



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

## ***Element Huntington Beach***

*15062 Bolsa Chica  
Huntington Beach, CA 92649  
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 Manufacturers List (QML), to the revision in effect at the time of the audit for:*

## ***Materials Testing***

Certificate Number: 3658183899  
Expiration Date: 31 January 2021

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Michael J. Hayward  
Vice President and Chief Operating Officer



## SCOPE OF ACCREDITATION

### Materials Testing

**Element Huntington Beach**  
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Huntington Beach, CA 92649

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In recognition of the successful completion of the PRI evaluation process, accreditation is granted to this facility to perform the following:

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

#### **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

(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

Mg base

Ni Base

Ti Base

**AC7101/3 Rev D - Nadcap Audit Criteria for Materials Test Laboratories – Mechanical Testing  
(to be used on audits on/after 4 December 2016)**

- (A) Room Temperature Tensile
- (B) Elevated Temperature Tensile
- (C) Stress Rupture
- (CT) Compression Testing
- (N) Impact
- (O) High Cycle Fatigue
- (P) Fracture Toughness
- (XA) Creep
- (XE) Crack Propagation/Crack Growth Testing
- (XN) Bend Testing
- (Y) Low Cycle Fatigue

**AC7101/4 Rev F - Nadcap Audit Criteria for Materials Test 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
- (L13) Replication
- (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)
- (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 D - Nadcap Audit Criteria for Materials Test Laboratories – Hardness Testing  
(Macro) (to be used on audits on/after 22 March 2015)**

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

**AC7101/6 Rev D - Nadcap Audit Criteria for Materials Test 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

(Q1–4A) Copper–Copper Sulfate– 16% Sulfuric Acid Test “Strauss test” (bend test)

(Q2) Alternate immersion stress corrosion testing – ASTM G 44

(Q2–1) ASTM G 49

(Q2–3) ASTM G 38

(Q3) ASTM G 34

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

(Z) Standard Specimen Machining

(Z1) Low Stress Grinding

(Z2) Low Stress Grinding and Polishing

(Z3) Cast Specimens

(Z4) Special Preparation

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

**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)

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

U11 The Boeing Company

U2 Pratt & Whitney

Element Huntington Beach  
Huntington Beach, CA

#4

U3 Rolls–Royce plc  
U5 Airbus Helicopter  
U8 Airbus

**ISO/IEC - Currently accredited by an ILAC approved source**

**Lab Type - Lab Type**  
Independent



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## **Materials Testing**

Certificate Number: 19021193839  
Expiration Date: 31 January 2021

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Michael J. Hayward  
Vice President and Chief Operating Officer



## SCOPE OF ACCREDITATION

### Materials Testing

#### Element

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- (Z) Standard Specimen Machining
- (Z1) Low Stress Grinding
- (Z3) Cast Specimens
- (Z4) Special Preparation

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

#### **Lab Type - Lab Type**

Independent