

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 <p>Accredited to ISO/IEC 17025:2005</p>	<h3>Howco Metals Management</h3> <p>Issue No: 019 Issue date: 11 August 2011</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
METALS, ALLOYS and METAL PRODUCTS	<u>Corrosion Tests</u>	
Stainless steels	Pitting and crevice attack	ASTM G48-03 Methods A and B Shell Engineering Document ES/247 Rev2
	Intergranular attack	ASTM A262-02a (2008) Practice A and E
	<u>Mechanical Tests</u>	
	Hardness:	
	Rockwell (B and C scales)	ASTM A370-10 ASTM E18-08
	Vickers	ASTM E384-10
	Impact:	
	Charpy (V notch) (Temperature range 77K to ambient)	BS EN 10045-1:1990 ASTM A370-10 ASTM E23- 07a ^{ε1}
	Crystallinity	BS 131:Part 5:1965(1982)
	Lateral expansion and percent shear	ASTM E23-07a ^{ε1}



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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>Mechanical Tests</u> Tensile (Forces from 5 kN to 500 kN) <u>Metallurgical Tests</u> Grain size Volume fraction Identification of delta and Laves phases in Inconel 718	BS EN 10002-1:2001 (withdrawn) BS EN ISO 6892-1:2009 (Method B) ASTM A370-10 ASTM E8/E8M-09 ASTM E112-96(2004) ^{ε2} (comparative and planimetric methods) ASTM E1181-02(2008) ASTM E562-08 API 6A718 (second edition)
Steels	Macroetch examination (Rating)	ASTM A604/A604M-07 ASTM E381-01(2006) excluding Sections 10 and 11
END		