

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

Element Sheffield

3 Ignite Magna Way Rotherham, S60 1FD **United Kingdom**

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

Certificate Number: 16036179631 Expiration Date: 31 October 2018

Joseph G. Pinto

Executive Vice President and Chief Operating Officer



SCOPE OF ACCREDITATION

Materials Testing

Element Sheffield 3 Ignite Magna Way Rotherham, S60 1FD United Kingdom

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 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
 - (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 Test Laboratories – Mechanical Testing (to be used on audits on/after 4 December 2016)

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- (A) Room Temperature Tensile
- (B) Elevated Temperature Tensile
- (C) Stress Rupture
- (N) Impact
- (O) High Cycle Fatigue
- (XA) Creep
- (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
- (L5) Near Surface Examinations Microindentation (Surface–Case Depth)

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

(Q1) Stress Corrosion

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

ISO/IEC - Currently accredited by an ILAC approved source

Lab Type - Lab Type

Independent

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