



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

Procedure No: A-(MC)GSB-01 Date Issued: 9-28-04 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-(MC)GMAW-01(04) , \_\_\_\_\_ , \_\_\_\_\_  
 Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(04) , PQR-(MC)GMAW-FWST-01B(04) , \_\_\_\_\_ , \_\_\_\_\_
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 30.6 KJ/in Max 51.1 KJ/in
20. Electrode extension (electrical stickout) 3/4"

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APPROVED

BY DOE 12/29/09

Weld size (in)	Pass No(s)	Electrode size (in)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (TC-P4-GF) Show all dimensions, weld sizes, passes, and AWS symbols
			AMPS/WFS*	VOLTS		
1/4"	1	.052"	265-320	31-34.5	13-16	<p>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 &amp; T jts.</p>
5/16"	1	.052"	265-320	31-34.5	13-16	
3/8"	1-2	.052"	265-320	31-34.5	13-16	
1/2"	3-4	.052"	265-320	31-34.5	13-16	
5/8"	4-6	.052"	265-320	31-34.5	13-16	
3/4"	5-7	.052"	265-320	31-34.5	13-16	
7/8"	6-9	.052"	265-320	31-34.5	13-16	
1"	7-10	.052"	265-320	31-34.5	13-16	

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

Prepared By: James R. Connor DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

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.