SCOPE OF ACCREDITATION

Materials Testing Laboratories

Element Chicago
194 Internationale Blvd
Glendale Heights, IL 60139-2094

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 H - Nadcap Audit Criteria for Materials Testing Laboratories – General Requirements for All Laboratories (to be used on audits on/AFTER 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
- Mg 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

Uncontrolled if Printed

(C) Stress Rupture
(N) Impact
(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
(L4) Near Surface Examinations – Casting (Mold) Reactions Layers
(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 E - Nadcap Audit Criteria for Materials Testing Laboratories – Hardness Testing (Macro) (to be used on audits on/AFTER 07-May-2023)

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

AC7101/6 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Corrosion (to be used on/after 1 July 2018)

(Q) Salt Spray
(Q1) Detecting susceptibility to intergranular attack in austenitic stainless steel
  (Q1–1) Oxalic Acid Etch Test
  (Q1–2) Ferric Sulfate–Sulfuric Acid Test “Streicher test” (mass loss)
  (Q1–3) Nitric Acid Test “Huey test” (mass loss)
  (Q1–4A) Copper–Copper Sulfate– 16% Sulfuric Acid Test “Strauss test” (bend test)

AC7101/7 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Mechanical Testing Specimen Preparation (to be used on audits on/after 15 May 2016)

(Z) Standard Specimen Machining
(Z3) Cast Specimens
(Z4) Special Preparation

Uncontrolled If Printed

AC7101/9 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Specimen Heat Treating (to be used on audits on/AFTER 07-Sep-2025)

AC7101/14 Rev NA - Nadcap Audit Criteria for Materials Testing Laboratories – Proficiency Testing and Internal Round Robin Requirements for ALL Laboratories (to be used on audits on/AFTER 10-Dec-2023)

AC7110/13 Rev C - Nadcap Audit Criteria for Evaluation of Welds (to be used on audits on/AFTER 05-May-2024)

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 D – Metallurgical Evaluation of Resistance Welds (identify if this process is used)
Supplement E – Bend Test Evaluation of Fusion Welds (for other testing purposes)
Supplement E – Bend Test Evaluation of Welder/Welding Operator Qualification Welds
Supplement F – Metallographic Evaluation of Qualification and/or Process Control Braze Joints

AC7110/13S Rev E - Nadcap Supplemental Audit Criteria for Evaluation of Welds (to be used on audits on/AFTER 13-Aug-2023)

U10 GE Aviation
U11 The Boeing Company
U2 Pratt & Whitney
U3 Rolls Royce

ISO/IEC - Currently accredited by an ILAC approved source

Lab Type - Lab Type

Independent

Uncontrolled If Printed

Nadcap℠
Administered by PRI

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

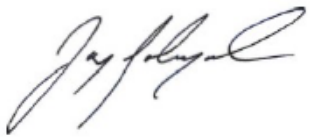
Element Chicago

194 Internationale Blvd
Glendale Heights, IL 60139-2094
United States

This certificate demonstrates conformance and recognition of accreditation for specific services, as listed in www.eAuditNet.com on the Qualified Manufacturer's List (QML), to the revision in effect at the time of the audit for:

Materials Testing Laboratories

Certificate Number: 4645236088
Expiration Date: 31 August 2027
Accreditation Length: 18 Months



Jay Solomond
Executive Vice President & Chief Operating Officer

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