



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

CMC Metrology S.A. de C.V.
Paseos de Hidalgo del Parral 13739
Chihuahua, Chihuahua, Mexico, 31125

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 19 August 2024
Certificate Number: AC-2902



This laboratory 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 (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

CMC Metrology S.A. de C.V.
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Mauricio Sanchez
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CALIBRATION

Valid to: **August 19, 2024**

Certificate Number: **AC-2902**

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Rockwell Hardness Testers ¹	HRC Low Middle High	0.47 HRC 0.43 HRC 0.38 HRC	Hardness Blocks-ASTM E18-Indirect Verification
	HR15TW Low Middle High	0.33 HR15TW 0.31 HR15TW 0.44 HR15TW	
	HR15N Low Middle High	0.41 HR15N 0.43 HR15N 0.51 HR15N	
	HR30N Low Middle High	0.38 HR30N 0.39 HR30N 0.46 HR30N	
	HR30T Low Middle High	0.6 HR30TW 0.24 HR30TW 0.33 HR30TW	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Rockwell Hardness Testers ¹	HR45T Low Middle High	0.69 HR45TW 0.41 HR45TW 0.44 HR45TW	Hardness Blocks-ASTM E18-Indirect Verification
	HRA Low Middle High	0.26 HRA 0.18 HRA 0.17 HRA	
	HRBW Low Middle High	0.29 HRBW 0.33 HRBW 0.40 HRBW	
	HREW Low Middle High	0.20 HREW 0.52 HREW 0.53 HREW	
	HRHW Low High	0.46 HRHW 0.44 HRHW	
Brinell Hardness Tester ¹	HBW 10/3000 HIGH Diameter Hardness	0.015 mm 0.87 HBW	Indirect Verification method per ASTM E10
	HBW 10/3000 LOW Diameter Hardness	0.016 mm 0.65 HBW	
	HBW 10/1500 HIGH Diameter Hardness	0.015 mm 1.2 HBW	
	HBW 10/1500 LOW Diameter Hardness	0.014 mm 0.51 HBW	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Brinell Hardness Tester ¹	HBW 10/500 HIGH Diameter Hardness	0.016 mm 1.8-HBW	Indirect Verification method per ASTM E10
	HBW 10/500 LOW Diameter Hardness	0.017 mm 1.8 HBW	
	HBW 5/250 HIGH Diameter Hardness	0.012 mm 2.14 HBW	
	HBW 5/250 LOW Diameter Hardness	0.015 mm 1.3 HBW	
Leeb Hardness Testers ¹	533 HLD 764 HLD	6.8 HLD 9.9 HLD	Indirect verification method per ASTM A956/A956M
Dynamometers and Force Testers ¹ (Tension and Compression)	(4.4482 to 93.41) N (97.803 to 979.99) N (0.98 to 2.22) kN	0.094 % of reading 0.38 % of reading 0.25 % of reading	Master Weights and Load Cell-ISO7500-1
Universal Testing Machines ¹ (Tension and Compression)	(4.4482 to 93.41) N	0.10 % of reading	Master Weights-ISO7500-1
	(97.803 to 979.99) N	0.22 % of reading	Load Cell-ISO7500-1
	(0.98 to 6.7) kN	0.26 % of reading	
	(6.7 to 98.067) kN	0.28 % of reading	

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ($k=2$), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope
2. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-2902.



R. Douglas Leonard Jr., VP, PILR SBU