

Casco Bay Steel Structures, Inc.

WELDING PROCEDURE SPECIFICATION

Material specification ASTM Gr. 50 + Gr. 50W
 Welding process Gas Metal ARC Welding (GMAW)
 Manual or machine Semi Auto
 Position of welding Flat + Horizontal
 Filler metal specification AWS-A5.28
 Filler metal classification E80C-Ni1 ESAB
 Flux NA
 Shielding gas 90% AR / 10% CO₂ Flow rate 35 CFH + 1/4 Elec. Stickout 5/8
 Single or multiple pass Single + multiple
 Single or multiple arc Single
 Welding current DC
 Polarity DC EP
 Welding progression See Detail
 Root treatment Blast Clean - wire Brush - Area To be Free of slag - RUST - Moisture
 Preheat and interpass temperature See Table and as Required
 Postheat temperature AS Required
 Heat Input Min 24.4 KJ/in Max 38.3 KJ/in P.Q.R. 418-FCM = 34.8 KJ/in
 * 35.0 KJ/in Min for single pass
 Minimum Preheat and Interpass Temperature, °C [°F]

Welding Process (Base Metal)	Thickness of Thickest Part at Point of Welding, mm (in)				Gr 50	Gr 50W
	To 20 mm [3/4 in] Incl.	Over 20 mm [3/4 in] to 40 mm [1-1/2 in] Incl.	Over 40 mm [1-1/2 in] to 65 mm [2-1/2 in] Incl.	Over 65 mm [2-1/2 in]		
SAW; GMAW; FCAW; SMAW (M270M [M270] [A 709M (A 709)])	345 [50]	10 [50]	20 [70]	65 [150]	110 [225]	
FCM Gr 50	150 ^{oF}	200 ^{oF}	225 ^{oF}	325 ^{oF}		
FCM Gr 50W	150 ^{oF}	250 ^{oF}	325 ^{oF}	350 ^{oF}		

WELDING PROCEDURE

Max. Interpass 440^{oF}

Pass no.	Electrode size	Welding current		Travel speed	AWS D1.5	Joint detail
		Amperes	Volts			
AS REQ	.052	307	29.2	15.5	Sec. 5.12.4.2	Joint detail FILLET
		338.7	31	17.5		
		To	To	To		
* 1 Pass	.052	276.3	27	13.5	AWS D1.5	Joint detail FILLET
		338.7	31	17.5		
		to	to	to		
		281.3	28.0	13.5		

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. FCM 610

Revision no. _____

Contractor Casco Bay Steel

Authorized By Paul E. Goodale

Date 8-1-2013

Approved for
 Waitersfield
 Jon + 5/13/16
 RST