

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 0638 Accredited to ISO/IEC 17025:2017	Allegheny Technologies Ltd Issue No: 049 Issue date: 21 May 2021	
	Blackmore Street Sheffield S4 7TZ	Contact: Darrell Horsfield Tel: +44 (0)114 2201393 E-Mail: Darrell.Horsfield@ATImetals.com Website: www.ATImetals.com
Testing performed by the Organisation at the locations specified below		

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details		Activity	Location code
Address Blackmore Street Sheffield S4 7TZ	Local contact Mr D Horsfield	<u>Support functions</u> Technical support General support Management system support <u>Testing</u> Corrosion tests Mechanical tests Metallurgical tests	A
Address Carlisle Street East Works Carlisle Street East Sheffield S4 7QR	Local contact Mr D Horsfield	<u>Testing</u> Elemental analysis Metallurgical tests (Macro)	B



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DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
METALS, ALLOYS and METAL PRODUCTS	<u>Chemical Tests</u>		
Iron base alloys	Elemental analysis: C, Si, Mn, P, S, Cr, Mo, Ni, Al, AS, B, Co, Cu, N, Nb, Sn, Ti, V, W, Zr, Ca, Mg, Ta	Documented In-house methods using OES: TI OP-CHEM-8-002-LTD & TI OP-CHEM-8-003-LTD	B
Nickel base alloys	C, Si, Mn, P, S, Cr, Mo, Al, As, B, Co, Cu, N, Nb, Sn, Ti, V, W, Zr, Ca, Mg, Ta, Fe	Documented In-house methods using OES: TI OP-CHEM-8-002-LTD & TI OP-CHEM-8-003-LTD	B
Iron / Nickel base alloys	Si, Mn, P, Cr, Mo, Ni, Al, Co, Cu, Nb, Sn, Ti, V, W, Zr, Ta, Fe	Documented In-house methods using XRF: TI OP-CHEM-3-003-LTD	B
Titanium base alloys	Si, Mn, Cr, Mo, Ni, Al, Co, Cu, Nb, Sn, V, W, Zr, Fe, Y	Documented In-house methods using XRF: TI OP-CHEM-3-003-LTD	B
Iron / Nickel based alloys	C, S, N, H, O	Documented In-house Methods: TI OP-CHEM-5-001-LTD (O ₂ /N ₂) TI OP-CHEM-9-002-LTD (H ₂) TI OP-CHEM-5-001-LTD (H ₂) TI OP-CHEM-4-001-LTD (C/S) 844	B
Titanium alloys	C, N, H, O	Documented In-house Methods: TI OP-CHEM-5-001-LTD (O ₂ /N ₂) TI OP-CHEM-9-002-LTD (H ₂) TI OP-CHEM-5-001-LTD (H ₂) TI OP-CHEM-4-001-LTD (C/S) 844	B
Iron/Nickel Alloys	Pb, Bi, Ag, Se, Sb, Te, TI, Cd, Zn	Documented in-house Method using Atomic Absorption Spectroscopy TI OP-CHEM-7-002-LTD	B



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METALS, ALLOYS and METAL PRODUCTS (cont'd)	<u>Corrosion Tests</u>		
Austenitic stainless steels	Intergranular corrosion	BS EN ISO 3651-2:1998 ASTM A262-15 Practice A, E	A
Wrought nickel and chromium bearing alloys	Intergranular corrosion	ASTM G28-02(2015) Practice A	A
Stainless steels	Pitting & Crevice resistance	ASTM G48-11(2020)e1 Practice A	A
	<u>Mechanical Tests</u>		
Ferrous and non-ferrous alloys	Nick fracture	BS 4S100:1975 (Withdrawn)	A
	Stress rupture Creep Creep and rupture (temperature from ambient to 1000°C)	BS EN 2002-5 :2007 BS EN ISO 204 :2018 BS 4A4:Part 1:Section 3:1967 (Withdrawn) ASTM E139-11(2018) ASTM E292-18	A
Ferrous and non-ferrous alloys (cont'd)	Tensile (temperature from ambient to 1000°C) (forces up to 300 kN)	BS 4A4:Part 1:Section 1:1966BS EN 2002-1:2005 BS EN 2002-2:2005 BS EN ISO 6892-1:2019 Method B BS EN ISO 6892-2:2018 Method B ASTM E8/E8M-16a ASTM E21-20	A
	<u>Hardness:</u>		
	Brinell (HBW 10/3000)	BS EN ISO 6506-1:2014 ASTM E10-18	A
	Vickers (HV5, HV10, HV30)	BS EN ISO 6507-1:2018	A
	Rockwell (Scales B & C)	BS EN ISO 6508-1:2016 ASTM E18:20	A
	<u>Impact:</u>		
	Charpy (V- Notches) (-196°C to 200°C)	ASTM E23-18 ASTM A370-20	A



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METALS, ALLOYS and METAL PRODUCTS (cont'd)	<u>Metallurgical Tests</u>		
Ferrous and non-ferrous alloys	De-carburised depth Thin Surface hardened layer thickness	BS EN ISO 3887:2018 BS 6286:1982 Documented In-House Method MET-072-LTD	A
	Grain size	ASTM E112-13 ASTM E930-18 ASTM E1181:02(2015) DMC0250 Index C	A
	Inclusion content	ASTM E45-18a DIN 50602-85 MSRR 9964 Issue 7 (withdrawn) RRMS 30015 Rev C	A
	Volume fraction	ASTM E562-19e1 AMS 2315G	A
	Macro etch rating	ASTM A604/A604M-07(2017)	B
Nickel and Nickel alloys	Identification of delta and laves phases in Alloy UNS N07718	API Spec 6A718 2 nd Ed (Withdrawn) API Spec 6ACRA (01 Aug 15) Documented In-house Method MET 77-LTD	A
END			