



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 Manufacturers List (QML), to the revision in effect at the time of the audit for:

Materials Testing

Certificate Number: 4991181572
Expiration Date: 31 October 2020

Joseph G. Pinto
Executive Vice President and Chief Operating Officer



SCOPE OF ACCREDITATION

Materials Testing

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:

AC7101/1 Rev F - Nadcap Audit Criteria for Materials Testing Laboratories – General Requirements for All Laboratories (to be used on/after 14 Sept 2014)

AC7101/3 Rev D - Nadcap Audit Criteria for Materials Test 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 Test 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 Test Laboratories – Hardness Testing (Macro) (to be used on audits on/after 22 March 2015)

- (M1) Brinell Hardness
- (M2) Rockwell Hardness
- (M3) Vickers Hardness

AC7101/6 Rev D - Nadcap Audit Criteria for Materials Test 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 Test Laboratories – Mechanical Testing Specimen Preparation (to be used on audits on/after 15 May 2016)

- (Z) Standard Specimen Machining

AC7101/9 Rev B - Nadcap Audit Criteria for Materials Test Laboratories – Specimen Heat Treating (to be used on/after 28 August, 2011 and before 15 January 2017)

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

- (6–L5) Hardness – Microindentation Hardness
- (6–M2) Hardness – Rockwell
- (8–A) Tensile Test – Axial Tensile
- (8–W) Tensile Test – Wedge Tensile

Lab Type - Lab Type

Independent