Casco Bay Steel Structures, Inc.

WELDING PROCEDURE SPECIFICATION

Material specification ASTM Gr 50 (345)
Welding process Flux Core Arc Welding (FCAW)
Manual or machine Semi AUTO
Position of welding Flat & Horizontal
Filler metal specification AWS 5.5-21
Filler metal classification E71T-1 - Lincoln UltraCore 71AD5 Dual
Flux NA Flow rate 35 CFH +8/-4, Elec. Stickout 5/8 +-
Shielding gas 75% AR / 25% CO2
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 Free of Slag - Rust & Moisture
Preheat and interpass temperature See Table
Postheat temperature As Req.
Heat Input Min 22.4 KJ/in Max 35.2 KJ/in PQR # FCM-SP2, 32 KJ/in

Vermont Agency of Transportation
RECEIVED
CK'D BY JWC OK'D BY
November 4, 2013
RESUBMIT No Approved
BY James Lacroix DATE 11/08/2013

VT-AOT; Bristol
Bridge NO. 31
Proj No. BRO 1445(3)
CASS NO. 534

Minimum Preheat and Interpass Temperature, °C [°F]

Welding Process (Base Metal)	Thickness of Thicker Part at Point of Welding, mm [in] 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]
AW; SMAW; FCAW; SMAW (M27DM [M270] 709)(GTA 709)) Gr. 250 [36], 345 [50], 345W OW) HPS 345W [HPS 50W])	10 [50]	20 [70]	63 [150]	110 [225]
FCM Gr 50	150°F	200°F	225°F	325°F - HB

Max Interpass 400°F

WELDING PROCEDURE

Pass no.	Electrode size	Welding current Amperes	Welding current Volts	Travel speed	Sec. 5.12.4.2 AWS D1.5 Joint detail Fillet
		297	29	16.4	2F 1F
1 To 4	1/16	326 To 267.3	31 To 27	18.9 To 13.9	5/16 To 5/8* 5/16 To 5/8*

* Weld Size may use Multiple Pass

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. 101-C, ST VT AOT
Revision no. REV"1

Contractor Casco Bay Steel
Authorized By Paul E. Goodale
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