DSBROWN

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

Procedure No: **A-SM-STUD-REP-01** Date Issued: 8/6/04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: N/A
2. Qualified in accordance with: AWS D1.5- 2002
   Referenced PQR No(s). N/A __ , __ , ____
   Referenced FWST No(s). N/A , N/A , __ , ____
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, A108 Stud
4. Material Thickness (es) Unlimited
5. Welding process SMAW
6. Manual [X] , machine [ ] , or semiautomatic [ ]
7. Position(s) of welding 1F, 2F
8. Filler metal specification AWS A5.1
9. Filler metal class and brand name LINCOLN JET LH-78-MR E7018
10. Flux class & brand N/A , Type N/A
11. Shielding gas N/A Flow rate N/A
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] 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 20.28 Kj/In Max 30.6 Kj/In
20. Electrode extension (electrical stickout) Varies

For DOT Approval

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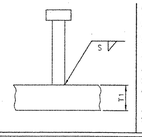
Weld size (in)	Pass No(s).	Electrode Size (in)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
1/4"	1	5/32"	130-170	26-30	10
5/16"	1	5/32"	130-170	26-30	10
3/8"	2-3	5/32"	130-170	26-30	10

Joint Detail (Fillet)
Show all dimensions, weld sizes, passes, and AWS symbols



T1 = Varies
Stud = Varies
S = Weld Size

Weld must cover and extend beyond missing flash at least 3/8" in each direction

(see AWS D1.5 Table 7.2 for required weld size)

As per AWS D1.5 Sec. 7 (Table 7.2)

Stud Diameter	Minimum Fillet
≤ 3/8"	1/4"
3/8" ≤ 1"	5/16"
> 1"	3/8"

Prepared By: James R. Connor DSB QA Manager

Project: Granite Street over Stevens Branch of the Winooski River

DSB Job: 12550-1042

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.

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