Schedule of Accreditation

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United Kingdom Accreditation Service

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

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Accredited to ISO/IEC 17025:2017

BES Group Testing Rotech Ltd

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Moxley Industrial Centre
Western Way
Wednesbury
WS10 7BG
United Kingdom

Contact: Paulina Klejnowska
Tel: +44 (0)121 505 4050
E-Mail: Paulina.Klejnowska@besgroup.com
Website: besgroup.com

Testing performed by the Organisation at the locations specified

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code
Address BES Group Testing Rotech Ltd Western Way Wednesbury WS10 7BG **Local contact** Paulina Klejnowska	Testing Chemical tests Corrosion tests Mechanical tests Metallurgical tests Weldment Tests	A

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	Chemical Tests		
Aluminium alloys	Elemental analysis Si, Fe, Mn, Cu, Mg, Zn, Cr, Pb, Sn, Ti	Documented In-House Method RP101 using Optical Emission Spectroscopy	A
Aluminium alloys (Wrought)	Elemental analysis Si, Fe, Cu, Mn, Mg, Cr, Ni, Zn, Ti, Pb, Sn, Zr, V, Ga, Bi	Documented In-House Methods RP116 & RP117 using ICP-OES	A
Ferrous Based Alloys	Elemental analysis Mn, Si, P, Cu, Ni, Cr, Mo, V, Ti, Al, Nb, B	Documented In-House Methods RP116 & RP-117 using ICP-OES	A
Low Alloy Steels	Elemental analysis C, Mn, Si, S, P, Cu, Ni, Cr, Mo, Sn, Nb, V, Al, Ti, B, Zr, Pb, W, Co, N	Documented In-House Method RP101 using Optical Emission Spectroscopy	A
High Alloy Steels	Elemental analysis C, Mn, Si, S, P, Cu, Ni, Cr, Mo, Sn, Nb, V, Al, Ti, B, W, Co, N	Documented In-House Method RP101 using Optical Emission Spectroscopy	A
Nickel Alloys	Elemental analysis C, Si, Mn, P, S, Cr, Mo, Ni, Al, Co, Cu, B, Ti, W, V, Nb, Fe, Ta, Zr	Documented In-House Method RP101 using Optical Emission Spectroscopy	A
Cupro Nickel Alloys	Elemental analysis Al Bi B Co Cr P Pb Si Sn Zn Sb Fe Mn, Ni, Cu (balance)	Documented In-House Methods RP116 using ICP-OES	A
High alloyed steels, low alloyed steels, copper alloys cupro nickel alloys & plain carbon steels.	Determination of Carbon and Sulphur	Documented In-House Method RP138	A
Cast iron, copper alloys, ferro alloys, high alloyed steels, low alloyed steels, nickel and cobalt alloys, plain carbon steels and refractories	Qualitative and Semi-Quantitative analysis of elements above atomic No.5	Documented In-House Method RP362 using Energy Dispersive Spectroscopy	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
METALS, ALLOYS and METAL PRODUCTS (cont'd)	<u>Chemical Tests</u>		
High alloyed steels, low alloyed steels, copper alloys & plain carbon steels.	Determination of Nitrogen	Documented In-House Method RP136	A
	<u>Corrosion Tests</u>		
Austenitic stainless steels	Susceptibility to intergranular corrosion	ASTM A262-15(R21) (Practice A, C & E)	A
Stainless Steels & related alloys	Pitting and Crevice Corrosion	ASTM G48-25 Method A	A
Wrought nickel rich chromium bearing alloys	Susceptibility to intergranular corrosion	ASTM G28-24 Method A	A
	<u>Mechanical Tests</u>		
	Bend	BS EN ISO 7438:2020	A
	Hardness:		
	Brinell (5/750, 10/3000)	BS EN ISO 6506-1:2014 ASTM E10:23	A
	Rockwell Scales B & C	BS EN ISO 6508-1:2023 ASTM E18-25	A
	Vickers HV5, HV10, HV30	BS EN ISO 6507-1:2023 ASTM E92-23	A
	Low Force Vickers HV0.3, 0.5 and 1	BS EN ISO 6507-1:2023	A
	Micro Hardness HV 0.10	ASTM E384-22	A
	Hk 0.3, 0.5	BS EN ISO 4545-1:2023	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
METALS, ALLOYS and METAL PRODUCTS (cont'd)	Mechanical Tests (cont'd) **Impact:**		
	Izod	BS 131:Part 1:1961(2015)	A
	Charpy (V-notch) (-196°C and -101°C to ambient) Including %Shear and Lateral Expansion	BS EN ISO 148-1:2016 ASTM A370-24a ASTM E23-25 ASTM A923:2023 Method B	A
	Tensile (Ambient temperature, forces from 2 kN to 600 kN)	BS EN ISO 6892-1:2019 Methods A & B BS EN 2002-1:2005 ASTM E8/8M-25 ASTM A370-24a ASTM B557/B557M-15(2023)	A
	Tensile (temperature from ambient to 600°C, forces from 2 kN to 100 kN)	BS EN ISO 6892-2:2018 Method A ASTM E21-20	A
Pipes and tubes	Crush & Flattening	BS EN ISO 8492:2013 BS 6323:Part 1:1982 (Withdrawn) ASTM A370-24a	A
Fasteners (Including Bolts, Screws and Nuts)	Proof Load and Tension	BS EN ISO 898-1:2013 BS EN ISO 898-2:2022 BS EN ISO 3506-1:2020 BS EN ISO 3506-2:2020 ASTM F606/F606M-25 ASTM F738-02(2008) (Withdrawn) ASTM A370-24a	A
	Partial decarburization depth	BS EN ISO 898-1:2013 ASTM F2328-17(2022)	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
METALS, ALLOYS and METAL PRODUCTS (cont'd)	<u>Metallurgical Tests</u>		
	Case depth (Surface Hardened Layers)	BS 6286:1982(2005) ISO 4970:1979 BS EN ISO 2639:2002 BS EN 10328:2005	A
	Depth of Decarburisation	BS EN ISO 3887:2023	A
	Dezincification	BS EN ISO 6509-1:2014 AS 2345:2006 (R2016) (Appendix C)	A
	Average Grain size (Comparison)	BS EN ISO 643:2024 ASTM E112- 25 (Method A)	A
	Characterising Duplex Grain Size	ASTM E1181-02(2023)	A
	Estimating Largest Grain Size (ALA)	ASTM E930-18	A
	Fractographic and microscopical examination	Documented In-House Method RP 361	A
	Inclusion content	ISO 4967:2013 ASTM E45-25 (Method A only)	A
	Macrostructure	ASTM E381-22 ASTM A604/A604M-07(2022)	A
	Volume fraction	ASTM E562-19e1	A
	Detrimental intermetallic phases	ASTM A923:2023 Method A	A
Fe alloys, Stainless Steels, Al alloys, Ti alloys, Ni alloys and Superalloys	Microstructures	Documented In-House Method RP 368	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
METALS, ALLOYS and METAL PRODUCTS (cont'd)	<u>Metallurgical Tests (cont'd)</u>		
Weldments and Brazing	Tests designated in specified Welding Codes as detailed below:-		
	Bend, Fracture, Hardness, Impact, Tensile, Macro / Micro examination	BS EN ISO 4136:2022 BS EN ISO 5173:2023 BS EN ISO 5178:2019 BS EN ISO 5817:2023 BS EN ISO 9015-1:2011 BS EN ISO 9015-2:2016 BS EN ISO 9016:2022 BS EN ISO 9017:2018 BS EN ISO 9018:2015 BS EN ISO 17639:2022 BS EN ISO 15613:2025 BS EN ISO 15614-8:2016 BS 1140:1993 BS 4871:Part 3:1985 BS 4872:Part 1:1982 BS 4872:Part 2:1976 BS EN ISO 9606-1:2017 BS EN ISO 9606-2:2004 BS EN ISO 15614-1:2017+A1:2019 BS EN ISO 15614-2:2025 BS EN ISO 15620:2019 BPVC ASME IX:2025 CAP 533 BCAR Section A8-10	A
METALLIC COATINGS	<u>Corrosion Tests</u>		
	Neutral salt spray	ASTM B117-19 BS EN ISO 9227:2022-a1: 2024	A
	<u>Metallurgical Tests</u>		
	Plating	BS EN ISO 1463:2021	A
	Coating mass	BS EN 10346:2015 (Annex A)	A
END			