



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

The Company: Responsive Engineering Ltd

Welding Manufacturing Sites: Armstrong Works

Address: Scotswood Road, Newcastle, NE15 6UX

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, stainless steels and aluminium/aluminium alloys in conjunction with new build of railway vehicles and 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
111:MMA	1.1 Steels $R_{eH} \leq 275N/mm^2$	10mm – 40mm
	1.2 Steels $R_{eH} > 275N/mm^2 \leq 360N/mm^2$	
	2.1 Steels $R_{eH} > 360N/mm^2 \leq 460N/mm^2$ combinations between 2 ^a – 2, 1 – 1, 2 ^a – 1	
131:MIG	22.1, 22.2 ^b , 22.3 ^b , 22.4 ^b Non heat treatable Al alloys combinations between 22.1, 22.2 ^b , 22.3 ^b , 22.4 ^b	3mm – 24mm
	23.1 Heat treatable alloys: Al-Mg-Si-alloys	
135:MAG	1.1 Steels $R_{eH} \leq 275N/mm^2$	3mm – 80mm
	1.2 Steels $R_{eH} > 275N/mm^2 \leq 360N/mm^2$	
136:MAG flux-cored wire	1.1 Steels $R_{eH} \leq 275N/mm^2$	3mm – 160mm
	1.2 Steels $R_{eH} > 275N/mm^2 \leq 360N/mm^2$	
	2.1 Steels $R_{eH} > 360N/mm^2 \leq 460N/mm^2$ combinations between 2 ^a – 2, 1 – 1, 2 ^a – 1	
141:TIG	1.1 Steels $R_{eH} \leq 275N/mm^2$	3mm – 17.42mm
	1.2 Steels $R_{eH} > 275N/mm^2 \leq 360N/mm^2$	1.4mm – 9.56mm
	8.1 Austenitic stainless steels with Cr \leq 19%	
	8.2 Austenitic stainless steels with Cr \leq 19%	
	22.1, 22.2 ^b , 22.3 ^b , 22.4 ^b Non heat treatable Al alloys combinations between 22.1, 22.2 ^b , 22.3 ^b , 22.4 ^b	1mm – 40mm
23.1 Heat treatable alloys: Al-Mg-Si-alloys		
^a Covers the equal or lower specified yield strength steels of the same group		
^b Provided Al-Mg filler material used		

Responsible Welding Coordinator: Kenneth Simpson MSc, European/International Welding Engineer (d.o.b 14 March 1961) Level A

Deputy Responsible Welding Coordinator: Mr Philip Dodds, European/International Welding Specialist, CSWIP 3.1 Welding Inspector (d.o.b 18 April 1961) (Level A)

Certificate Number: CWRVC/021/GB

Valid Until: 13 April 2022

(subject to satisfactory periodic surveillance)

Issued On: 28 May 2019

TWI Certification Ltd, Chief Executive

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