



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

WESTMORELAND MECHANICAL TESTING & RESEARCH LTD.
19 Wildmere Rd.
Banbury, United Kingdom OX16 3JU
Cristian Poputa Phone: +44 (0) 1295 261211
www.wmtr.co.uk

MECHANICAL

Valid to: June 30, 2019

Certificate Number: 0621.03

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on metals, alloys, metal products, plastics and reinforced plastic composites:

Test Technology:

Test Method(s):

Metals

Tensile	ASTM E345, E8/E8M, A370, B557, B557M, E21; BS EN ISO 6892-1, BS EN ISO 6892-2; BS EN 2002-1, BS EN 2002-2
Youngs Modulus, Tangent Modulus and Chord Modulus	ASTM E111
Plastic Strain Ratio (r)	ASTM E517
Strain Hardening Exponent (n)	ASTM E646
Compression	ASTM E9
Bend Testing	WMTR/QTP/EM007 ¹
Pin - Type Bearing	ASTM E238
Double Shear	ASTM B769
Shear	ASTM B831

Test Technology:

Test Method(s):

Hardness

Brinell Hardness (10/3000 HBW)	ASTM E10
Rockwell Hardness (HRB & HRC)	ASTM E18
Vickers Hardness (HV5, HV10, HV30)	ASTM E92
Micro-Hardness (HV 0.2, 0.3, 0.5, 1 & HK 0.5, 1)	ASTM E384

Impact

Charpy V - Notch	ASTM E23, A370
Izod	BS 131-1

Fracture Toughness

Fracture Toughness (KIC)	ASTM E399
R Curve	ASTM E561

Fatigue Testing

Constant Amplitude Fatigue	BS EN 6072
High Cycle & Low Cycle Fatigue Under Force Control	ASTM E466; BS 3518-3
High Cycle Fatigue	BS EN 3987
Low Cycle Fatigue Under Force Control	prEN 3874:Edition P1, April 1998
Low Cycle Fatigue Under Strain Control	BS 7270; ASTM E606/E606M
Fatigue Crack Growth	ASTM E647

Test Technology:

Test Method(s):

Metallurgical Tests

Depth of Decarburization (Micro Hardness and Optical Techniques)	ASTM E1077
Average Grain Size Automatic & Semi-Automatic Methods	ASTM E1382, E112
Largest Grain	ASTM E930
Hydrogen Embrittlement	ASTM F519
Inclusion Content	ASTM E45 (Method D)
Microstructure of Graphite in Iron Castings	ASTM A247
Alpha Case in Titanium Microscopic and Bend	WMTR/QTP/MOG024 ¹

Plastics

Compressive Properties	ASTM D695; BS EN 6036
Compressive Residual Strength Properties	ASTM D7137/D7137M; BS EN 6038
In-plane Shear	ASTM D3518/D3518M; BS EN ISO 14129
Tensile	ASTM D3039/D3039M, D638; BS EN 2561, 6035; BS EN ISO 527-1, 527-2, 527-4, 527-5; BS 2782-3 Method 326F
Apparent Interlaminar Shear Strength	BS EN 2563
Flexural	ASTM D790
Tension Fatigue	ASTM D3479/D3479M

Chemical Tests on Metals

Elemental Analysis	WMTR/QTP/OES002 using OES ¹
Aluminum and aluminum alloys (Be, Bi, Ca, Cd, Cr, Cu, Fe, Ga, Li, Mg, Mn, Na, Ni, P, Pb, Sb, Si, Sn, Sr, Ti, V, Zn, Zr)	
Carbon Steels, low alloy steels, stainless steels (Al, As, B, C, Ca, Co, Cr, Cu, Mn, Mo, Nb, Ni, P, Pb, S, Sb, Sn, Si, Ti, V, W, Zr)	



Test Technology:

Test Method(s):

Corrosion Tests

Intergranular Corrosion

ASTM G110; BS EN ISO 7866 Annex A

Alternate Immersion Stress Corrosion
(Including Preparation of Samples)

ASTM G44, G47, G38, G49

Salt Spray (Fog)

ASTM B117

¹In-house test method





Accredited Laboratory

A2LA has accredited

WESTMORELAND MECHANICAL TESTING & RESEARCH LTD.

Banbury, United Kingdom

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 10th day of April.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0621.03
Valid to June 30, 2019

For the tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.