

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>Royal & Sun Alliance Engineering</h3> <p>Issue No: 019 Issue date: 20 August 2008</p>	
	<p>17 York Street Manchester M2 3RS</p>	<p>Contact: Mr M Ormrod Tel: +44 (0)161-235 3000 Fax: +44 (0)161-235 3001 E-Mail: mark.ormrod@uk.royalsun.com Website:</p>
<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>LIGHT and DENSE METALS and ALLOYS including castings, forgings and weldments</p>	<p><u>Non-Destructive Testing</u></p> <p>Liquid Penetrant Method using fluorescent and colour contrast inks (Manual application)</p>	<p>BS EN 571-1:1997 ASME V:2007 ASTM E165-02 Documented In-House Method 02-111-I048</p>
	<p>Ultrasonic Flaw Detection Manual contact method</p>	<p>BS 3923-1:1986 (Withdrawn) BS 4124:1991 (Withdrawn) BS 5996 :1993 (Withdrawn) BS 6208:1990 (Withdrawn) BS EN 12680-1:2003 BS EN 1714:1998 BS EN 10160:1999 BS EN 10228-3:1998 ASME V: 2007 ASTM A577/A577M-90(2001) ASTM E164-03 Documented In-House Methods 02-111-I046, 02-111-I049, 02-111-I050, 02-111-I051, 02-111-I052, 02-111-I053, 02-111-I067, 02-111-I068, 02-111-I069,</p>
<p>FERROMAGNETIC METALS</p>	<p>Magnetic Particle Method using portable equipment and yokes</p>	<p>BS 5138:1974(2000) BS 6072:1981(1986) (Withdrawn) BS EN 1290:1998 BS EN ISO 9934-1:2001 ASME V:2007 ASTM E709-01 Documented In-House Method 02-111-I047</p>



0426
Accredited to
ISO/IEC 17025:2005

Schedule of Accreditation
issued by
United Kingdom Accreditation Service
21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

Royal & Sun Alliance Engineering
Issue No: 019 Issue date: 20 August 2008

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
LIGHT and DENSE METALS and ALLOYS including castings and weldments	Radiography: 30 keV to 300 keV Gamma Ray Co 60 up to 925 GBq(25 Ci) Ir 192 up to 2.96 TBq(80 Ci) Yb 160 up to 259 GBq(7 Ci)	BS 2600-1 :1983 (Withdrawn) BS 2600-1 :1973 (Withdrawn) BS 2910 :1986 (Withdrawn) BS 7257 :1989 9Withdrawn) BS EN 444:1994 BS EN 1435:1997 ISO 1106-1:1984 (Withdrawn) ISO 1106-2:1985 (Withdrawn) ASME V: 2007 ASTM E94-04 ASTM E1032-06
METALS and ALLOYS	<u>Mechanical Tests</u> Bend testing Hardness: Vickers Impact: Charpy V-notch Temperature range -70°C to ambient and -196°C Tensile: loads up to 600 kN temperature - ambient 100°C to 600°C	BS EN ISO 7438:2005 BS EN ISO 6507 -1:1998 (Superseded) BS EN 10045-1:1990 BS EN 10002-1:2001 BS EN 10002-5:1992



0426
Accredited to
ISO/IEC 17025:2005

Schedule of Accreditation
issued by
United Kingdom Accreditation Service
21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

Royal & Sun Alliance Engineering
Issue No: 019 Issue date: 20 August 2008

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
WELDMENTS	<p><u>Mechanical, Metallurgical and Non-Destructive Tests</u></p> <p>Tests designated in specified welding codes - as detailed below:-</p> <p>Bend, Fracture, Hardness, Impact, Tensile, Visual examination, Liquid penetrant, Magnetic particle, Radiographic and Ultrasonic examination</p>	<p>BS EN 287 -1:2004 BS EN 287-2:1992(Withdrawn) BS EN 288-3:1992 (Withdrawn) BS EN 288-4:1992 (Withdrawn) BS EN ISO 9606-2 :2004 BS EN ISO 9606-3 :1999 BS EN ISO 9606-4 :1999 BS EN ISO 9606-5 :2000 BS EN ISO 15614-1 :2004 BS EN ISO 15614-2 :2005 BS EN ISO 15614-8 :2002 BS EN 875:1995 BS EN 876:1995 BS EN 895:1995 BS EN 910:1996 BS EN 970:1997 BS EN 1043-1:1996 BS EN 1320:1997 BS EN 1321:1997 BS 1113:1999 BS 1821:1982 (Withdrawn) BS 2633:1987 BS 2654:1989 (Withdrawn) BS 2790:1992 BS 2971:1991 BS 4677:1984 BS 4870-3:1985 (Withdrawn) BS 4871-3:1985 BS 4872-1:1982 BS 4872-2:1976 BS 5289:1976 (Withdrawn) PD 5500:2006 ASME IX:2007</p>
END		