



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

Procedure No: A-FSV-01 Date Issued: 8-12-03 Revision No: 0 Rev. Date: _____

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

- Non-Fracture Critical Fracture Critical WPS Expiration Date: _____
- Qualified in accordance with: AWS D1.5-2002 (5.12.1)
- Referenced PQR No(s): PQR-FCAW-01-03
- Referenced FWST No(s): N/A
- Material specification(s) ASTM A709 Gr. 36, 50, 50W
- Material Thickness (es) Unlimited
- Welding process FCAW
- Manual , machine , or semiautomatic
- Position(s) of welding 1G
- Filler metal specification AWS A5.20
- Filler metal class and brand name E71T-1, E71T-9 (Lincoln Outershield Elite)
- Flux class & brand N/A, Type N/A
- Shielding gas 100% CO2 Flow rate 45 CFH
- Single pass Or multiple pass
- Single arc Or multiple arc
- Welding Current DCEP
- Polarity Reverse
- Welding progression Stringers
- Root treatment Clean to bright sound metal and per AWS D1.5 (3.2.1 & 3.11)
- Postheat treatment N/A
- Calculated Heat Input (KJ/in) Min 31.20 KJ/in Max 50.72 KJ/in
- Electrode extension (electrical stickout) 3/4"

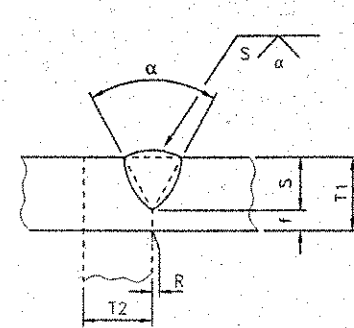
For DOT Approval

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 BY DATE 01-04-06

Weld size (in)	Pass No(s)	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)	Travel (in)
			AMPS	VOLTS		
1/4"	1	1/16"	260-310	26-30	11-13	
5/16"	1-2	1/16"	260-310	26-30	11-13	
3/8"	2-3	1/16"	260-310	26-30	11-13	
1/2"	4-5	1/16"	260-310	26-30	11-13	
5/8"	5-6	1/16"	260-310	26-30	11-13	
3/4"	5-8	1/16"	260-310	26-30	11-13	

Joint Detail (C-P2-GF)

Show all dimensions, weld sizes, passes, and AWS symbols



T1 = 1/4" min.
 T2 = Unlimited
 f = 1/8" min.
 R = 0
 α = 60°
 S = Groove Prep Depth

For Butt Joints see AWS 2.14

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: U.S. RTE. 5 OVER LULLS BROOK

DSB Job: 14032-1042

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.