

**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 **RECEIVED**  
 5 Welding process GTAW  
 6 Manual  machine  or semiautomatic  OK'D BY \_\_\_\_\_ OK'D BY JWC  
 7 Position(s) of welding 1E, 2F **MAY 04 2009**  
 8 Filler metal specification AWS A5.9 APPROVED \_\_\_\_\_  
 9 Filler metal class and brand name ER309L (Murrex) BY RJC DATE 5/14/09  
 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

Weld size (in)	Passes (N/A)	Electrode Size (in)	Welding Process Variables		Travel Speed (in/min)	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"	70°F	450°F
>1" to ≤2"	150°F	450°F
>2"	225°F	450°F

Prepared By James R. Connor DSB QA Manager  
 Project \_\_\_\_\_  
 DSB Job 26169-1106-VT

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