



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

IMR Test Labs

*131 Woodsedge Drive
Lansing, NY 14882
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: 3262181167
Expiration Date: 31 January 2020

Joseph G. Pinto
Executive Vice President and Chief Operating Officer



SCOPE OF ACCREDITATION

Materials Testing

IMR Test Labs
131 Woodsedge Drive
Lansing, NY 14882

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)

AC7101/2 Rev D - Nadcap Audit Criteria for Materials Test Laboratories – Chemical Analysis (to be used on audits on/after 22 March 2015)

(F) Atomic or Optical Emission Spectroscopy (AES or OES)

(F2) Atomic Emission Spectroscopy – Inductively Coupled Plasma (ICP–OES/AES)

(F3) Atomic Emission Spectroscopy – Spark/Arc (S/A–OES)

(G) Elemental Analysis (Combustion or Fusion)

(G1) – Carbon

(G2) – Hydrogen

(G3) – Nitrogen

(G4) – Oxygen

(G5) – Sulfur

(S) X–Ray Fluorescence (XRF)

(V) Mass Spectrometry

Specify the Alloy Base for Accreditation

Al Base

Co Base

Cu Base

Fe Base

Mg base

Ni Base

Ti Base

**AC7101/3 Rev C - Nadcap Audit Criteria for Materials Test Laboratories – Mechanical Testing
(to be used on/after 28 August, 2011)**

- (A) Room Temperature Tensile
- (B) Elevated Temperature Tensile
- (N) Impact
- (O) High Cycle Fatigue
- (P) Fracture Toughness
- (XE) Crack Propagation/Crack Growth Testing
- (XN) Bend Testing
- (Y) Low Cycle Fatigue

**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)
- (L5X) Near Surface Examinations – Microindentation (Surface) (Chord Method ARP1820)
- (L6) Near Surface Examinations – Nitriding
- (L7) Near Surface Examinations – IGA, IGO
- (L8) Near Surface Examinations – Alpha Case: Wrought Titanium
- (L9) Near Surface Examinations – Alpha Case: Cast 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 C - Nadcap Audit Criteria for Materials Test Laboratories – Corrosion (to be
used before 1 July 2018)**

- (Q) Corrosion (General)
- (Q1) Stress Corrosion

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
- (Z2) Low Stress Grinding and Polishing
- (Z3) Cast Specimens
- (Z4) Special Preparation

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)

AC7109/5 Rev G - Nadcap Audit Criteria for Coating Evaluations (Laboratory) (Req'd for all Coatings audits - except suppliers using Nadcap approved AC7109/5 labs) (to be used on audits on/after 3 December, 2017)

- Bond Strength – Bend
- Bond Strength – Tensile
- Coating Composition by Electron Microscopy
- Hardness – Rockwell
- Metallography/Microstructure
- Microindentation Hardness – Vickers
- Thickness – Metallographic

AC7110/13 Rev B - Nadcap Audit Criteria for Evaluation of Welds to be used ON OR AFTER 5 MAY 2013

DO NOT CHECK – INFORMATION ONLY – IF YOU ARE SELECTING THE AC7110/13 CHECKLIST YOU MUST ALSO SELECT AC7101/4 – Nadcap Audit Criteria for Materials Test Laboratories – Metallography and Microhardness

Supplement A – Metallurgical Evaluation of Welder / Welding Operator Qualifications (identify if this process is used)

Supplement B – Metallurgical Evaluation of Fusion Welds (identify if this process is used)

Supplement C – Metallurgical Evaluation of Electron Beam / Laser Welds (identify if this process is used)

Supplement D – Metallurgical Evaluation of Resistance Welds (identify if this process is used)

Supplement E – Bend Test Evaluation of Electron Beam and Laser (for other testing purposes)

Supplement E – Bend Test Evaluation of Fusion Welds (for other testing purposes)

Supplement E – Bend Test Evaluation of Welder/Welding Operator Qualification Welds

AC7110/13S Rev D - Nadcap Supplemental Audit Criteria for Evaluation of Welds to be used on audits ON OR AFTER 11 January 2015)

- U10 GE Aviation
- U13 Bombardier
- U2 Pratt & Whitney
- U3 Rolls–Royce plc

IMR Test Labs
Lansing, NY

#4

ISO/IEC - Currently accredited by an ILAC approved source

Lab Type - Lab Type
Independent