



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

Procedure No: **B-FSV-01** Date Issued: 3-28-08 Revision No: 02 Rev. Date: 4/28/13

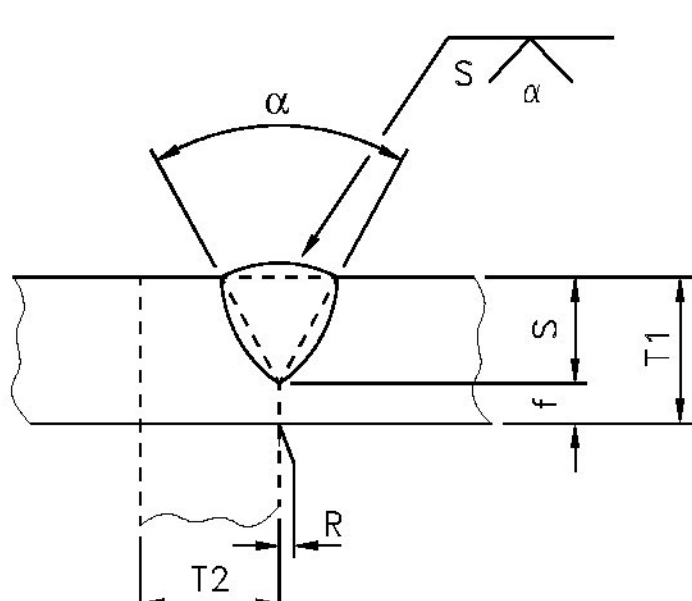
Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

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). N/A , , ,
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process FCAW
6. Manual , machine , or semiautomatic
7. Position(s) of welding 1G
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 and 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 RSF OK'D BY CLB
September 19, 2017
 RESUBMIT NO Approved
 BY C. CARLSON DATE 10/10/17

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

Joint Detail (C-P2-GF)
 Show all dimensions, weld sizes, passes, and AWS symbols



T1 = 1/4" min.
 T2 = Unlimited
 f = 1/8" min.
 R = 0
 alpha = 60°
 S = Groove Prep Depth
**** T1 & T2 equal to or less than 3/4" for 1/4" welds.**

For Butt Joints see AWS 2.14

Prepared By: DSB QA Manager Project: <u>VT-15A</u> DSB Job: <u>53146-1011</u>	Preheat and Interpass Temperature Chart <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Base Metal Thickness range</th> <th>Minimum Preheat (°F)</th> <th>Max Preheat & Interpass (°F)</th> </tr> </thead> <tbody> <tr> <td>≤ 3/4"</td> <td>50°F</td> <td>450°F</td> </tr> <tr> <td>>3/4" to ≤1.5"</td> <td>70°F</td> <td>450°F</td> </tr> <tr> <td>>1.5" to ≤2.5"</td> <td>150°F</td> <td>450°F</td> </tr> <tr> <td>>2.5"</td> <td>225°F</td> <td>450°F</td> </tr> </tbody> </table>	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
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Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.