



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

Westmoreland Mechanical Testing and Research, Ltd

*19 Wildmere Road
Banbury, Oxfordshire, OX16 3JU
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: 12022179279

Expiration Date: 30 April 2019

Joseph G. Pinto

Executive Vice President and Chief Operating Officer



SCOPE OF ACCREDITATION

Materials Testing

Westmoreland Mechanical Testing and Research, Ltd
19 Wildmere Road
Banbury, Oxfordshire, OX16 3JU
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)
 - (F3) Atomic Emission Spectroscopy – Spark/Arc (S/A–OES)
- (G) Elemental Analysis (Combustion or Fusion)
 - (G2) – Hydrogen
 - (G3) – Nitrogen
 - (G4) – Oxygen

Specify the Alloy Base for Accreditation

- Al Base
- Fe 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
- (B) Elevated Temperature Tensile
- (CT) Compression Testing
- (N) Impact
- (O) High Cycle Fatigue
- (P) Fracture Toughness

- (XE) Crack Propagation/Crack Growth Testing
- (XN) Bend Testing
- (Y) Low Cycle Fatigue

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

- (A1) Room Temperature Tensile with Elastic (Young's) Modulus

**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
- (L2) Near Surface Examinations – Alloy Depletion
- (L3) Near Surface Examinations – Oxidation/Corrosion
- (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 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 before 1 July 2018)**

- (Q) Corrosion (General)
- (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
- (Z1) Low Stress Grinding
- (Z2) Low Stress Grinding and Polishing
- (Z3) Cast Specimens

AC7101/9 Rev B - Nadcap Audit Criteria for Materials Test Laboratories – Specimen Heat Treating (to be used on/after 28 August, 2011 and before 15 January 2017)

ISO/IEC - Currently accredited by an ILAC approved source

Lab Type - Lab Type

Independent