

ACCREDITATION CERTIFICATE

LB-265-CAL

Dubai Accreditation Department

has accredited

Gray Mackenzie Engineering Services

Shed#118 Dry Docks, Al Jadaf

Dubai- United Arab Emirates

In accordance with the requirements of ISO/ IEC 17025: 2005 to undertake the tests in the field of:

Calibration

For the tasks listed in the attached Scope of Accreditation

This Accreditation is invalid without the attached scope of accreditation and shall remain in force within the validity period printed below, subject to continuing compliance with the requirements of the accreditation program.

Validity of Certificate: from 10- 08- 2016 to 09- 08- 2019

Initial Accreditation Date: 10- 08- 2016



Director, Dubai Accreditation Department



SCOPE OF ACCREDITATION Temperature Calibration

Gray Mackenzie Engineering Services

Shed#118 Dry Docks, Al Jadaf

Dubai- United Arab Emirates

Scope Issue No: 01

Accreditation Certificate No: LB-265-CAL

Scope Validity Period: 10-08-2016 to 09-08-2019

Issued by (Head of Section):

| DETAILS OF THE APPLICABLE RANGE OF CALIBRATION AND MEASUREMENT CAPABILITY FOR THE SCOPE OF ACCREDITATION | | | | |
|--|--|----------------------------|--|------------|
| Calibration Field/ Measured Quantity | Calibration Method | Range and Specification | Calibration Measurement Capability (CMC)* | Location |
| Calibration of thermocouples/RTD with digital temperature indicator | Comparison method No. GMES/LAB/LCP-04 | 35 °C up to 300 °C | 0.6 °C | Laboratory |
| Calibration of thermocouples/RTD with digital temperature indicator | Comparison method No. GMES/LAB/LCP-04 | >300 °C up to 660 °C | 1.0 °C | |

Note: For history details of accredited conformity assessment activities, please refer to Dubai Accreditation Department, Dubai Municipality.

- Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement 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. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



SCOPE OF ACCREDITATION
Pressure Calibration

Gray Mackenzie Engineering Services
Shed#118 Dry Docks, Al Jadaf
Dubai- United Arab Emirates

Scope Issue No: 01

Accreditation Certificate No: LB-265-CAL

Scope Validity Period: 10-08-2016 to 09-08-2019

Issued by (Head of Section):

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| DETAILS OF THE APPLICABLE RANGE OF CALIBRATION AND MEASUREMENT CAPABILITY FOR THE SCOPE OF ACCREDITATION | | | | |
|--|-----------------------------|----------------------------|--|------------|
| Calibration Field/ Measured Quantity | Calibration Method | Range and Specification | Calibration Measurement Capability (CMC)* | Location |
| pneumatic Pressure (gauge pressure) | LCP-01 based on BS EN 837-1 | 0.5 bar up to 28 bar | $1.0 \cdot 10^{-4} \cdot p_e + 0.50 \text{ mbar}$ | Laboratory |
| Hydraulic Pressure (gauge pressure) | LCP-01 based on BS EN 837-1 | 1 bar up to 60 bar | $2.0 \cdot 10^{-4} \cdot p_e + 2.0 \text{ mbar}$ | |
| | | >60 bar up to 1200 bar | $3.5 \cdot 10^{-4} \cdot p_e + 15 \text{ mbar}$ | |

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