



SCOPE OF ACCREDITATION

Materials Testing

Metals Engineering & Testing Lab

2040 W. Quail Avenue
Phoenix, AZ 85027

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:

AC7006 Rev G - Audit Criteria Equivalent to ISO/IEC 17025

Chemical Analysis

- CH– Atomic Emission Spectroscopy – Inductively Coupled Plasma (ICP) / ASTM E1479
- CH– Elemental Analysis (Combustion or Fusion) – Carbon / ASTM E1019
- CH– Elemental Analysis (Combustion or Fusion) – Sulfur / ASTM E1019
- CH– OES Analysis of Carbon Alloy Steel / ASTM E415
- CH– OES Analysis of Carbon and Low–Alloy Steel / ASTM E415
- CH– OES Analysis of Stainless Steel by the Point–To–Plane Excitation Technique / ASTM E1086

Mechanical Testing

- M– Bend Testing / ASTM E290
- M– Charpy Impact / ASTM E23
- M– Hardness Testing – Brinell Hardness / ASTM E10
- M– Hardness Testing – Rockwell Hardness / ASTM E18
- M– Metallography – Alpha Case / ASTM E3
- M– Metallography – Alpha Case / ASTM E407
- M– Metallography – Chord Method / ARP 1820
- M– Metallography – Decarburization / ASTM E3
- M– Metallography – Decarburization / ASTM E384
- M– Metallography – Effective Case Depth / ASTM E384
- M– Metallography – General / ASTM E112
- M– Metallography – Grain Size (Nickel Alloys) / ASTM E112
- M– Metallography – Grain Size / ASTM E112
- M– Metallography – IGA/IGO
- M– Metallography – Inclusion Rating / ASTM E45
- M– Metallography – Macroetching / ASTM E3

- M– Metallography – Macroetching / ASTM E340
- M– Metallography – Macroetching / ASTM E381
- M– Metallography – Microetching / ASTM E407
- M– Microhardness Testing, Knoop / ASTM E384
- M– Microhardness Testing, Vickers / ASTM E384
- M– Room Temperature Tensile (Standard Test Methods of Tension Testing Wrought and Cast Aluminum– and Magnesium–Alloy Products) / ASTM B557
- M– Room Temperature Tensile / ASTM E8
- M– Salt Spray (Fog) / ASTM B117

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
 - (G5) – Sulfur

Specify the Alloy Base for Accreditation

- Al Base
- Fe 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
- (N) Impact
- (XN) Bend Testing

AC7101/4 Rev D - Nadcap Audit Criteria for Materials Test Laboratories – Metallography and Microindentation Hardness (to be used on/after 28 August, 2011 and before 30 November 2014)

- (L) Metallography (General)
 - (L1) Microindentation (Interior)
 - (L5) Near Surface Examinations – Microindentation (Surface)
 - (L5X) Near Surface Examinations – Microindentation (Surface) (ARP1820)
 - (LS) Micro: Surface Conditions

- (L10) Near Surface Examinations – Carburization
- (L2) Near Surface Examinations – Alloy Depletion
- (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) Metallography (Macro)

AC7101/5 Rev C - AC7101/5 – Nadcap Audit Criteria for Materials Test Laboratories – Hardness Testing (Macro) to be used on/after 28 August, 2011 and before 22 March 2015)

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

AC7101/6 Rev C - Nadcap Audit Criteria for Materials Test Laboratories – Corrosion (to be used on/after 28 August, 2011)

- (Q) Corrosion (General)

AC7101/7 Rev C - Nadcap Audit Criteria for Materials Test Laboratories – Mechanical Testing Specimen Preparation

- (Z) Standard Specimen Machining
- (Z3) Cast Specimens

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)

AC7110/13S Rev C - Nadcap Supplemental Audit Criteria for Evaluation of Welds to be used on audits ON OR AFTER 5 May 2013

U11 The Boeing Company

Lab Type - Lab Type

Independent