



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

Procedure No: A-GTF-01 Date Issued: 1-9-04 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, AWS D1.6-99
 Referenced PQR No(s). PQR-GTAW-01-(03)
 Referenced FWST No(s). PQR-GTAW-01(03)
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, 304SS, 316SS For DOT Approval
4. Material Thickness (es) Unlimited
5. Welding process GTAW
6. Manual , machine , or semiautomatic
7. Position(s) of welding 1F, 2F
8. Filler metal specification AWS A5.9
9. Filler metal class and brand name ER309L (Murrex)
10. Flux class & brand N/A, Type N/A
11. Shielding gas 100% Argon Flow rate 20 CFH
12. Single pass Or multiple pass
13. Single arc Or multiple arc
14. Welding Current DCEN
15. Polarity Straight
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 10.9 KJ Max 20.4 KJ
20. Electrode extension (electrical stickout) N/A

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NOV 17 2009

RELEASIT _____ APPROVED

BY: _____ DATE 12/29/09

Weld size (In)	Pass No(s)	Electrode Size (In)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (Flare Bevel) Show all dimensions, weld sizes, passes, and AWS symbols
			AMPS/WFS*	VOLTS		

20 ga.	1	1/8"	170-200	15-17	10-14	
16 ga.	1	1/8"	170-200	15-17	10-14	
14 ga.	1	1/8"	170-200	15-17	10-14	
12 ga.	1	1/8"	170-200	15-17	10-14	
11 ga.	1	1/8"	170-200	15-17	10-14	
10 ga.	1	1/8"	170-200	15-17	10-14	
8 ga.	1	1/8"	170-200	15-17	10-14	
3/16"	1	1/8"	170-200	15-17	10-14	

<p>* Wire feed speed may be used along with amperage (include chart)</p> <p>Prepared By: <u>James R. Connor</u> DSB QA Manager</p> <p>Project: _____</p> <p>DSB Job: <u>27177-1106</u></p>	<p>Preheat and Interpass Temperature Chart</p> <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.