



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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CALIBRATION

Valid To: September 30, 2012

Certificate Number: 2728.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations<sup>1</sup>:

I. Dimensional

| Parameter/Equipment | Range        | CMC <sup>2,4</sup> (±) | Comments                       |
|---------------------|--------------|------------------------|--------------------------------|
| Extensometers       | (0 to 25) mm | (0.061 % + 0.6R) μm    | Satec extensometers calibrator |

II. Mechanical

| Parameter/Equipment                                       | Range   | CMC <sup>2,4</sup> (±)                                   | Comments            |
|---|---|--|---------------------|
| Universal Machines – Tension Measurement <sup>3</sup>     | (49.03 to 490.33) N<br>(445.22 to 4452.21) N<br>(4.903 to 49.033) kN  | 0.31 %<br>0.069 %<br>0.033 %                             | ISO 7 500-1 and 376 |
| Universal Machines – Compression Measurement <sup>3</sup> | (49.03 to 490.33) N<br>(445.22 to 4452.21) N<br>(4.903 to 49.033) kN<br>(29.419 to 294.199) kN<br>(98.066 to 980.655) kN<br>(196.133 to 1961.33) kN | 0.14 %<br>0.18 %<br>0.19 %<br>0.25 %<br>0.15 %<br>0.15 % | ISO 7 500-1 and 376 |

| Parameter/Equipment  | Range   | CMC <sup>2,4</sup> (±)  | Comments                             |
|--|---|---|--------------------------------------|
| Indirect Verification of Rockwell and Rockwell Superficial Hardness Testers <sup>3</sup> | (61 to 80) HRA<br>(40 to 100) HRB<br>(20 to 65) HRC<br>(70 to 90) HR15N<br>(40 to 80) HR30N<br>(20 to 72) HR45N<br>(61 to 75) HR15T<br>(43 to 82) HR30T<br>(13 to 73) HR45T | 0.17 HRA<br>0.24 HRB<br>0.2 HRC<br>0.47 HR15N<br>0.14 HR30N<br>0.53 HR45N<br>0.62 HR15T<br>0.17 HR30T<br>0.66 HR45T | ISO 6508-2, ASTM E-18                |
| Indirect Verification of Brinell Hardness Testers <sup>3</sup>                           | (100 to 600) HBW  | 0.009 mm  | ISO 6506-2                           |
| Indirect Verification of Vickers and Micro-Vickers Hardness Testers <sup>3</sup>         | (400 to 718) HV<br>(100 to 600) HV  | 0.16 µm<br>0.09 µm  | ISO 6507-2, ASTM 384                 |
| Indirect Verification of Knoop Microhardness Testers <sup>3</sup>                        | (100 to 600) HK   | 0.27 µm   | ISO 6507-2, ASTM 384                 |
| Verification of Charpy Testers <sup>3</sup>  | (12 to 20) J<br>(88 to 115) J<br>(210 to 230) J   | 1.9 %<br>5.2 %<br>5.2 %   | ASTM E23                             |
| Pressure Gages, Transducers, and Transmitters <sup>3</sup>                               | (0 to 30) psi<br>(0 to 100) psi<br>(0 to 500) psi<br>(0 to 1000) psi<br>(0 to 10 000) psi   | 0.021 psi<br>0.097 psi<br>0.35 psi<br>0.79 psi<br>20 psi  | OIML R101, ASME B40.1, and OIML R109 |
| Vacuum <sup>3</sup>  | Up to -14.5 psi   | 0.012 psi   | OIML R101, ASME B40.1, and OIML R109 |

| Parameter/Equipment                        | Range          | CMC <sup>2,4</sup> ( $\pm$ ) | Comments             |
|--|----------------|------------------------------|----------------------|
| Torque <sup>3</sup> (Gauge and Indicators) | (1 to 2712) Nm | (0.26 % + 0.6R) Nm           | Torsional transducer |

<sup>1</sup> This laboratory offers commercial calibration service and field calibration service.

<sup>2</sup> 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. CMC's 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.

<sup>3</sup> Field calibration service is available for this calibration and this laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.

<sup>4</sup> In the statement of CMC, percentages are to be read as percent of reading, unless noted otherwise. In the statement of CMC,  $R$  is the numerical value of the resolution of the device in microinches.



The American Association for Laboratory Accreditation

World Class Accreditation

# Accredited Laboratory

A2LA has accredited

**METROLAB, S.A. DE C.V.**

*Nuevo Leon, Mexico*

for technical competence in the field of

**Calibration**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This laboratory also meets any additional program requirements in the field of calibration. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).

Presented this 23<sup>rd</sup> day of November 2010.



  
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Peter Meyer

President & CEO  
For the Accreditation Council  
Certificate Number 2728.01  
Valid to September 30, 2012

*For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.*