

Phone: (207) 772-2533

5 Industry Road
South Portland, Maine 04106



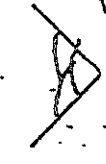

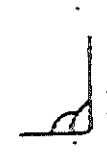

Putney IM 091-1(60)
VTrans Structures' Section
Jan 26, 2011

WELDING PROCEDURE SPECIFICATION

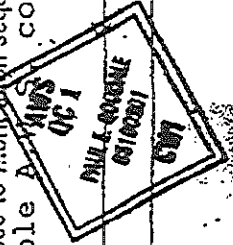
Material specification ASTM A109 Gr 86-80-50W (250-345-345W) ✓
 Welding process SMAW Metal Arc Welding (SMAW)
 Manual or machine Manual
 Position of welding Flat (F), Horizontal (HF) ✓
 Filler metal specification ANST/AWS A5.1 - A5.5 ✓
 Filler metal classification E7018 - 8018 C/3 - 7028
 Flux NA
 Shielding gas NA Flow rate NA ✓
 Single or multiple pass Single and multiple ✓
 Single or multiple arc single
 Welding current AC / DP
 Polarity Straight / Reverse
 Welding progression NA ✓
 Root treatment Meet AWS SPECIFICATION
 Preheat and Interpass temperature to 3/4(9) 50°(10) 3/4(9) to 1/2(8) 70°(20) 1/2(8) to 2/4(6.5) 150°(15)
 Postheat temperature NA ✓
 Heat Input Min NA Max NA ✓

(Metric)

WELDING PROCEDURE

| Pass no. | Electrode size | Welding current | | Travel speed | Joint detail |
|------------|-------------------|-----------------|--------------|--------------|---|
| | | Ampetes | Volts | | |
| | <u>Joint</u> | | | | <u>AW's D1.5</u> |
| | <u>1/8 (3.2)</u> | <u>70-170</u> | <u>22-26</u> | | <u>LF</u> |
| <u>AS</u> | <u>5/32 (3.9)</u> | <u>120-225</u> | <u>22-26</u> | <u>AS</u> |  |
| <u>REQ</u> | <u>3/16 (4.8)</u> | <u>170-300</u> | <u>24-27</u> | <u>REQ</u> |  |
| | <u>3/16 (4.8)</u> | <u>90-160</u> | <u>22-26</u> | |  |
| | <u>7/32 (5.7)</u> | <u>120-225</u> | <u>22-26</u> | | <u>2F</u> |
| | <u>3/16 (4.8)</u> | <u>180-290</u> | <u>24-27</u> | |  |
| | <u>5/32 (3.9)</u> | <u>170-290</u> | <u>22-26</u> | |  |
| | <u>3/16 (4.8)</u> | <u>210-330</u> | <u>24-27</u> | |  |

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



Procedure no. 4101 Contractor Casco Bay Steel
 Revision no. _____ Authorized By Paul E. Hordale
 Form III-2 Date 8/28/10