


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 <p>8774</p> <p>Accredited to ISO/IEC 17025:2005</p>	<h3>Henry Williams Limited</h3> <p>Issue No: 004 Issue date: 24 October 2017</p>	
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<p>Testing performed at the above address only</p>		

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
<p>METALS, ALLOYS and METAL PRODUCTS</p> <p>Ferrous and Non-Ferrous Castings, Forgings, Plate, Pipes and Tubes</p>	<p><u>Mechanical Tests</u></p>	
	<p>Tensile at ambient temperature (Forces 0.3 to 600 kN)</p>	<p>ASTM A370-17 ASTM E8/E8M-16a BS EN ISO 6892-1: 2016</p>
	<p>Tensile at elevated temperature from 100°C to 500°C (Forces 2kN to 600 kN)</p>	<p>ASTM E21-09 BS EN ISO 6892-2: 2011</p>
	<p><u>Impact:</u> Charpy - V notch (Temperature -102°C to ambient and at -196°C)</p>	<p>ASTM A370-17 ASTM E23-16b BS EN ISO 148-1: 2016</p>
	<p>Lateral Expansion Fracture appearance (% shear)</p>	<p>ASTM A370-17 ASTM E23-16b BS EN ISO 148-1: 2016</p>
	<p><u>Hardness:</u> Brinell (10/3000 HBW)</p>	<p>ASTM A370-17 ASTM E10-15a BS EN ISO 6506-1: 2014</p>
	<p>Rockwell (HRB & HRC)</p>	<p>ASTM A370-17 ASTM E18-16 BS EN ISO 6508-1: 2016</p>
<p>Vickers (HV10 & HV30)</p>	<p>ASTM E92-17 BS EN ISO 6507-1: 2005</p>	



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
METALS, ALLOYS and METAL PRODUCTS (cont'd)	<u>Metallurgical Tests</u>	
Ferrous and Non-Ferrous Castings, Forgings, Plate, Pipes and Tubes (cont'd)	Average Grain size (Comparison method)	ASTM E112-13
	Volume fraction	ASTM E562-11
	<u>Corrosion</u>	
Stainless Steels and related alloys	Determination of Resistance to Pitting & Crevice Corrosion	ASTM G48-11(2015) (Method A)
Austenitic Stainless Steels	Determination of Susceptibility to Inter-granular attack	ASTM A262-15 (Practise E)
Duplex, Austenitic/Ferritic Stainless Steels	Method for Detecting Detrimental Inter-metallic Phase	ASTM A923-14 (Method C)
Low Alloy Carbon Steel and Stainless Steel materials	<u>Elemental Analysis</u> <u>Optical Emission Spectroscopy</u>	
	C, Si, Mn, P, S, Ni, Cr, Mo, Cu, Sn, Nb, V, Co, Ti, Ta, B, Al, W, As, N	Documented In-House Method SOP TH017
END		