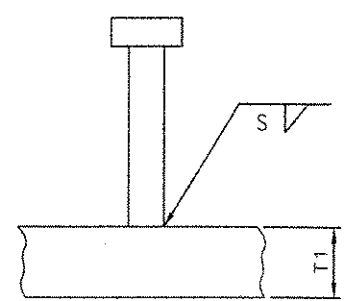


DSBROWN Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: A-FF-STUD-REP-01 Date Issued: 9-12-03 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, A500B to A108 Stud For DOT Approval _____
 4. Material Thickness (es) Unlimited
 5. Welding process FCAW
 6. Manual , machine , or semiautomatic
 7. Position(s) of welding 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 and per AWS D1.5 (3.2.1 & 3.11)
 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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 RESUBMIT APPROVED BY _____
 DATE 11-20-04

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	VOLTS		
**1/4"	1	1/16"	260-310	26-30	11-13	 <p>T₁ = VARIES S = VARIES PER TABLE 7.2 (AS SHOWN LEFT OF PAGE). APPLICATION: REPAIR OF STUD WELDMENTS, WHICH DO NOT EXHIBIT A FULL 360° FLASH</p>
5/16"	1	1/16"	260-310	26-30	11-13	
3/8"	2-3	1/16"	260-310	26-30	11-13	

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

Prepared By: James R. Connor DSB QA Manager
 Project: Granite Street over Stevens Branch of the Winooki River
 DSB Job: 12550-1042

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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