SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
& ANSI/NCSL Z540-1-1994

FISCHER TECHNOLOGY, INC. USA
750 Marshall Phelps Road
Windsor, CT 06095
George Hoag Phone: 860 683 0781

CALIBRATION

Valid To: August 31, 2023 Certificate Number: 3576.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1, 6]:

I. Dimensional

Parameter/Equipment	Range	CMC[2, 4, 5] (±)	Comments
Coating Thickness[3] – Measuring Equipment	Up to 5 µin thin layer (5 to 2800) µin	11 % 3.5 %	ASTM B568 X-ray fluorescence
	Up to 900 µin alloy thickness Up to 99.9 % alloy composition	5.2 % 3.5 %	ASTM B568 X-ray fluorescence
	Up to 1 mils (1 to 1200) mils	1.7 % 0.8 %	Eddy current & magnetic induction, ASTM B244, E376
	Up to 5 mils (5 to 30) mils	6.0 % 5.0 %	ASTM B567 beta backscatter
	Up to 3000 µin	5.0 %	ASTM B504 coulometric method
	Up to 1 mils	7.0 %	Plated Cu over epoxy ASTM E376 eddy current

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Coating Thickness Standards	Up to 5 µin thin layer (5 to 2800) µin Up to 900 µin alloy thickness Up to 99.9 % alloy composition Up to 2 mils (2 to 1200) mils Up to 5 mils (5 to 30) mils Up to 3000 µin Up to 1 mils	11 % 3.5 % 5.2 % 3.5 % 1.7 % 0.8 % 6.0 % 5.0 % 5.0 % 4.0 %	ASTM B568 X-ray fluorescence ASTM B568 X-ray fluorescence Digital indicator/ micrometer ASTM B567 - 14 beta backscatter ASTM B504 coulometric method Plated Cu over epoxy ASTM E376 eddy current

II. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC[2, 4, 5] (±)	Comments
Electrical Conductivity – Measuring Equipment	Up to 16 % IACS (>16 to 35) % IACS (>35 to 62) % IACS (>62 to 104) % IACS	2.0 % 1.0 % 0.35 % 1.0 %	ASTM E1004-17 electrical conductivity by eddy current % IACS – International annealed copper standard
Electrical Conductivity Standards	Up to 16 % IACS (>16 to 35) % IACS (>35 to 62) % IACS (>62 to 104) % IACS	2.0 % 1.0 % 0.35 % 1.0 %	ASTM E1004-17 electrical conductivity by eddy current %IACS – International annealed copper standard

III. Magnetic Quantities

Parameter/Equipment	Range	CMC[2, 4, 5] (±)	Comments
Ferrite Content[3] – Measuring Equipment	(0 to 6) FN (6 to 140) FN	0.6 FN 10 %	ASTM A799 / A799M ferrite content by magnetic induction FN – ferrite number
Ferrite Content Standards	(0 to 6) FN (6 to 140) FN	0.6 FN 10 %	ASTM A799 / A799M ferrite content by magnetic induction FN – ferrite number

IV. Mechanical

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Indirect Verification of Instrumented Indentation Hardness Testers (Martens)	4000 HM	4.0 %	ISO 14577 HM – Martens hardness
Calibration of Standardized Instrumented Indentation Test Blocks	4000 HM	4.0 %	ISO 14577 HM – Martens hardness

[1] This laboratory offers commercial calibration service and field calibration service.

[2] Calibration and Measurement Capability Uncertainty (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. CMCs 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 Uncertainty due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

[3] Field calibration service is available for this calibration. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC Uncertainty 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 Uncertainty.

[4] In the statement of CMC, the value is defined as the percentage of reading, unless otherwise noted.

[5] The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.

[6] This scope meets A2LA's *P112 Flexible Scope Policy*.

Accredited Laboratory

A2LA has accredited

FISCHER TECHNOLOGY, INC. USA

Windsor, CT

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and R205 – Specific Requirements: Calibration Laboratory Accreditation Program. 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*).

Presented this 23rd day of July 2021.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3576.01
Valid to August 31, 2023

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