

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

Procedure No: A-FSB-13 Date Issued: 12-11-03 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) Gr. 36, 50, 50W, ASTM A500B For DOT Approval

4. Material Thickness (es) Unlimited

5. Welding process FCAW

6. Manual , machine , or semiautomatic

7. Position(s) of welding 1G, 2G, 1F, 2F

8. Filler metal specification AWS A5.20

9. Filler metal class and brand name E71T-1 (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"

Weld Size (EAS)	Weld Pass	Electrode Size (in)	Welding Process Variables		Travel Speed (ft/min)	Travel
			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	
1/2"	3-4	1/16"	260-310	26-30	11-13	
5/8"	4-6	1/16"	260-310	26-30	11-13	
3/4"	5-7	1/16"	260-310	26-30	11-13	
7/8"	6-8	1/16"	260-310	26-30	11-13	
1"	7-9	1/16"	260-310	26-30	11-13	

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

Preheat and Interpass Temperature Chart

Base Metal Thickness range	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: Route No. TH 7/11, CL3

DSB Job: 20388-1206

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

For DOT Approval

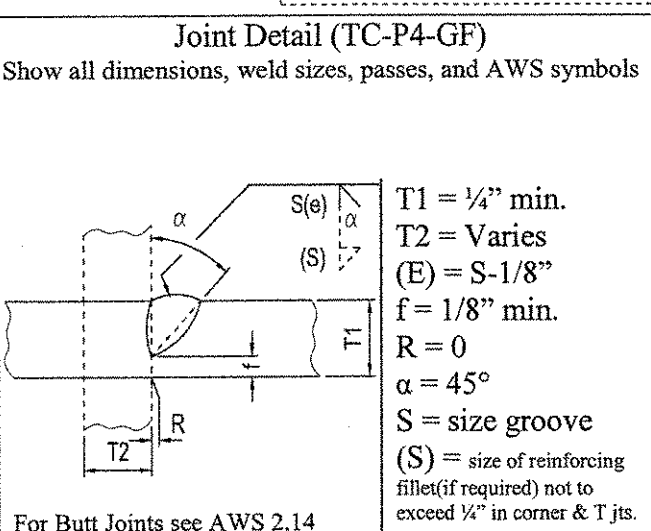
GR'D BY: _____ OK'D BY: _____

RESUBMIT: _____ APPROVED: _____

DATE: 7-23-07

JUN 21 2007

VITRANS RECEIVED



079-BRW P