

Element Materials Technology Sheffield Ltd 3 Ignite Magna Way Rotherham S60 1FD UNITED KINGDOM

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Lab Job#: 715015

Certification Date: 28/10/21



## **TEST CERTIFICATE**

**University of Manchester** Sackville Street Manchester, North West England M1 3BU PO / SO: ELM2255936

Material: Steel

Specification(s): Client Requirements

Ref: EUROI

R WELD SECTION	ON	Size / Description: Test P						
		Chemical Analy	sis		Test Date: 27-10-21	Operator: Mark Maloney		
Test ID	Element	Description	Result	Min	Max	Unit	Test Type	Method Reference
792918	Al	Aluminium	0.01		0.01	Wt. %	ICP CM088	Accredited In House Method
	As	Arsenic	<0.01	INFO		Wt. %	ICP CM088	Notes: Please note the elements As, Sb & Ta are not covere
	В	Boron	0.001		0.001	Wt. %	OES/AES	by our schedules of accreditation.
	С	Carbon	0.110	0.090	0.120	Wt. %	Combustion CM098	
	Co	Cobalt	<0.01	INFO		Wt. %	ICP CM088	
	Cr	Chromium	9.00	8.50	9.50	Wt. %	ICP CM088	
	Cu	Copper	<0.01	INFO		Wt. %	ICP CM088	
	Mn	Manganese	0.52	0.20	0.60	Wt. %	ICP CM088	
	Mo	Molybdenum	<0.01	INFO		Wt. %	ICP CM088	
	Nb	Niobium	<0.01	INFO		Wt. %	ICP CM088	
	Ni	Nickel	0.02	INFO		Wt. %	ICP CM088	
	Р	Phosphorus	<0.005		0.005	Wt. %	ICP CM088	
	S	Sulfur	<0.003		0.005	Wt. %	Combustion CM098	
	Sb	Antimony	<0.02	INFO		Wt. %	ICP CM088	
	Si	Silicon	0.030		0.050	Wt. %	ICP CM088	
	Sn	Tin	<0.01	INFO		Wt. %	ICP CM088	
	<u>Ta</u>	<u>Tantalum</u>	<u>0.12</u>	0.05	0.09	Wt. %	ICP CM088	
	Ti	Titanium	<0.01		0.01	Wt. %	ICP CM088	
	V	Vanadium	0.21	0.15	0.25	Wt. %	ICP CM088	
	W	Tungsten	1.1	1.0	1.2	Wt. %	ICP CM088	
	Zr	Zirconium	<0.01	INFO		Wt. %	ICP CM088	

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Where appropriate, the results reported herein provide traceability of measurement to recognised national standards, and to units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. Any opinions or interpretations given herein fall outside the scope of our schedule of accredited testing. For further information on how Element reports statements of conformity in testing you can read our policy https://element.com/about-element/statements-of-conformity. This report shall not be reproduced except in full without the written approval of the laboratory. Original reports issued by Element, either in electronic or physical form have legal value only when furnished with an authorised signature. Any subsequent digital or physical copies of this report have no legal value unless authorised by Element. The Terms & Conditions of Element, available upon request, are applicable on all services provided by Element. Testing conducted on site at Element Sheffield - Magna Way unless otherwise indicated. NB: The results reported apply only to the items tested or sampled from the material supplied.

Billie Deakin, Laboratory Manager

Signed for and on behalf of Element



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Material: Steel

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Specification(s): Client Requirements

Ref: EUROFER WELD SECTION Size / Description: Test Piece

		Chemical Analysis		Test Date: 28-10-21	Operator: Shaun Foster			
Test ID	Element	Description	Result	Min	Max	Unit	Test Type	Method Reference
792916	N2	Nitrogen	0.020	0.015	0.045	Wt. %	Fusion-H2, N2, O2 CM090	Accredited In House Method
	02	Oxygen	<0.0010		0.01	Wt. %	Fusion-H2, N2, O2 CM090	

## **Disposition**

Does NOT conform to requirements. Underlined results above do not conform to requirements.

When Element is making statements of conformity a simple acceptance rule has been applied.

Uncertainty budgets have been determined and are available on request.

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