Nadcap℠
Administered by PRI

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

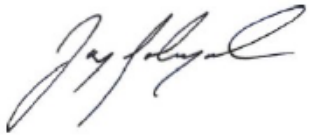
IMR Test Labs - Singapore Pte Ltd

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: 10951190433
Expiration Date: 30 November 2022
Accreditation Length: 18 Months



Jay Solomond
Executive Vice President & Chief Operating Officer

Performance Review Institute (PRI) | 161 Thorn Hill Road | Warrendale, PA 15086-7527

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:

AC7101/1 Rev G - Nadcap Audit Criteria for Materials Testing Laboratories – General Requirements for All Laboratories (to be used on audits on/after 5 May 2019)

AC7101/2 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Chemical Analysis (to be used on audits before 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

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

(M2) Rockwell Hardness

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 BEFORE 13-Feb-2022)

Bond Strength – Tensile
Erosion – Ambient
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

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)
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
U2 Pratt & Whitney
U3 Rolls–Royce plc

ISO/IEC - Currently accredited by an ILAC approved source

Lab Type - Lab Type
Independent