



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

## *Element Cleveland*

5405 E Schaaf Rd  
Cleveland, OH 44131-1337  
United States

*This certificate demonstrates conformance and recognition of accreditation for specific services, as listed in [www.eAuditNet.com](http://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: 4344226330  
Expiration Date: 31 May 2026  
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**

**Element Cleveland**  
5405 E Schaaf Rd  
Cleveland, OH 44131-1337

This certificate expiration is updated based on periodic audits. The current expiration date and scope of accreditation are listed at: [www.eAuditNet.com](http://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
- (W) Atomic Absorption
  - (W2) Graphite Furnace (GFAA)

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
- (N) Impact
- (P) Fracture Toughness
- (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)
- (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 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
- (M4) Electrical Conductivity Inspection

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

- (Q1) Detecting susceptibility to intergranular attack in austenitic stainless steel
  - (Q1–1) Oxalic Acid Etch Test
  - (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

**AC7101/9 Rev C - Nadcap Audit Criteria for Materials Testing Laboratories – Specimen Heat Treating (to be used on/after 15 January 2017)**

**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)**

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)

**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

**Lab Type - Lab Type**

Independent