

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

Procedure No: A-(MC)GSB-01 Date Issued: 9-28-04 Revision No: 01 Rev. Date: 9-15-09

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

1. Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: 8-11-14

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

Referenced PQR No(s). PQR-(MC)GMAW-03(09) , ,

Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(09) , PQR-(MC)GMAW-FWST-01B(09) , ,

3. Material specification(s) ASTM A709 Gr. 36, 50, 50W For DOT Approval

4. Material Thickness (es) Unlimited

5. Welding process GMAW

6. Manual ☐ , machine ☒ , or semiautomatic ☒

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

8. Filler metal specification AWS A5.18

9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim

10. Flux class & brand N/A , Type N/A

11. Shielding gas 75% Ar / 25% 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 34.77 KJ/in Max 49.65 KJ/in

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

Weld size (in)	Pass No(s)	Electrode size (in)	Welding Process Variables		Travel Speed (IPM)
			AMPS/WFS*	VOLTS	
1/4"	1	.052"	270-307	27.9-31	11.5-13
5/16"	1	.052"	270-307	27.9-31	11.5-13
3/8"	1-2	.052"	270-307	27.9-31	11.5-13
1/2"	3-4	.052"	270-307	27.9-31	11.5-13
5/8"	4-6	.052"	270-307	27.9-31	11.5-13
3/4"	5-7	.052"	270-307	27.9-31	11.5-13
7/8"	6-9	.052"	270-307	27.9-31	11.5-13
1"	7-10	.052"	270-307	27.9-31	11.5-13

Joint Detail (TC-P4-GF)

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

T1 = 1/4" min.
T2 = Varies
(E) = S-1/8"
f = 1/8" min.
R = 0
α = 45°
S = size groove
(S) = size of reinforcing
fillet(if required) not to
exceed 1/2" in corner & T jts.

For Butt Joints see AWS 2.14

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

Prepared By: DSB QA Manager

Project: _____

DSB Job: 35029-1112

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.