



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Calimet, S.A. de C.V.

***Ave. Las Puentes No. 1002A Col. Las Puentes 4º Sector,
San Nicolás de los Garza, Nuevo León, México C.P. 66460***

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

ISO/IEC 17025:2005

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):

Mechanical and Chemical Testing of Metals *(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:

Tracy Szerszen
President/Operations Manager

Initial Accreditation Date:

February 19, 2009

Issue Date:

October 25, 2019

Expiration Date:

December 31, 2021

Accreditation No.:

53226

Certificate No.:

L19-537

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

*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*



Certificate of Accreditation: Supplement

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Ave. Las Puentes No. 1002A Col. Las Puentes 4º Sector
 San Nicolás de los Garza, Nuevo León, México C.P. 66460
 Contact Name: Luzema Gonzalez Phone: 818-353-1745

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

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Mechanical ^F	Metallic Materials	Tension Testing	ASTM-E8 ASTM-A370	20 kgf to 45 000 kgf
		Notched Bar Impact Testing	ASTM-E23	1 lbf-ft to 290 lbf-ft
		Rockwell Hardness	ASTM-E18	20 HRC to 70 HRC
				40 HRB to 100 HRB
				74 HR15T to 93 HR15T
				37 HR30T to 83 HR30T
				62 HR15N to 85 HR15N
				27 HR30N to 67 HR30N
		Vickers Hardness	ASTM-E384	Vickers Indenter Under Test Forces 300 gf to 1 000 gf and 1 kgf to 30 kgf
		Brinell Hardness	ASTM-E10 ASTM-E110	Load 3 000 kgf
				Load 500 kgf
				Load 1 500 kgf Load 3 000 kgf
		Determining Average Grain Size	ASTM-E112	Table E112
	Tensile Strain-Hardening Exponents (n-values) of Metallic Sheet Materials	ASTM-E646	0.08 to 0.3	
Plastic Strain Ratio "r" for Sheet Metal	ASTM-E517	0.5 to 3		
Inclusion Content	ASTM-E45	Qualitative Visual		
Pipes, Plate	Guide Bend Test	ASTM-E190 ASTM-E290	Universal Machine Capacity 60 000 kgf. Bending Test Fixture Tinius Olsen, N° 210691 Capacity 15 000 kgf	
Chemical ^F	Carbon Steel and Low Alloy Steel	Analysis of Carbon and Low-Alloy Steel by Spark Atomic Emission Spectrometry	ASTM-E415	C 0.002 % to 1.40 %
				Si 0.001 % to 2 %
				Mn 0.000 5 % to 2.4 %
				P 0.000 2 % to 0.1 %



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Chemical ^F	Carbon Steel and Low Alloy Steel	Analysis of Carbon and Low-Alloy Steel by Spark Atomic Emission Spectrometry	ASTM-E415	S 0.000 2 % to 0.1 %
				Cr 0.000 5 % to 3 %
Mo 0.000 5 % to 1.5 %				
Ni 0.000 5 % to 4 %				
Cu 0.000 3 % to 1.4 %				
Al 0.001 % to 1%				
B 0.000 1 % to 0.1 %				
Ca 0.000 1 % to 0.01 %				
Co 0.001 % to 0.35 %				
Nb 0.001 % to 0.35 %				
Pb 0.000 1 % to 0.05 %				
Sb 0.002 5 % to 0.1 %				
Sn 0.000 5 % to 0.12 %				
Ti 0.000 2 % to 0.35 %				
V 0.000 9 % to 0.8 %				
W 0.005 % to 3 %				
Zn 0.000 1 % to 0.04 %				
Zr 0.001 % to 0.5 %				
Se 0.002 % to 0.5 %				
N 0.001 % to 0.15 %				
As 0.000 1 % to 0.5 %				
Stainless Steel	Analysis of Austenitic Stainless Steel by Spark Atomic Emission Spectrometry	ASTM-E1086	C 0.002 % to 1 %	
			Si 0.001 % to 3 %	
			Mn 0.000 5 % to 16 %	
			P 0.000 2 % to 0.1 %	
			S 0.000 2 % to 0.4 %	
			Cr 1.50 % to 35 %	
			Mo 0.000 5 % to 5 %	
			Ni 0.000 5 % to 46 %	
			Cu 0.000 3 % to 8.5 %	
			Al 0.001 % to 2.6 %	
			B 0.000 1 % to 1 %	
			Ca 0.000 1 % to 0.05 %	



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Chemical ^F	Stainless Steel	Analysis of Austenitic Stainless Steel by Spark Atomic Emission Spectrometry	ASTM-E1086	Co 0.001 % to 1.2 % Nb 0.001 % to 3 % Pb 0.000 5 % to 0.4 % Sn 0.000 5 % to 0.25 % Ti 0.000 2 % to 3.2 % V 0.000 9 % to 0.5 % W 0.005 % to 0.8 % Zn 0.000 1 % to 0.04 % Zr 0.001 % to 0.25 % Se 0.002 % to 1.5 % N 0.001 % to 0.45 %
	Cast Iron	Analysis of Cast Iron by Spark Atomic Emission Spectrometry	ASTM-E1999	C 0.002 % to 5 % Si 0.001 % to 4.8 % Mn 0.000 5 % to 2.4 % P 0.000 2 % to 1 % S 0.000 2 % to 0.2 % Cr 0.000 5 % to 3 % Mo 0.000 5 % to 1.5 % Ni 0.000 5 % to 4 % Cu 0.000 3 % to 1.4 % Al 0.001 % to 1 % B 0.000 1 % to 0.2 % Ca 0.000 1 % to 0.01 % Co 0.001 % to 0.2 % Mg 0.002 % to 0.5 % Nb 0.001 % to 0.3 % Pb 0.000 5 % to 0.02 % Sb 0.000 1 % to 0.2 % Sn 0.000 5 % to 0.2 % Ti 0.000 2 % to 0.35 % V 0.000 9 % to 0.8 %



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Chemical ^F	Cast Iron	Analysis of Cast Iron by Spark Atomic Emission Spectrometry	ASTM-E1999	W 0.000 1 % to 0.13 %
				Zn 0.000 1 % to 0.04 %
				Zr 0.001 to % 0.1 %
				Se 0.002 to % 0.5 %
				N 0.001 % to 0.5 %
				As 0.000 1 % to 0.5 %
				Bi 0.000 1 % to 0.5 %
	Ce 0.000 1 % to 0.5 %			
	Aluminum and Aluminum Alloys	Analysis of Aluminum and Aluminum Alloys by Spark Atomic Emission Spectrometry	ASTM-E1251	Si 0.000 3 % to 25 %
				Fe 0.000 5 % to 6 %
				Cu 0.000 1 % to 15 %
				Mn 0.000 2 % to 13.5 %
				Mg 0.000 2 % to 12 %
				Cr 0.000 2 % to 0.7 %
Ni 0.000 1 % to 3 %				
Zn 0.000 5 % to 12 %				
Ti 0.000 2 % to 0.55 %				
B 0.000 2 % to 0.01 %				
Be 0.000 1 % to 0.1 %				
Ca 0.000 1 % to 0.05 %				
Co 0.000 1 % to 1.6 %				
Na 0.000 1 % to 0.05 %				
Pb 0.000 2 % to 1.4 %				
Sn 0.001 % to 1 %				
Sr 0.000 1 % to 0.15 %				
V 0.000 2 % to 0.1 %				
Zr 0.000 01 % to 0.3 %				
P 0.000 5 % to 0.01 %				
Sb 0.000 5 % to 1 %				
Cd 0.000 1 % to 0.5 %				
Bi 0.000 1 % to 0.5 %				



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Chemical ^F	Steel, Iron, Nickel, Cobalt, Carbides, Copper Base, Ores, Aluminum, Ferroalloys, Slags, Ceramics	Determination of Carbon and Sulfur in Steel, Iron, Nickel and Cobalt Alloys by Combustion Techniques	ASTM-E1019	C 0.000 4 % to 4.5 %
				S 0.000 4 % to 0.4 %
	Aluminum and Aluminum Base Alloys	Chemical Analysis of Aluminum and Aluminum Base Alloys	ASTM-E34	Cu 0.001 % to 20 %
				Mg 0.001 % to 12 %
				Fe 0.001 % to 3 %
				Mn 0.001 % to 2 %
				Ni 0.001 % to 4 %
				Zn 0.001 % to 12 %
				Pb 0.001 % to 1 %
	Copper and Copper Alloys	Copper and Copper Alloys by Atomic Absorption	NMX-W-165-SCFI-2015	Al 0.001 % to 20 %
				Fe 0.001 % to 12 %
				Mn 0.001 % to 15 %
				Pb 0.001 % to 34 %
Sn 0.001 % to 20 %				
Zn 0.001 % to 50 %				
Carbon Steel and Low Alloy	Chemical Analysis of Carbon Steel, Low Alloy Steel, Silicon Electrical Steel, Ingot Iron and Wrought Iron by Atomic Absorption	ASTM-E350	Al 0.001 % to 1.5 %	
			Sb 0.001 % to 0.03 %	
			Cr 0.001 % to 3.99 %	
			Co 0.001 % to 0.3 %	
			Cu 0.001 % to 1.5 %	
			Pb 0.001 % to 0.5 %	
			Mn 0.001 % to 2.5 %	
			Mo 0.001 % to 1.5 %	
Ni 0.001 % to 5 %				
P 0.001 % to 0.25 %				



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Chemical ^F	Carbon Steel and Low Alloy	Chemical Analysis of Carbon Steel, Low Alloy Steel, Silicon Electrical Steel, Ingot Iron and Wrought Iron by Atomic Absorption	ASTM-E350	Si 0.001 % to 5 %
				Sn 0.001 % to 0.1 %
				Ti 0.001 % to 0.6 %
				V 0.001 % to 0.5 %
	Cast Iron	Chemical Analysis of Cast Iron All Types	ASTM-E351	Al 0.001 % to 0.5 %
				Sb 0.001 % to 0.03 %
				Cr 0.001 % to 4.5 %
				Co 0.001 % to 7.5 %
				Cu 0.001 % to 0.15 %
				Pb 0.001 % to 0.15 %
				Mg 0.001 % to 0.1 %
				Mn 0.001 % to 2.5 %
				Mo 0.001 % to 5 %
				Ni 0.001 % to 36 %
				P 0.001 % to 0.9 %
Si 0.001 % to 6 %				
Sn 0.001 % to 0.35 %				
Ti 0.001 % to 0.2 %				
V 0.001 % to 0.5 %				
Zn 0.001 % to 0.2 %				
Zinc and Zinc Alloys	Chemical Analysis of Zinc and Zinc Alloys	ASTM-E536	Al 0.001 % to 4.5 %	
			Sb 0.001 % to 0.003 %	
			Cr 0.001 % to 0.004 %	
			Cu 0.001 % to 1.6 %	
			Pb 0.001 % to 1.6 %	
			Mn 0.001 % to 0.01%	
			Ni 0.001 % to 0.006 %	
			Cd 0.001 % to 0.013 %	
			Mg 0.001 % to 0.1 %	
			Sn 0.001 % to 0.12 %	
Fe 0.001 % to 0.1 %				



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Chemical ^F	Metal	Corrosion Visual	ASTM-B117, G85, D610, D714	Qualitative Visual
No Destructive Testing	Metal	Visual Inspection	AWS D1.1	Qualitative Evaluation
		Penetrant Liquid		
		Ultrasonic Testing		
		Magnetic Particle		

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer^F would mean that the laboratory performs this testing at its fixed location.

