

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

The Company: MTL Advanced Ltd

Welding Manufacturing Sites: Rotherham Factory

Address: Grange Lane, Brinsworth, Rotherham, S60 5AE, United Kingdom

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 aluminium/aluminium alloys 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 |
|--|--|-------------|
| 111: MMA | 1.1 Steels ReH ≤ 275N/mm ² | 3mm-32mm |
| 131: MIG | 1.2 Steels R _{eH} > 275N/mm ² ≤ 360N/mm ² 22.1, 22.2*, 22.3*, 22.4* Non heat treatable alloys Combinations between 22.1, 22.2*, 22.3* and 22.4* | 3mm – 20mm |
| 135: MAG solid wire | 23.1 Heat treatable alloys: AI Mg SI alloys 1.1 Steels R _{eH} ≤ 275N/mm ² 1.2 Steels R _{eH} > 275N/mm ² ≤ 360N/mm ² | 3mm – 60mm |
| | 2.2 Thermomechanically treated fine grade steels and cast steels with a specified minimum yield strength ReH > 460N/mm ² | 3mm – 20mm |
| | 3.2 Quench and tempered fine grained steels with specific minimum yield strength >690N/mm ² | 3mm – 120mm |
| | 8.1 Austenitic stainless steels with Cr ≤ 19% | 3mm - 40mm |
| 136: MAG flux-cored | 1.1 Steels R _{eH} ≤ 275N/mm ² 1.2 Steels R _{eH} > 275N/mm ² ≤ 360N/mm ² | 3mm – 120mm |
| | 3.2 Quench and tempered fine grained steels with specific minimum yield strength >690N/mm2 | 3mm – 40mm |
| 141: TIG | 1.1 Steels R _{eH} ≤ 275N/mm ² 1.2 Steels R _{eH} > 275N/mm ² ≤ 360N/mm ² | 3mm – 25mm |
| | 21 Pure aluminium ≤ 1% impurities or alloy content | 1.5mm - 6mm |
| | 23.1 Aluminium-magnesium silicon alloys 22.1, 22.2*, 22.3*, 22.4* Non heat treatable Al alloys combinations between 22.1, 22.2*, 22.3* and 22.4* | 3mm – 12mm |
| | 3.2 Quench and tempered fine grained steels with specific minimum yield strength >690N/mm ² | 3mm – 20mm |
| | 8.1 Austenitic stainless steels with Cr ≤ 19% | 3mm – 20mm |
| Provided Al-Mg Filler material is | 10.1 Austenitic ferritic stainless steels with Cr ≤ 24% | 3mm – 40mm |

Responsible Welding Coordinator: Vasyl Kruk (d.o.b 10th January 1980) (Level A) EngTech MWeldl, Certified European/International Welding Engineer.

Deputy Responsible Welding Coordinator: John George Cheetham (d.o.b 9th December 1963) (Level B) PCN Level 3 Welding Inspector

Issued On: 8 August 2019

Certificate Number: CWRVC/011/GB

Valid Until: 7 August 2022

(subject to satisfactory periodic surveillance)

TWI Certification Ltd, Chief Executive

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