CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Verichek Technical Services, Inc.
3000 Industrial Blvd.
Bethel Park, PA 15102

Fulfills the requirements of

ISO/IEC 17025:2017

In the fields of

CALIBRATION and **TESTING**

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.

Jason Stine, Vice President

Expiry Date: 15 July 2027

Certificate Number: L1190-1

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

Verichek Technical Services, Inc.

3000 Industrial Blvd.
Bethel Park, PA 15102

Evan T. Sivetz 412-854-1800

CALIBRATION AND TESTING

ISO/IEC 17025 Accreditation Granted: **15 July 2025**

Certificate Number: **L1190-1** Certificate Expiry Date: **15 July 2027**

CALIBRATION

Chemical Quantities

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Spark Atomic Emission Spectrometers [1, 2] (Optical Emission Spectrometers)	Al	0.018 % by Weight	ASTM E305
	C	0.009 9 % by Weight	
	Ca	0.006 5 % by Weight	
	Co	0.036 % by Weight	
	Cr	0.01% by Weight	
	Co	0.036 % by Weight	
	Cu	0.081% by Weight	
	Pb	0.017 % by Weight	
	Mn	0.11% by Weight	
	Mo	0.02 % by Weight	
	N	0.005 9 % by Weight	
	Ni	0.08 % by Weight	
	Nb	0.008 3 % by Weight	
	P	0.006 2 % by Weight	
	S	0.005 9 % by Weight	
	Si	0.06 % by Weight	
	Sn	0.005 9 % by Weight	
	Ti	0.008 6 % by Weight	
	V	0.009 9 % by Weight	
	W	0.012 % by Weight	

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Chemical Quantities

Parameter/ Equipment	Handheld X-Ray Fluorescence Spectrometer [2]			
Reference Standard, Method, and/or Equipment	ISO Guide 33:2015, Section 10			
Range	**Expanded Uncertainty of Measurement (+/-)**			
	% by Weight			
Chemical Composition	Cu Matrix	Fe Matrix	Al Matrix	Ni Matrix
Al	0.046	0.054	0.18	0.17
Bi	-	-	0.009	
Co	0.018	0.047		0.025
Cr	-	0.09	0.02	0.096
Cu	0.099	0.012	0.16	0.015
Fe	0.055	0.13	0.026	0.18
Mg	-	-	0.2	-
Mn	0.009	0.047	0.012	0.032
Mo	-	0.011	-	0.039
Nb	-	0.012	-	-
Ni	0.011	0.065	0.11	0.15
P	-	0.011	-	0.024
Pb	0.038	-	0.01	-
S	0.011	-	-	-
Se	-	-	-	0.011
Si	0.025	0.019	0.07	0.039
Sn	0.026	-	-	
Ti	-	0.026	-	0.039
V	-	0.015	-	0.015

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Chemical Quantities

Parameter/ Equipment	Handheld X-Ray Fluorescence Spectrometer [2]			
Reference Standard, Method, and/or Equipment	ISO Guide 33:2015, Section 10			
Range	**Expanded Uncertainty of Measurement (+/-)**			
	% by Weight			
Chemical Composition	Cu Matrix	Fe Matrix	Al Matrix	Ni Matrix
W	-	0.013	-	0.036
Zn	0.082	-	0.01	-

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Rockwell Hardness Testing Machines [1]	HRC Low Mid High	 0.8 HRC 0.87 HRC 0.63 HRC	Indirect Verification per ASTM E18
Brinell Hardness Testing Machines [1]	HBW 10/3000 193 HBW 205 HBW 221 HBW	 0.008 9 HBW 0.008 6 HBW 0.008 8 HBW	Indirect Verification per ASTM E10

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TESTING

Chemical

Specific Tests and/or Properties Measured[1]	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Chemical Analysis [1]	ASTM E415 ASTM E1476 ASTM E1916	Metals	Elemental Analysis (OES and X-Ray)
Positive Metal Identification [1]	ASTM E1476 ASTM E1916	Metals	Sorting-Qualitative (OES and X-Ray)

Mechanical Testing

Specific Tests and/or Properties Measured[1]	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Rockwell Hardness	ASTM E18	Metals	Rockwell Hardness Testing Machine
Brinell Hardness	ASTM E10	Metals	Brinell Harness Testing Machine
Leeb Hardness [1] (20 to 999) HL	ASTM A956	Metals	Leeb Hardness Tester
Coating Thickness	ASTM B568	Zinc on Steel	X-Ray Fluorescence (XRF)

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/testing 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. The uncertainty of measurement varies depending upon the element (matrix) involved. Uncertainty estimates are available upon request.

Jason Stine, Vice President

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