

DSBROWN Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: A-GTF-01 Date Issued: 1-9-04 Revision No: 0 Rev. Date: _____
 Contractor (Fabricator) D.S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager
 1. Non-Fracture Critical Fracture Critical WPS Expiration Date: _____
 2. Qualified in accordance with: AWS D1.5-2002, AWS D1.6-99
 Referenced PQR No(s): PQR-GTAW-01(03)
 Referenced FWST No(s): PQR-GTAW-01(03)
 3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, 304SS, 316SS For DOT Approval
 4. Material Thickness (es) Unlimited
 5. Welding process GTAW
 6. Manual , machine , or semiautomatic
 7. Position(s) of welding 1F, 2F
 8. Filler metal specification AWS A5.9
 9. Filler metal class and brand name ER309L (Murrex)
 10. Flux class & brand N/A, Type N/A
 11. Shielding gas 100% Argon Flow rate 20 CFH
 12. Single pass Or multiple pass
 13. Single arc Or multiple arc
 14. Welding Current DCEN
 15. Polarity Straight
 16. Welding progression stringers
 17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
 18. Postheat treatment N/A
 19. Calculated Heat Input (KJ/in) Min 10.9 KJ Max 20.4 KJ
 20. Electrode extension (electrical stickout) N/A

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 APR 09 2007
 APPROVED
 DATE 4/18/07

Weld size (in)	Pass	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (Flare Bevel)
			AMPS/WFS*	VOLTS		
20 ga.	1	1/8"	170-200	15-17	10-14	<p>T₁ = Varies S = Fillet Weld Size (Fillet weld must not exceed thickness of stainless steel)</p>
16 ga.	1	1/8"	170-200	15-17	10-14	
14 ga.	1	1/8"	170-200	15-17	10-14	
12 ga.	1	1/8"	170-200	15-17	10-14	
11 ga.	1	1/8"	170-200	15-17	10-14	
10 ga.	1	1/8"	170-200	15-17	10-14	
8 ga.	1	1/8"	170-200	15-17	10-14	
3/16"	1	1/8"	170-200	15-17	10-14	

* Wire feed speed may be used along with amperage (include chart)

Base Metal Thickness range	Preheat and Interpass Temperature Chart	
	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Prepared By: James R. Connor DSB QA Manager
 Project: _____
 DSB Job: 19866-1106

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

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