INTERNATIONAL ACCREDITATION SERVICE®

CERTIFICATE OF ACCREDITATION

This is to attest that

Wimpey Laboratories, LLC

Al Khuwair
Muscat, MS 133
Oman

Calibration Laboratory CL-201

has met the requirements of AC204, *IAS Accreditation Criteria for Calibration Laboratories*, and has demonstrated compliance with the ISO/IEC Standard 17025:2005, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation maintained on the IAS website (www.iasonline.org).

This certificate is valid up to August 1, 2019.

(See laboratory's scope of accreditation for fields of calibration and accredited calibration.)

This accreditation certificate supersedes any IAS accreditation bearing an earlier effective date. The certificate becomes invalid upon suspension, cancellation or revocation of accreditation. See www.iasonline.org for current accreditation information, or contact IAS at 562-364-8201.

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Raj Nathan
President

15-12065

SCOPE OF ACCREDITATION

IAS Accreditation Number	CL-201
Accredited Entity	Wimpey Laboratories, LLC
Address	Al Khuwair, Muscat, MS 133, Oman
Contact Name	Balu Sudhakaran
Telephone	+968 95530438
Effective Date of Scope	July 16, 2018
Accreditation Standard	ISO/IEC 17025:2005

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)[1,2]

CALIBRATION AREA	RANGE & RESOLUTION[3]	EXPANDED UNCERTAINTY[4] (±)	TECHNIQUE, REFERENCE STANDARD, EQUIPMENT
Dimensional			
Digital / Vernier Caliper	0 mm to 600 mm / 0.01 mm	0.008 mm	BSEN ISO 13385-1-2011 Comparison method using Gauge Block Set (Grade 0) & Ring Gauges
Outside Micrometer	0 mm to 25mm / 0.001 mm	0.0011 mm	BS 3611-2010 Comparison method using Gauge Block Set (Grade 0)
Dial / Digital Indicator	0 mm to 25 mm / 0.004 mm	0.003 mm	BS 907:2008 / BS 463:2006 Comparison method using Calibration Tester (0.001 mm)
Feeler Gauge	0 mm to 2 mm	0.0015 mm	BS 957:2008 Comparison method using Digital Micrometer(0.001 mm)
Mechanical			
Pressure Gauge / Digital Pressure Gauge	0 bar to 20 bar 1 bar to 35 bar 35 bar to 1200 bar	0.019 bar 0.011 bar 0.12 bar	BSEN 837-1:1998;DKD R6-1 using Digital Pressure Calibrator BSEN 837-1:1998;DKD R6-1 using Dead Weight Tester
Vacuum Gauge	-0.80 bar to 0 bar	0.008 bar	ISO 3567:2005/DKD R6-2 using Digital Pressure Calibrator
Electronic Weighing Balance	1 mg to 220 g 220 mg to 6200 g 6200 g to 20 kg 20 kg to 500 kg	0.048 mg 0.018 g 0.34 g 30 g	ASTM E898-88 Comparison method using Precision Test Weights (F1) ASTM E898-88 Comparison method using Test Weights (M1)

SCOPE OF ACCREDITATION

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)[1,2]

CALIBRATION AREA	RANGE & RESOLUTION[3]	EXPANDED UNCERTAINTY[4] (±)	REFERENCE STANDARD / EQUIPMENT
Test Weights	1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g 5 kg	0.086 mg 0.088 mg 0.088 mg 0.088 mg 0.090 mg 0.10 mg 0.10 mg 0.11 mg 0.11 mg 0.12 mg 0.12 mg 0.13 mg 0.13 mg 0.14 mg 0.14 mg 0.18 mg 0.26 mg 82 mg	OIML R -111-2 Comparison method using Test Weights (F1)
Thermal			
Digital / Dial Thermometer	-25 °C to 150 °C 150 °C to 400 °C	0.05 °C 1.1 °C	BSEN 13190:2001 / BS 5074:1974 Comparison method using Digital Thermometer & Field metrology well BSEN 13190:2001 / BS 5074:1974 Comparison method using Digital Thermometer & Dry Block Calibrator
Infrared Thermometer	50 °C to 500 °C	1.2 °C	ASTM E- 2847-14. Comparison method using Infrared Calibrator and Digital Thermometer
Temperature Installations – Ovens, Incubators, Stirred Water baths, Fridges and Freezers	–20 °C to 250 °C	1.0 °C	DKD_R_5_7_e (Calibration of Climatic Chambers). Comparison method using Digital Thermometer

SCOPE OF ACCREDITATION

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)[1,2]

CALIBRATION AREA	RANGE & RESOLUTION[3]	EXPANDED UNCERTAINTY[4] (±)	REFERENCE STANDARD / EQUIPMENT
Electrical/DC/Low Frequency			
DC Voltage	1 mV to 1V / 1 µV 1 V to 100 V / 100 µV 100 V to 1000 V / 1 mV	0.20 % 0.0022 % 0.0023 %	Direct Method using Fluke 5522A
AC Voltage (@ 50Hz)	1 mV to 1V / 10 µV 1 V to 100 V / 10 µV 100 V to 1000 V / 1mV	0.72 % 0.026 % 0.036 %	Direct Method using Fluke 5522A
DC Current	100 µA to 100 mA/ 1nA 100 mA to 1 A / 1 µA 1 A to 3 A / 10 µA 3 A to 20 A / 100 µA 20 A to 1000 A	0.71 % 0.03 % 0.07 % 0.13 % 0.21 %	Direct Method using Fluke 5522A and Current coil
AC Current	10 mA to 200 mA / 0.1 µA 200 mA to 3 A / 1 µA 3 A to 20A / 100 µA 20 A to 1000 A	0.069 % 0.15 % 0.17 % 0.21 %	Direct Method using Fluke 5522A and Current coil
DC Resistance	1 Ω to 100 Ω / 0.1 mΩ 100 Ω to 1 kΩ / 0.1 mΩ 1 kΩ to 100 kΩ/ 0.01 Ω 100 kΩ to 100 MΩ / 0.1 Ω	0.11 % 0.0049 % 0.0041 % 0.063 %	Direct Method using Fluke 5522A
Capacitance	50 nF to 100 nF / 1 pF 100 nF to 1 µF / 1 pF 1µF to 100 µF / 10 pF 100 µF to 9 mF / 1 nF	0.33 % 0.41 % 0.65 % 0.65 %	Direct Method using Fluke 5522A
Frequency	10 Hz to 1 MHz / 0.1 Hz	0.0003 %	Direct Method using Fluke 5522A
Temperature (Simulation) Temperature Indicator/Controller /Recorder/Test Kit/ universal calibrators	−200 °C to 1300 °C / 0.01 °C	0.47 °C	Simulation Method using Fluke 5522A

[1]The uncertainty covered by the Calibration and Measurement uncertainty (CMC) is expressed as the expanded uncertainty having a specific coverage probability of approximately 95 %. It is the smallest measurement uncertainty that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than that provided in the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

[2]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.

SCOPE OF ACCREDITATION

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)[1,2]

CALIBRATION AREA	RANGE & RESOLUTION[3]	EXPANDED UNCERTAINTY[4] (±)	REFERENCE STANDARD / EQUIPMENT

[3]Where applicable

[4]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 percent of instrument reading or instrument output, as appropriate, unless otherwise indicated.