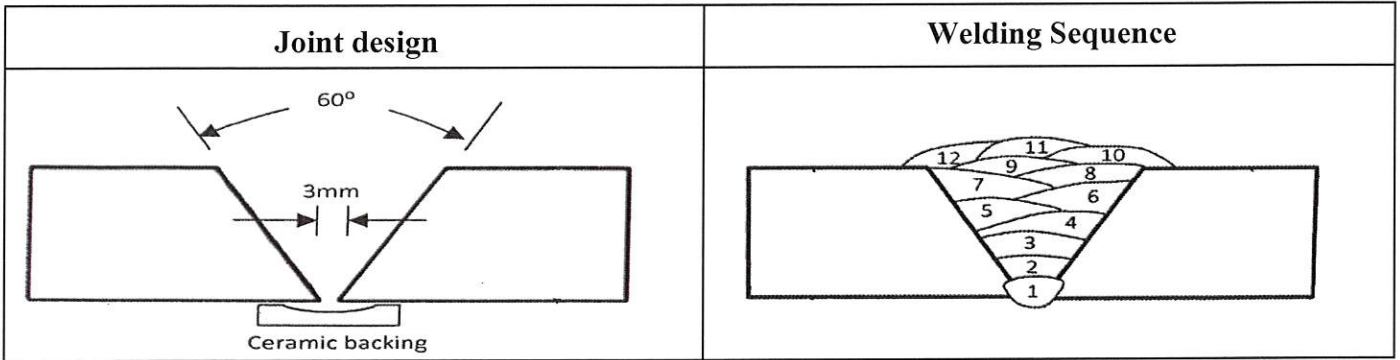




CLEVELAND STEEL & TUBES LTD

WELDING PROCEDURE SPECIFICATION (WPS)

Welding Proc.:	CT-05	Method of Prep. & Cleaning:	Flame cut & Grind
WPQR Ref. No:	CST-01	Parent Material Specification:	API 5L Grade L485
Approval Std:	BS EN ISO 15614-1	Parent Material Group:	ISO 15608 Group 1.3
Location:	Dalton Shop	Material Thickness(mm):	10mm - 40mm
Welding Process:	MAG (135) SAW (121)	Outside Diameter(mm):	> 203mm
Joint Type:	Butt Weld	Welding Position:	PA Rotated



Welding Details

Run	Process	Size of Filler Metal	Current A	Voltage V	Type of current/ Polarity	Wire Feed Speed	Travel Speed mm/sec	Heat Input kJ/mm
1	MAG	1.2mm	260 - 310	29.5 - 31.5	DC+	N/A	3.73 - 4.91	1.25 - 2.09
2-6	SAW	4.0mm	435 - 485	30 - 32	DC+	N/A	8.11 - 11.47	1.21 - 2.02
7-12	SAW	4.0mm	525 - 575	30 - 32	DC+	N/A	8.36 - 11.88	1.32 - 2.21

Filler Metal Classification and Trade Name: BS EN ISO 14341 A:G 50 5 M21/Lincoln SupraMig Ultra
BS EN ISO 14171-A-S2/Oerlikon OE-S2

Any Special Baking or Drying: Dry Store

Gas/Flux Shielding: BS EN ISO 14175 M21 - Energas Migweld 20
BS EN ISO 14174:SA AR 1 88 AC H5 - Oerlikon OP181

Gas Flow Shielding: 15-20 l/min

Wire stick out: 18-20 mm

Metal Transfer type: Mixed Globular/Spray

Details of Back Gouging/Backing: Ceramic Backing

Preheat: N/A

Interpass Temperature: 350 °C max

Post Weld Heat Treatment: N/A

Manufacturer :- Cleveland Steel & Tubes Ltd

Issued :- 1/4/15

Prepared by :- Oliver Hamilton

Signature :-

