

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

IMR Test Labs - Singapore Pte Ltd

30 Loyang Way #03-16 Singapore, 508769 Singapore

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 Laboratories

Certificate Number: 10951228084 Expiration Date: 31 August 2024 Accreditation Length: 18 Months

Jay Solomond

Executive Vice President & Chief Operating Officer



SCOPE OF ACCREDITATION

Materials Testing Laboratories

IMR Test Labs - Singapore Pte Ltd 30 Loyang Way #03-16 Singapore, 508769 Singapore

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)

AC7101/2 Rev E - Nadcap Audit Criteria for Materials Testing Laboratories – Chemical Analysis (to be used on audits on/after 30 August 2020)

- (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

Specify the Alloy Base for Accreditation

Al Base

Co Base

Cu Base

Fe Base

Ni Base

Ti Base

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
- (B) Elevated Temperature Tensile
- (C) Stress Rupture

(XA) Creep

t-frm-0004 29-May-20

(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
- (L9) Near Surface Examinations Alpha Case: Cast Titanium
- (XL) Macro Examination

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

(M2) Rockwell Hardness

AC7109/5 Rev H - 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 13-Feb-2022)

Bond Strength - Tensile

Coating Composition by Electron Microscopy

Erosion - Ambient

Hardness - Rockwell

Hardness - Scratch

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

NOTE: IF YOU ARE SELECTING THE AC7110/13 CHECKLIST YOU MUST ALSO SELECT AC7101/4 – Nadcap Audit Criteria for Materials Testing Laboratories – Metallography and Microhardness. You must also select AC7110/13S

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)

t-frm-0004 29-May-20

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 E - Nadcap Supplemental Audit Criteria for Evaluation of Welds (to be used on audits on/AFTER 13-Aug-2023)

U2 Pratt & Whitney U3 Rolls Royce

ISO/IEC - Currently accredited by an ILAC approved source

Lab Type - Lab Type

Independent

t-frm-0004 29-May-20