

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

Procedure No: A-FE-01 Date Issued: 8-12-03 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 (5.12.1)  
 Referenced PQR No(s): PQR-FCAW-01-03  
 Referenced FWST No(s): PQR-FCAW-FWST-01(03), PQR-FCAW-FWST-01A(03)
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W For DOT Approval
4. Material Thickness (es) Unlimited
5. Welding process FCAW
6. Manual , machine , or semiautomatic
7. Position(s) of welding 1F, 2F
8. Filler metal specification AWS A5.20
9. Filler metal class and brand name E71T-1, E71T-9 Lincoln Outershield Elite
10. Flux class & brand N/A, Type N/A
11. Shielding gas 100% CO2 Flow rate 45 CFH
12. Single pass  Or multiple pass
13. Single arc  Or multiple arc
14. Welding Current DCEP
15. Polarity Reverse
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 31.20 KJ/in Max 50.72 KJ/in
20. Electrode extension (electrical stickout) 3/4"

VTRANS RECEIVED  
 FEB 09 2006  
 APPROVED BY: JWC  
 DATE: 2/20/06

Weld Size (in)	Pass No(s)	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)	Travel (in)
			AMPS/WFS*	VOLTS		
**1/4"	1	1/16"	260-310	26-30	11-13	
5/16"	1	1/16"	260-310	26-30	11-13	
3/8"	2-3	1/16"	260-310	26-30	11-13	
7/16"	3-5	1/16"	260-310	26-30	11-13	
1/2"	4-6	1/16"	260-310	26-30	11-13	
5/8"	5-7	1/16"	260-310	26-30	11-13	
3/4"	6-8	1/16"	260-310	26-30	11-13	

**Joint Detail (Fillet)**  
 Show all dimensions, weld sizes, passes, and AWS symbols

T1 = Varies  
 T2 = Varies  
 S = Weld Size

\*\* T1 & T2 equal to or less than 3/4" for 1/4" welds.

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

Prepared By: <u>James R. Connor</u> DSB QA Manager	Preheat and Interpass Temperature Chart		
	Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
Project: _____	≤ 3/4"	50°F	450°F
DSB Job: <u>16225-1121-VT</u>	>3/4" to ≤1.5"	70°F	450°F
	>1.5" to ≤2.5"	150°F	450°F
	>2.5"	225°F	450°F

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