



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

END Lab, S.A. de C.V.

**Av. 517 #80, Col. San Juan de Aragón
Delegación Gustavo Madero, Ciudad de México, México. C.P. 07969**

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2017

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Electrical, Optical, Mechanical and Dimensional Calibration
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Initial Accreditation Date:

Issue Date:

Expiration Date:

June 18, 2012

April 26, 2024

August 31, 2026

Accreditation No.:

Certificate No.:

72269

L24-330

Tracy Szerszen
President

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlab.com

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084



Certificate of Accreditation: Supplement

END Lab, S.A. de C.V.

Av. 517 # 80, Col. San Juan de Aragón, Deleg. Gustavo Madero
Delegación Gustavo Madero, Ciudad de México, México C.P. 07969
Contact: Joaquin Gutierrez. Phone: 551-114-8355

Accreditation is granted to the facility to perform the following calibrations:

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Magnetic Particle Inspection Devices	Up to 10 000 A	9.1 A	Magnaflux 621318 S/N 81536 Digital Ammeter Magnaflux Magwerks / Gould Bass	ASTM-E709 and ASTM-E1444 TSI Inc /
Current AC/DC/ Time ^O	0.5 s to 3 s	0.038 s		
Gauss Meters (Magnetometers) ^F	Up to 100 G	0.058 G	Mahwerks HPS1- 3059A Helmholtz System Power	PR-TR-27

Optical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Light Meter – Irradiance Ultraviolet Light at Listed Wave Lengths: 320 nm to 380 nm ^F	200 $\mu\text{W}/\text{cm}^2$ to 7 000 $\mu\text{W}/\text{cm}^2$	13 $\mu\text{W}/\text{cm}^2$	CIE 69 Radiometer Photometer Model XR-3000	DSE-2000 Spectroline PR-TR-28
Light Meter – Illuminance Visible Light at Listed Wave Lengths: 380 nm to 760 nm ^F	5.38 Lux to 4 843.76 Lux	0.89 Lux		

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Indirect Verification of Leeb Hardness Tester Ld ^{FO}	785 HLd	16 HLd	Ld Test Block	ASTM-A 956

Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Ultrasonic Thickness Gages ^{FO}	2.5 mm to 12.5 mm	35 μm	PH-Tool Master Step	PR-TR-26



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Dimensional

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Ultrasonic Flaw Detector ^{FO}	25 mm to 250 mm	35 μ m	PH-Tool IIW Type 1	PR-TR-26

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically expressed at a confidence level of 95 % using a coverage factor k (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.
2. The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.
3. The presence of a superscript F means that the laboratory performs calibration of the indicated parameter at its fixed location.
4. The presence of a superscript O means that the laboratory performs calibration of the indicated parameter onsite at customer locations.
5. Measurement uncertainties obtained for calibrations performed at customer sites can be expected to be larger than the measurement uncertainties obtained at the laboratories fixed location for similar calibrations. This is due to the effects of transportation of the standards and equipment and upon environmental conditions at the customer site which are typically not controlled as closely as at the laboratories fixed location.