RTD) PT100	-200 °C to 800 °C	0.44 °C	Multi-Function Calibrator by Direct Method (Based on Euramet CG_11)
PT200 PT500 PT1000	-200 °C to 630 °C -200 °C to 630 °C -200 °C to 630 °C	0.1 °C 0.19 °C 0.21 °C	
Electrical Simulation Measure & Generate Mode Thermocouples Type K Type N Type J Type R Type S Type B Type B Type E Type T	-200 °C to 1370 °C -200 °C to 1300 °C -210 °C to 1200 °C 0 °C to 1700 °C 0 °C to 1700 °C 600 °C to 1800 °C -250 °C to 1000 °C -200 °C to 400 °C	0.31 °C 0.49 °C 0.27 °C 0.59 °C 0.59 °C 0.76 °C 0.17 °C 0.13 °C	Multi Product Calibrator and TC Simulation Adapter by Direct method (Based on Euramet CG_11)

<sup>&</sup>lt;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

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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.