

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

Procedure No: A-FSB-11 Date Issued: 11-13-03 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-FCAW-01-03
 Referenced FWST No(s): PQR-FCAW-FWST-01(03), PQR-FCAW-FWST-01A(03)
 3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, A53 & 500C (pipe) For DOT Approval
 4. Material Thickness (es) Unlimited
 5. Welding process FCAW
 6. Manual , machine , or semiautomatic
 7. Position(s) of welding 1G, 2G, (1F, 2F)
 8. Filler metal specification AWS A5.20
 9. Filler metal class and brand name E71T-1, E71T-9 Lincoln Outershield Elite
 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) BY _____ DATE 7-17-06
 18. Postheat treatment N/A
 19. Calculated Heat Input (KJ/in) Min 31.20 KJ/in Max 50.72 KJ/in
 20. Electrode extension (electrical stickout) 3/4"

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 JUN 26 2006
 APPROVED: _____
 DATE 7-17-06

| Weld Size (E&S) | 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 | | |
| *1/8" | 1 | 1/16" | 260-310 | 26-30 | 11-13 | <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 1/2" in corner & T Jts.</p> |
| 1/4" | 1 | 1/16" | 260-310 | 26-30 | 11-13 | |
| 5/16" | 1 | 1/16" | 260-310 | 26-30 | 11-13 | |
| 3/8" | 2-3 | 1/16" | 260-310 | 26-30 | 11-13 | |
| 1/2" | 3-4 | 1/16" | 260-310 | 26-30 | 11-13 | |
| 5/8" | 4-6 | 1/16" | 260-310 | 26-30 | 11-13 | |
| 3/4" | 5-7 | 1/16" | 260-310 | 26-30 | 11-13 | |
| 7/8" | 6-8 | 1/16" | 260-310 | 26-30 | 11-13 | |

* To be used for non-structural applications only!
 For Butt Joints see AWS 2.14

| Prepared By: <u>James R. Connor</u> DSB QA Manager | Preheat and Interpass Temperature Chart | | |
|--|---|----------------------|------------------------------|
| | Base Metal Thickness range | Minimum Preheat (°F) | Max Preheat & Interpass (°F) |
| Project: _____ | ≤ 3/4" | 50°F | 450°F |
| DSB Job: <u>14032-1042</u> | >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.

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