



Production Joint Welding Procedure Specification (D1.5-08)

Procedure No: B-FF-01 Date Issued: 3-28-08 Revision No: 01 Rev. Date: 11-11-09

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

1. Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: 3-6-13

2. Qualified in accordance with: AWS D1.5- 2008 (5.13)

Referenced PQR No(s). PQR-FCAW-01-(08) , ,

Referenced FWST No(s). PQR-FCAW-FWST-01A(08) , PQR-FCAW-FWST-01B(08) , ,

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 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 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)

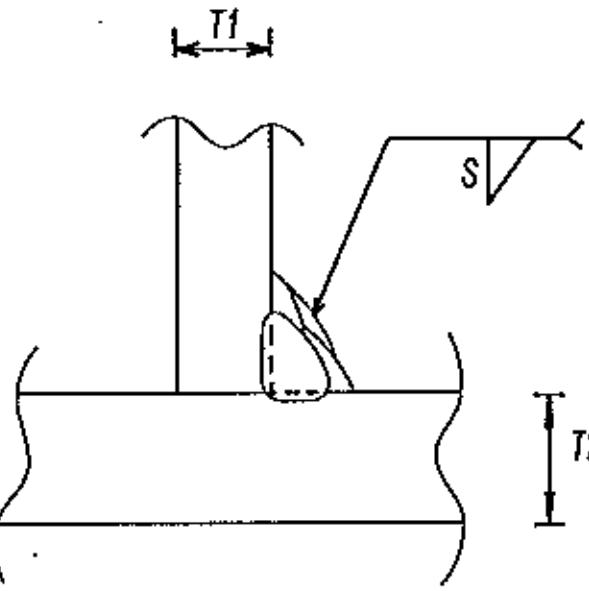
18. Postheat treatment N/A

19. Calculated Heat Input (KJ/In) Min 32.2 KJ/in Max 45.8 KJ/in

20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

WITNESSED
RECEIVED
OK'D BY: JWC
JUN 26 2012
APPROVED BY: [Signature]
DATE: 7/2/12

Weld size (In)	Pass No(s)	Electrode Size (In)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (Fillet) Show all dimensions, weld sizes, passes, and AWS symbols
			AMPS/WFS*	VOLTS		
**1/4"	1	1/16"	257-295	26.1-29.5	11.4-12.5	 T1 = Varies T2 = Varies S = Weld Size ** T1 & T2 equal to or less than 3/4" for 1/4" welds.
5/16"	1	1/16"	257-295	26.1-29.5	11.4-12.5	
3/8"	2-3	1/16"	257-295	26.1-29.5	11.4-12.5	
7/16"	3-5	1/16"	257-295	26.1-29.5	11.4-12.5	
1/2"	4-6	1/16"	257-295	26.1-29.5	11.4-12.5	
5/8"	5-7	1/16"	257-295	26.1-29.5	11.4-12.5	
3/4"	6-8	1/16"	257-295	26.1-29.5	11.4-12.5	

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

Prepared By: [Signature] DSB QA Manager

Project: _____

DSB Job: 36775-1104-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.