



Welding of Railway Vehicles and Components according to EN 15085-2

The Company: Arc Energy Resources Ltd

Welding Manufacturing Sites:

Address: Unit 12, Eastington Industrial Estate, Meadow Hill, Eastington, Gloucestershire, GL10 3RZ

Is certified to perform welding under certification level CL 1 according to EN 15085-2

Field of application: Fabrication and welding of carbon-manganese steels and stainless steels in conjunction with new build of railway vehicles and rail components to existing drawings and customer specifications without design

Range of Certification:

Welding Process according to EN ISO 4063	Material Group according to CEN ISO/TR 15608	Dimensions/Thickness
111: MMA	1.2 Steels $R_{eH} > 275/\text{mm}^2 \leq 360\text{N}/\text{mm}^2$	6.3mm – 25mm
	8.1 Austenitic stainless steel with $\text{Cr} \leq 19\%$	9.5mm – 38mm
135: MAG solid wire	1.2 Steels $R_{eH} > 275/\text{mm}^2 \leq 360\text{N}/\text{mm}^2$	3mm – 13mm
136: MAG flux-cored wire	3.1 Steels $R_{eH} > 360\text{N}/\text{mm}^2 \leq 690\text{N}/\text{mm}^2$	16mm – 64mm (453mm dia)
141: TIG solid wire	1.1 Steels $R_{eH} \leq 275/\text{mm}^2$	1.4mm – 4mm
	1.2 Steels $R_{eH} > 275/\text{mm}^2 \leq 360\text{N}/\text{mm}^2$	3mm – 25mm (50mm – 100mm dia)
	3.1 Steels $R_{eH} > 360\text{N}/\text{mm}^2 \leq 690\text{N}/\text{mm}^2$	3mm – 12mm (453mm dia)
	8.1 Austenitic stainless steel with $\text{Cr} \leq 19\%$	1.4mm – 24mm
	Steels covered by Group 1 ^c except C > 0.25% \leq 0.85% 11.1 Steels as indicated under 11 with C > 0.25% \leq 0.35%	3mm – 36.4mm (110.3mm – 214.7mm dia)

^c A higher value is accepted, provided $\text{Cr} + \text{Mo} + \text{Cu} + \text{V} \leq 1\%$

Responsible Welding Coordinator: Eur Ing Alan Robinson CEng SenMWeldI, Certified European/International Welding Engineer (d.o.b 01/05/1952) Level A

Responsible Welding Coordinator: John Haines MSc CEng MWeldI, European/International Welding Engineer (d.o.b 20/06/1966) Level A

Deputy Responsible Welding Coordinator: Peter Crumpton EngTech TechWeldI (d.o.b 07/01/1977) European/International Welding Specialist (Level B)

Certificate Number: CWRVC/028/GB

Valid Until: 13 June 2020
(subject to satisfactory periodic surveillance)

Issued On: 16 June 2017

TWI Certification Ltd, Chief Executive

Issued by: TWI Certification Ltd, Granta Park, Great Abington, Cambridge, CB21 6AL, UK