

Highway Safety Corporation
Glastonbury, CT

Welding Procedure Specification

Material specification	ASTM A36, A572 gr 50, A709 Gr 36, ASTM A709 Gr 50, A500 gr B		
Welding process	Gas Metal Arc Welding (GMAW)		
Manual, semi-automatic, or automatic	Semi-Automatic		
Position of welding	Horizontal (2F)		
Filler metal specification	AWS A5.18		
Filler metal classification	ER70S-3		
Electrode and manufacturer	Lincoln Electric Lincoln Weld L-50		
Flux and manufacturer	N/A		
Shielding gas	85% Argon / 15% CO2	Flow rate	19-27 L / min
Single or multiple pass	Single		
Single or multiple arc	Single		
Welding current	DC		
Polarity	Reverse		
Welding progression	Stringers		
Root treatment	None		
Preheat and interpass temperature	Base Metal up to 3/4" (50°F) ; over 3/4-1 1/2" (70°F)		
Postheat treatment	None		
Electrode extension	3/4" ± 1/4"		

WELDING PROCEDURE

Weld size	Pass no.	Electrode size	Welding parameters		Travel speed	Joint detail
			Amperes	Volts		
3/16"	1	0.045"	300 A ± 30	29 V ± 2	28 ipm ± 2	
1/4"	1	0.045"	300 A ± 30	29 V ± 2	14 ipm ± 2	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc. within the limitation of variables given in section 5 of latest edition AWS D1.1

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