



Production Joint Welding Procedure Specification (D1.5-10)

Procedure No: **B-FSB-01** Date Issued: 3-28-08 Revision No: 02 Rev. Date: 4/28/2013

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

1. Non-Fracture Critical Fracture Critical WPS Expiration Date: 4/12/18
2. Qualified in accordance with: AWS D1.5- 2010 (5.12.1)
 Referenced PQR No(s). PQR-FCAW-01-(13)A
 Referenced FWST No(s). FCAW-FWST-01A, FCAW-FWST-01B
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 1G, 2G,(1F,2F)
8. Filler metal specification AWS A5.20
9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)
10. Flux class & brand N/A, Type N/A
11. Shielding gas 100% CO2 Flow rate 50 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 26.7 KJ/in Max 44.3 KJ/in
20. Electrode extension (electrical stickout) 3/4"

Vermont Agency of Transportation

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CK'D BY CLB OK'D BY CWC

December 1, 2017

RESUBMIT NO Approved
 BY C. CARLSON DATE 12/08/17

Weld size (E)&(S)	Pass No(s)	Electrode Size (In)	Welding Process Variables		Travel Speed (IPM)
			AMPS/WFS*	VOLTS	
**1/4"	1	1/16"	260-305	25-27.6	11.4-14.6
5/16"	1	1/16"	260-305	25-27.6	11.4-14.6
3/8"	2-3	1/16"	260-305	25-27.6	11.4-14.6
1/2"	3-4	1/16"	260-305	25-27.6	11.4-14.6
5/8"	4-6	1/16"	260-305	25-27.6	11.4-14.6
3/4"	5-7	1/16"	260-305	25-27.6	11.4-14.6
7/8"	6-8	1/16"	260-305	25-27.6	11.4-14.6
1"	7-9	1/16"	260-305	25-27.6	11.4-14.6

Joint Detail (TC-P4-GF)

Show all dimensions, weld sizes, passes, and AWS symbols

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

T1 = 1/4" min.
 T2 = Varies
 (E) = S-1/8"
 f = 1/8" min.
 R = 0
 alpha = 45°
 S = size groove
 (S) = size of reinforcing fillet(if required) not to exceed 1/4" in corner & T jts.

For Butt Joints see AWS 2.14

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

Prepared By: [Signature] DSB QA Manager

Project: _____

DSB Job: 53146-1114 VT

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

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