



This certificate is granted and awarded by the authority of the Nadcap Management Council to:

NSL Metallurgical

***4535 Renaissance Parkway
Cleveland, OH 44128
United States***

This certificate demonstrates conformance and recognition of accreditation for specific services, as listed in www.eAuditNet.com on the Qualified Manufacturer's List (QML), to the revision in effect at the time of the audit for:

Materials Testing Laboratories

Certificate Number: 4991220438
Expiration Date: 30 November 2025
Accreditation Length: 24 Months

Jay Solomond
Executive Vice President & Chief Operating Officer

SCOPE OF ACCREDITATION

Materials Testing Laboratories

NSL Metallurgical
4535 Renaissance Parkway
Cleveland, OH 44128

This certificate expiration is updated based on periodic audits. The current expiration date and scope of accreditation are listed at: www.eAuditNet.com - Online QML (Qualified Manufacturer Listing).

In recognition of the successful completion of the PRI evaluation process, accreditation is granted to this facility to perform the following:

AC7000 Rev A - AUDIT CRITERIA FOR NADCAP ACCREDITATION

AC7101/1 Rev G - Nadcap Audit Criteria for Materials Testing Laboratories – General Requirements for All Laboratories (to be used on audits BEFORE 10-Dec-2023)

AC7101/3 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Mechanical Testing (to be used on audits on/after 4 December 2016)

- (A) Room Temperature Tensile
- (N) Impact
- (XN) Bend Testing

AC7101/4 Rev F - Nadcap Audit Criteria for Materials Testing Laboratories – Metallography and Microindentation Hardness (to be used on/after 14 August, 2016)

- (L0) Metallographic Evaluation
- (L1) Microindentation (Interior)
- (L10) Near Surface Examinations – Carburization / Decarburization
- (L11) Grain Size
- (L12) Inclusion Rating
- (L2) Near Surface Examinations – Alloy Depletion
- (L3) Near Surface Examinations – Oxidation/Corrosion
- (L5) Near Surface Examinations – Microindentation (Surface–Case Depth)
- (L6) Near Surface Examinations – Nitriding
- (L7) Near Surface Examinations – IGA, IGO
- (L8) Near Surface Examinations – Alpha Case: Wrought Titanium
- (XL) Macro Examination

AC7101/5 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Hardness Testing (Macro) (to be used on audits BEFORE 07-May-2023)

- (M1) Brinell Hardness

- (M2) Rockwell Hardness
- (M3) Vickers Hardness

AC7101/6 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Corrosion (to be used on/after 1 July 2018)

- (Q1) Detecting susceptibility to intergranular attack in austenitic stainless steel
 - (Q1–1) Oxalic Acid Etch Test
 - (Q1–4A) Copper–Copper Sulfate– 16% Sulfuric Acid Test “Strauss test” (bend test)

AC7101/7 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Mechanical Testing Specimen Preparation (to be used on audits on/after 15 May 2016)

- (Z) Standard Specimen Machining

AC7101/9 Rev C - Nadcap Audit Criteria for Materials Testing Laboratories – Specimen Heat Treating (to be used on/after 15 January 2017)

AC7101/11 Rev C - Nadcap Audit Criteria for Materials Testing Laboratories – Fastener Testing (to be used on audits on/after 25 October 2015)

- (40L10) Metallography – Decarburization / Carburization
- (40L2) Metallography – Alloy Depletion
- (40L25) Metallography – Grain Size
- (40L3) Metallography – Oxidation / Corrosion
- (40L7) Metallography – IGA / IGO
- (40L8) Metallography –Alpha Case: Wrought Titanium
- (6–L5) Hardness – Microindentation Hardness
- (6–M2) Hardness – Rockwell
- (6–M3) Hardness – Vickers
- (8–A) Tensile Test – Axial Tensile
- (8–P) Tensile Test – Proof Load (nuts / screws)
- (8–W) Tensile Test – Wedge Tensile

Lab Type - Lab Type

Independent