



# CERTIFICATE OF ACCREDITATION

*This is to attest that*

## **PROMPT ENGINEERING & TRADING SERVICES CO. WLL**

SHOP NO. 19 & 20, BUILDING NO. 6, BARWA VILLAGE, WAKRA  
DOHA 24067, QATAR

### **Calibration Laboratory CL-165**

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 April 1, 2020

Expiration Date January 1, 2024



A handwritten signature in black ink that reads 'Raj Nathan'.

**President**

# 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)

## PROMPT ENGINEERING & TRADING SERVICES CO. WLL

[www.promptqatar.com](http://www.promptqatar.com)

**Contact Name** Leoraj Muttath

**Contact Phone** + 974-444-18757

Accredited to ISO/IEC 17025:2017

Effective Date April 1, 2020

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

| MEASURED QUANTITY or DEVICE TYPE CALIBRATED  | RANGE                                   | UNCERTAINTY <sup>1,2</sup> (±) | CALIBRATION PROCEDURE AND/OR STANDARD EQUIPMENT USED  |
|--|---|--------------------------------|---|
| <b>Dimensional</b>   |   |                                |   |
| External Micrometer <sup>5</sup>   | 0 mm to 150 mm                          | 1.9 µm                         | Using slip gauge set Grade "0", optical parallel and optical flat                               |
| Calipers <sup>5</sup>  | 0 mm to 300 mm                          | 9.0 µm                         | Using slip gauge set Grade "0"  |
| Height Gauge <sup>5</sup>  | 0 mm to 600 mm                          | 11 µm                          | Using surface plate, Grade "0" slip gauge set and length bars                                   |
| Thickness Gauge <sup>5</sup>   | 0 mm to 5 mm<br>0 mm to 50 mm           | 1.0 µm<br>6.0 µm               | Using Slip gauge set Grade "0"  |
| Feeler Gauge <sup>5</sup>  | 0.01 mm to 1 mm                         | 2.0 µm                         | Using Digital Micrometer  |
| Standard Foils <sup>5</sup>  | 0 µm to 5000 µm                         | 2.6 µm                         | Using Digital Micrometer  |
| Bore Gauge (2 point only) <sup>5</sup>   | 5 mm to 125 mm                          | 3.9 µm                         | Using master ring gauges or Grade '0' Slip Gauges   |
| <b>Mechanical</b>  |   |                                |   |
| Pressure (Pneumatic) Pressure and Vacuum Gauge (Dial/Digital) and Recorder/ Pressure Transducer/ Safety Valve <sup>5</sup> | -0.85 bar to 2 bar                      | 0.91 %                         | Using Fluke 729 Automatic Pressure calibrator   |
|  | 0.2 bar to 20 bar                       | 0.08 %                         | Using DH–Budenberg P542 Pneumatic calibrator  |
|  | 1 bar to 150 bar                        | 0.28 %                         | pneumatic calibrator Fluke P5513-20M Comparator with Reference pressure gauge, Fluke 2700G–G20M |
| Pressure (Hydraulic) Pressure Gauge (Dial/Digital) and Recorder Pressure Transducer <sup>6</sup>                           | 20 bar to 700 bar<br>20 bar to 1400 bar | 0.030 %<br>0.44 %              | Using Fluke P3116A Hydraulic Dead weight Tester   |

\* 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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|--|---|--|--|
| Vibration Meter/Analyzer <sup>5</sup>  | 10 m/s <sup>2</sup>   | 0.38 m/s <sup>2</sup>  | Using Calibration Exciter Type 4294, Bruel and Kjaer Make  |
| Sound Level Meter <sup>6</sup>   | 94 dB and 104 dB @ 1 kHz  | 0.6 dB   | Using Cirrus Research CR511F and CR514 acoustic calibrator   |
| Sound Level Calibrator <sup>6</sup>  | 94 dB and 114 dB @ 1 kHz  | 1.4 dB   | Using Cirrus CR162c sound level meter  |
| Velocity Hot Wire, Vane Type and Pitot Tube Anemometer <sup>6</sup>  | 2.5 m/s to 15 m/s (Vane anemometer) (Pitot)                       | 0.55 m/s<br>0.47 m/s   | Using WTM-1000, Laboratory grade, Bench top mini wind tunnel, Omega make and reference anemometer and reference pitot tube |
| Torque Wrenches (CW & CCW) <sup>5</sup>  | 10 N·m to 1000 N·m<br>1000 N·m to 3000 N·m                        | 0.71 %<br>0.4 %  | Using Stahlwille, Norbar Torque Transducers and calibration station  |
| Force – Compression Testing Machine (only on-site)   | 2 kN to 100 kN  | 0.08 %   | Morehouse 100 kN Tension/Compression Load cell   |
|  | 100 kN to 3000 kN   | 0.07 %   | Morehouse 3000 kN Compression Load cell  |
| Analytical / Laboratory Balance <sup>5</sup>   | 1 mg to 450 g<br>450 g to 5000 g                                  | 0.1 %<br>0.04 %  | Using E2 Class Weights   |
| Industrial Balance <sup>5</sup>  | 0 kg to 200 kg  | 28 g   | Using F1 and M1 class weight   |
| Weights <sup>5</sup>   | 100 g<br>200 g<br>500 g<br>1 kg<br>2 kg<br>5 kg<br>10 kg<br>20 kg | 8 mg<br>8.3 mg<br>8.3 mg<br>8 mg<br>9 mg<br>17 mg<br>15 mg<br>240 mg | Using mass comparator and E2, F2, M1 reference weights   |
| <b>Thermal</b>   |   |  |  |
| Temperature Controller / Indicator / Recorder / with Sensor / Thermometer / Thermocouple / RTD Sensor / Temperature Gauge / Transmitter <sup>5</sup> | -40 °C to 250 °C<br>250 °C to 660 °C                              | 0.094 °C<br>0.61 °C  | Using FLUKE 9144 Dry Block Metrology Well, Fluke 7103 Micro Bath / with Fluke 5628 PRT Secondary Standard                  |
| Infrared Thermometer <sup>5</sup>  | -15 °C to 120 °C<br>50 °C to 500 °C                               | 0.7 °C<br>1.0 °C   | Using FLUKE 4180 IR calibrator, Fluke 9132 IR Calibrator   |
| Oven / Incubator / Freezer <sup>5</sup>  | -195 °C to 419 °C   | 0.63 °C  | Using FLUKE 9142 temperature calibrator with FLUKE 5615 PRT secondary standard   |

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|--|--|--|--|
| Humidity meters / loggers / recorders <sup>5</sup> | 10 %RH to 95 %RH (@18 °C to 25 °C)   | 0.70 %   | Using Fluke 5128 A Humidity Generator  |
| <b>Electrical – DC/LF</b>                          |  |  |  |
| DC Current Generate <sup>3</sup>                   | 0 µA to 329.999 µA<br>0.33 mA to 3.29999 mA<br>3.3 mA to 32.9999 mA<br>33.0 mA to 329.999 mA<br>0.330 A to 1.09999 A<br>1.1 A to 2.99999 A<br>3.0 A to 10.9999 A<br>11 A to 20.5 A<br>20 A to 1000 A   | 16 nA + 0.04 %<br>0.02 %<br>0.06 %<br>0.02 %<br>0.06 %<br>0.11 %<br>0.08 %<br>0.08 %<br>0.50 % | Using FLUKE 5522 A / Fluke 9100 multifunction calibrator direct method<br><br>Using 50 Turn current coil |
| AC Voltage Generate <sup>3</sup>                   | (10 Hz to 500 Hz)<br>1.0 mV to 32.99 mV<br><br>(10 Hz to 500 kHz)<br>33 mV to 329.999 mV<br>0.33 V to 3.29999 V<br><br>(10 Hz to 100 kHz)<br>3.3 V to 32.9999 V<br><br>(45 Hz to 100 kHz)<br>33 V to 329.999 V<br><br>(45 Hz to 10 kHz)<br>330 V to 1020 V | 0.14 %<br><br>0.10 %<br>0.08 %<br><br>0.08 %<br><br>0.08 %<br><br>0.063 %                      | Using FLUKE 5522A / Fluke 9100 Multifunction Calibrator Direct Method                                    |
| AC Current Generate <sup>3</sup>                   | (50 Hz to 1 kHz)<br>0.029 mA to 0.32999 mA<br>0.33 mA to 3.29999 mA<br>3.3 mA to 32.9999 mA<br>33 mA to 329.999 mA<br>0.33 A to 2.99999 A<br>3 A to 20.5 A   | 0.40 %<br>0.11 %<br>0.27 %<br>0.06 %<br>0.08 %<br>0.19 %                                       | Using FLUKE 9100 and 5522A multifunction calibrator direct method  |
| AC High Current Generate <sup>3,5</sup>            | (50 Hz to 400 Hz)<br>20 A to 1000 A<br>1000 A to 4500 A  | 1.3 %<br>0.6 %   | Using FLUKE 9100 / 5522A/6003A Calibrator with Fluke 52120A/5500A high current coil                      |
| DC Voltage Generate <sup>3,5</sup>                 | 0 mV to 329.9999 mV<br>0.33 V to 3.299999 V<br>3.3 V to 32.99999 V<br>33 V to 329.9999 V<br>330 V to 1020.000 V  | 1 µV + 0.1 %<br>0.06 %<br>0.06 %<br>0.015 %<br>0.015 %   | Using FLUKE 5522 A / 9100 Multifunction calibrator direct only method                                    |

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|--|--|---|---|
| DC Resistance Generate <sup>3,5</sup>  | 0 Ω to 10.0 Ω<br>10.0 Ω to 100.0 Ω<br>100.0 Ω to 1.0 MΩ<br>1.0 MΩ to 100.0 MΩ<br>100.0 MΩ to 1100 MΩ   | 10 mΩ + 0.12 %<br>0.027 %<br>0.0079 %<br>0.070 %<br>1.8 % | Using FLUKE 5522A / 9100 Multifunction calibrator direct method (2-wire and 4-wire) |
| Frequency Generate <sup>3,5</sup>  | 0.01 Hz to 119.99 Hz<br>120.0 Hz to 1199.9 Hz<br>1.200 kHz to 11.999 kHz<br>12.00 kHz to 119.99 kHz<br>120.0 kHz to 1199.9 kHz<br>1.200 MHz to 2.000 MHz | 0.01 %<br>0.011 %<br>0.29 %<br>0.29 %<br>0.12 %<br>0.12 % | Using FLUKE 5522A Multifunction calibrator direct method                            |
| Rotational Speed Simulation (Contact / Non-Contact) <sup>5</sup>             | 10 rpm to 3000 rpm<br>3000 rpm to 999999 rpm   | 1 rpm<br>4 rpm  | Using Fluke 5522A using simulation method   |
| Capacitance Generate <sup>3,5</sup> (@ 1 kHz)                                | 220 pF to 1.00 nF<br>1.1 nF to 10.0 μF<br>10 μF to 1.0 mF<br>1 mF to 100 mF  | 3.9 %<br>0.28 %<br>0.61 %<br>0.92 %                       | Using FLUKE 5522A Multifunction calibrator direct method                            |
| LF Power Generate <sup>3,5</sup> (Active/ Reactive/ Apparent) (single-phase) | 0.008 W to 18 kW<br>(40 Hz to 70 Hz,<br>-1 PF to 1 PF)   | 0.47 %  | Using Fluke 6003A Power / Energy Calibrator   |
| LF Power Generate <sup>3,5</sup> (Active/ Reactive / Apparent) (3-phase)     | 0.008 W to 54 kW<br>(40 Hz to 70 Hz,<br>-1 PF to 1 PF)   | 0.35 %  | Using Fluke 6003A Power / Energy Calibrator   |
| DC Power Generate <sup>3,5</sup>   | 0.008 W to 25.2 kW   | 0.40 %  | Using Fluke 6003A Power / Energy Calibrator   |
| Energy Generate <sup>3,5</sup> (single-phase)                                | 1 V to 600 V<br>5 mA to 90 A<br>Maximum test duration 1000 hours (40 Hz to 70 Hz,<br>-1 PF to 1 PF)  | 2.8 %<br>(of output in kWh)                               | Using Fluke 6003A Power / Energy Calibrator   |
| Energy Generate <sup>3,5</sup> (3-phase)                                     | 1 V to 600 V (each channel)<br>5 mA to 30 A (each channel)<br>Maximum test duration 1000 hours (40 Hz to 70 Hz,<br>-1 PF to 1 PF)                        | 0.62 %<br>(of output in kWh)                              | Using Fluke 6003A Power / Energy Calibrator   |
| High Resistance Generate <sup>3,5</sup> (High voltage)                       | 10 kΩ to 10 GΩ<br>(@ 1575 V <sub>pk</sub> )<br>10 kΩ to 100 GΩ<br>(@ 10 kV <sub>pk</sub> )   | 1.6 %<br>1.6 %  | Using Fluke 5320A Electrical Tester Calibrator                                      |
| Leakage Current <sup>3,5</sup>   | 0.1 mA to 30 mA  | 0.70 %  | Using Fluke 5320A Electrical Tester Calibrator                                      |

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|--|--|--|--|
| Residual Current Device <sup>3,5</sup>   | Trip Current Ranges:<br>3 mA to 500 mA<br>500 mA to 3000 mA  | 0.31 %<br>2.8 %  | Using Fluke 5320A Electrical Tester Calibrator                     |
| Oscilloscope: <sup>3,5</sup><br>Time base<br>Bandwidth Amplitude<br><br>Rise Time                                    | 2 ns to 5 s<br>50 kHz to 600 MHz<br>10 mV to 6.6 v (50 Ω)<br>10 mV to 70 V (1 M Ω)<br>< 300 ps   | 0.06 ms<br>3.5 %<br>0.4 mV<br>0.4 mV<br>0.13 ns  | Using Fluke 5522A MFC with SC600 scope option                      |
| Temperature Simulation Temperature Indicator / Controller / Recorder / Test Kit / Universal Calibrator / Calibrators | 200°C to 800°C, Pt 385,100 Ω<br>-200°C to 630°C, Pt 3926,100 Ω<br>-200°C to 630°C, Pt 3916,100 Ω<br>-200°C to 630°C, Pt 385,200 Ω<br>-200°C to 630°C, Pt 385,500 Ω<br>-200°C to 630°C, Pt 385,1000 Ω<br>-80°C to 260°C, Pt Ni 385,120 Ω (Ni 120)<br>-100°C to 260°C, Cu 427, 10 Ω<br>600°C to 1820°C, B Type<br>0°C to 2316°C, C Type<br>-250°C to 1000°C, E Type<br>-210°C to 1200°C, J Type<br>-250°C to 1372°C, K Type<br>-200°C to 900°C, L Type<br>-200°C to 1300°C, N Type<br>0°C to 1767°C, R Type<br>0°C to 1767°C, S Type<br>-250°C to 400°C, T Type<br>-200°C to 600°C, U Type | 0.68°C<br>0.68°C<br>0.68°C<br>0.68°C<br>0.68°C<br>0.68°C<br>0.68°C<br>0.68°C<br>0.68°C<br>0.68°C<br>0.42°C<br>0.42°C<br>0.42°C<br>0.42°C<br>0.42°C<br>0.42°C<br>0.42°C<br>0.42°C<br>0.42°C | Using FLUKE and 5522A Multifunction calibrator – Simulation method |
| DC Voltage Measure <sup>4,5</sup>  | 0 mV to 100.0 mV<br>100 mV to 10.0 V<br>10.0 V to 100.0 V<br>100.0 V to 1000.0 V   | 4 nV + 0.006 %<br>0.006 %<br>0.006 %<br>0.006 %  | Using FLUKE 8846A digital multimeter                               |
| DC High Voltage Measure <sup>4,5</sup>   | 0.1 kV to 90 kV  | 0.29 %   | Using Vitrek 4700 & HVL 150  |
| AC Voltage Measure <sup>4,5</sup> (@ 50 Hz)  | 100 mV to 1 V<br>1 V to 10 V<br>10 V to 100 V<br>100 V to 1000 V   | 0.11 %<br>0.11 %<br>0.33 %<br>0.33 %   | Using FLUKE 8846A digital multimeter                               |
| AC High Voltage Measure <sup>4,5</sup> (@ 50 Hz)   | 0.1 kV to 70 kV  | 0.49 %   | Using Vitrek 4700 and HVL 150                                      |

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|--|---|--------------------------------------|---|
| DC Current Measure <sup>4</sup>  | 100 $\mu$ A to 1 mA   | 0.35 %                               | Using FLUKE 8846A digital multimeter                          |
|  | 1 mA to 10 mA   | 0.35 %                               |   |
|  | 10 mA to 100 mA   | 0.35 %                               |   |
|  | 100 mA to 1.0 A   | 0.064 %                              |   |
|  | 1 A to 3 A  | 0.08 %                               |   |
|  | 3 A to 10 A   | 0.18 %                               |   |
|  | 10 A to 20 A  | 0.18 %                               |   |
| DC Resistance Measure <sup>4,5</sup>   | 10 $\Omega$ to 100 $\Omega$                                       | 0.36 %                               | Using FLUKE 8846A digital multimeter                          |
|  | 100 $\Omega$ to 1 k $\Omega$                                      | 0.023 %                              |   |
|  | 1 k $\Omega$ to 10 k $\Omega$                                     | 0.023 %                              |   |
|  | 10 k $\Omega$ to 100 k $\Omega$                                   | 0.073 %                              |   |
|  | 100 k $\Omega$ to 1 M $\Omega$                                    | 0.073 %                              |   |
|  | 1 M $\Omega$ to 10 M $\Omega$                                     | 0.073 %                              |   |
|  | 10 M $\Omega$ to 100 M $\Omega$<br>100 M $\Omega$ to 1 G $\Omega$ | 0.073 %<br>1.4 %                     |   |
| Frequency Measure <sup>4,5</sup>   | 5 Hz to 1 MHz   | 0.12 %                               | Using FLUKE 8846A digital multimeter                          |
| Capacitance Measure <sup>4,5</sup>   | 1 nF to 1 mF  | 1.8 %                                | Using FLUKE 8846A digital multimeter                          |
|  | 1 mF to 100 mF  | 1.8 %                                |   |
| Temperature Measure <sup>4,5</sup>   | -200°C to 600°C   | 0.26°C                               | Using FLUKE 8846A digital multimeter (with RTD Pt- 100)       |
| Simulated Temperature (Temperature Indicator / Controller / Recorder / Test Kit / Universal Calibrator / Calibrators) <sup>4,5</sup> | -200°C to 800°C, Pt 385   | 0.46°C                               | Using FLUKE and 5522A Multifunction calibrator - Measure Mode |
|  | -200°C to 630°C, Pt 3926  | 0.46°C                               |   |
|  | -200°C to 630°C, Pt 3916  | 0.46°C                               |   |
|  | -200°C to 630°C, Pt 385   | 0.46°C                               |   |
|  | -80°C to 260°C, Pt Ni 385, 120 $\Omega$ (Ni 120)                  | 0.46°C                               |   |
|  | -100°C to 260°C, Cu 427, 10 $\Omega$                              | 0.46°C                               |   |
|  | 600°C to 1820°C, B Type   | 0.46°C                               |   |
|  | 0°C to 2316°C, C Type   | 0.46°C                               |   |
|  | -250°C to 1000°C, E Type  | 0.46°C                               |   |
|  | -210°C to 1200°C, J Type  | 0.46°C                               |   |
|  | -250°C to 1372°C, K Type  | 0.46°C                               |   |
|  | -200°C to 900°C, L Type   | 0.46°C                               |   |
|  | -200°C to 1300°C, N Type  | 0.46°C                               |   |
|  | 0°C to 1767°C, R Type   | 0.46°C                               |   |
|  | 0°C to 1767°C, S Type   | 0.46°C                               |   |
|  | -250°C to 400°C, T Type   | 0.46°C                               |   |
|  | -200°C to 600°C, U Type   | 0.46°C                               |   |
|  | -200°C to 630°C, Pt 385, 500 $\Omega$                             | 0.46°C                               |   |
|  | -200°C to 630°C, Pt 385, 1000 $\Omega$                            | 0.46°C                               |   |
|  | -80°C to 260°C, Pt Ni 385, 120 $\Omega$ (Ni 120)                  | 0.46°C                               |   |
|  | -100°C to 260°C, Cu 427   | 0.46°C                               |   |
|  | 600°C to 1820°C, B Type   | 0.46°C                               |   |
| 0°C to 2316°C, C Type  | 0.46°C  |                                      |   |
| -250°C to 1000°C, E Type   | 0.46°C  |                                      |   |

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|--|---|--|---|
| Simulated Temperature (Temperature Indicator / Controller / Recorder / Test Kit / Universal Calibrator / Calibrators) <sup>4,5</sup> continued   | -210°C to 1200°C, J Type<br>-250°C to 1372°C, K Type<br>-200°C to 900°C, L Type<br>-200°C to 1300°C, N Type<br>0°C to 1767°C, R Type<br>0°C to 1767°C, S Type<br>-250°C to 400°C, T Type<br>-200°C to 600°C, U Type | 0.46°C<br>0.46°C<br>0.46°C<br>0.46°C<br>0.46°C<br>0.46°C<br>0.46°C<br>0.46°C   | Using FLUKE and 5522A Multifunction calibrator - Measure Mode |
| <b>Chemical/Gas</b>  |   |  |   |
| Gas Detector Calibration <sup>6</sup><br>CO<br>O <sub>2</sub><br>Cl <sub>2</sub><br>H <sub>2</sub> S<br>LEL<br>CO <sub>2</sub><br>SO <sub>2</sub><br>VOC (iso- Butane)<br>NH <sub>3</sub><br>NO<br>NO <sub>2</sub> | 100 ppm<br>18.0 %<br>10 ppm<br>25 ppm<br>50 %<br>0.50 %<br>20 ppm<br>100 ppm<br>25 ppm<br>50 ppm<br>10 ppm  | 1.1 parts in 10 <sup>6</sup><br>0.11 %<br>0.067 parts in 10 <sup>6</sup><br>0.25 parts in 10 <sup>6</sup><br>0.68 %<br>2.1 parts in 10 <sup>6</sup><br>0.61 parts in 10 <sup>6</sup><br>1.7 parts in 10 <sup>6</sup><br>0.10 parts in 10 <sup>6</sup><br>1.4 parts in 10 <sup>6</sup><br>0.21 parts in 10 <sup>6</sup> | Using standard reference gas and calibration docking system   |

<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.

<sup>5</sup>The laboratory is also capable of site calibration, however, the uncertainties at site depend on the prevailing actual environmental conditions and master equipment used and may be higher than those achieved in the permanent laboratory.

<sup>6</sup>Only in permanent laboratory.

FS = full scale  
CW = clockwise  
CWW = counter-clockwise  
LF = low frequency  
PF = power factor  
pk = peak  
ppm = parts per million