

# Certificate of Accreditation



**Howmet Ltd**

Testing Laboratory No. 0142

**Is accredited in accordance with International Standard ISO/IEC 17025:2017  
– General Requirements for the competence of testing and calibration  
laboratories.**

This accreditation demonstrates technical competence for a defined scope specified in the schedule to this certificate, and the operation of a management system (refer joint ISO-ILAC-IAF Communiqué dated April 2017). The schedule to this certificate is an essential accreditation document and from time to time may be revised and reissued.

The most recent issue of the schedule of accreditation, which bears the same accreditation number as this certificate, is available from [www.ukas.com](http://www.ukas.com).

This accreditation is subject to continuing conformity with United Kingdom Accreditation Service requirements.

A handwritten signature in black ink, reading "M Gantley", is positioned above a horizontal line. The signature is fluid and cursive.

**Matt Gantley**, *Chief Executive Officer*  
United Kingdom Accreditation Service

Initial Accreditation: 1 May 1982  
Certificate Issued: 25 January 2021



Scan QR Code to  
verify

# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

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

 <b>0142</b>  Accredited to <b>ISO/IEC 17025:2017</b>	<b>Howmet Ltd</b>	
	<b>Issue No: 036    Issue date: 25 February 2025</b>	
	<b>Exeter Alloy</b> <b>Heron Road</b> <b>Exeter</b> <b>Devon</b> <b>EX2 7LL</b>	<b>Contact: Mr A Messenger</b> <b>Tel: +44(0)1392 429760</b> <b>Fax: +44 (0)1392 429702</b> <b>E-Mail: andy.messenger@howmet.com</b>
<b>Testing performed at the above address only</b>		

### DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
NICKEL BASE ALLOYS	<u>Chemical Tests</u>	Documented In-House Methods from Materials Control Laboratory Manual (MCLM) using:
	Elemental analysis	
	Aluminium Chromium Cobalt Copper Hafnium Iron Manganese Molybdenum Nickel Niobium Palladium Phosphorus Platinum Rhenium Ruthenium Silicon Tantalum Titanium Tungsten Vanadium Yttrium Zirconium	XRFS (294) XRFS (298)
	Cerium	XRFS (298)
	Silicon Phosphorus Boron Lanthanum Calcium Magnesium Aluminium	Spark OES (301)



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
NICKEL BASE ALLOYS (cont'd)	<u>Chemical Tests</u> (cont'd)  Elemental analysis (cont'd)  Carbon Sulphur  Nitrogen Oxygen  Lithium Beryllium Magnesium Phosphorus Sulfur Chlorine Calcium Scandium Manganese Copper Zinc Gallium Germanium Arsenic Bromine Selenium Rubidium Yttrium Rhodium Palladium Silver Indium Tin Antimony Iodine Tellurium Cesium Lanthanum Cerium Praseodymium Neodymium Samarium Europium Gadolinium Terbium Dysprosium	Combustion and Infra-Red Absorption (300)  Inert Gas Fusion (299)  Glow Discharge Mass Spectrometry (303)



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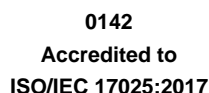
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NICKEL BASE ALLOYS (cont'd)	Chemical Tests (cont'd)  Elemental analysis (cont'd)  Holmium Erbium Thulium Ytterbium Lutetium Rhenium Osmium Iridium Platinum Gold Mercury Thallium Lead Bismuth Thorium Uranium Potassium Ruthenium Cadmium	Glow Discharge Mass Spectrometry (303)



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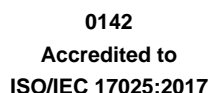
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IRON BASE ALLOYS	<u>Chemical Tests</u>	
	Elemental analysis	
	Aluminium	XRFS (294)
	Cerium	XRFS (298)
	Chromium	
	Cobalt	
	Copper	
	Iron	
	Manganese	
	Molybdenum	
	Niobium	
	Phosphorus	
	Silicon	
	Tantalum	
	Tin	
	Titanium	
	Tungsten	
	Vanadium	
	Zirconium	
	Carbon	Combustion and Infra-Red
	Sulphur	Absorption (300)
	Nitrogen	Inert Gas Fusion (299)
	Oxygen	



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METALS, ALLOYS AND METAL PRODUCTS	<u>Mechanical Tests</u>  Vickers Hardness (HV 30)  Rockwell Hardness (HRC)  Stress Rupture (700°C -1050°C)  Tensile tests Ambient Temperature (Range 0.1 - 50kN)  Elevated Temperature (650 °C and 850 °C)  Excluding the determination of Young's Modulus	BS EN ISO 6507-1:2023 ASTM E92 - 23  BS EN ISO 6508-1:2023 ASTM E18-24  BS EN 2002-005:2007 ASTM E139-11(2018) BS EN ISO 204:2023  BS EN ISO 6892-1:2019 ASTM E8/E8M-2024  BS EN 2002-2:2005 BS EN ISO 6892-2:2018 ASTM E21-20
END		