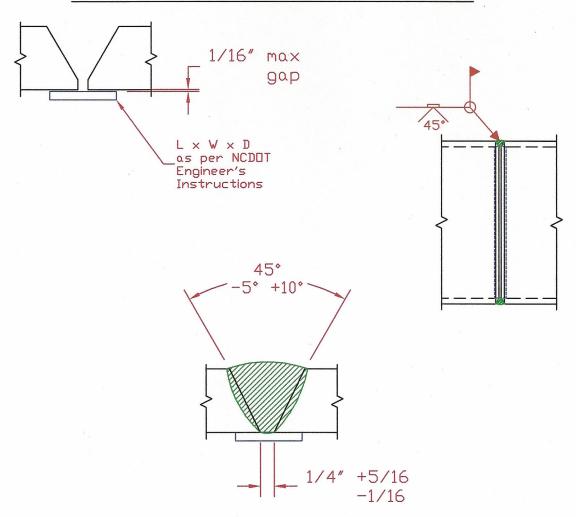
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ENCASEMENT PIPE

WELDING PROCEDURE SPECIFICATION (WPS) AWS D1.1

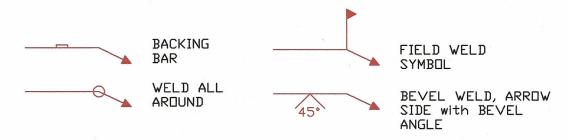
| tions & Codes | · | 1 | NCDOT Star | ndard S | Specifications. | /AASHTO/AWS Di | 1.1, Sections 2 thru 6 | |
|---|---|--|---|---------------------------------------|--|--|---|--|
| Specifications | : | AS | STM A-36, A | 572, (A | 709-36, 50), (| (M270-GR250, 345) | Unlimited Thickness | |
| Welding Process: SMAW | | | Manual or Semi- Automatic or Automatic: | | | | Manual | |
| Filler Metal Specification: AW NCDOT Approved | | | | | fication: | | – Flat, Horizontal, Vertical, | |
| | | | | | both | | Overhead | |
| Welding Current: DC P | | olarity: | Positive | | Progression: | N/A | | |
| Root Treatment: N/A | | | | | | | | |
| Preheat Temp: 100° minimum | | | Interpass: _ | 450° | maximum | Post Heat: | N/A | |
| Electrode | Welding Current | | Travel | | | Joint | Details | |
| Size | Amperes Volts | | Speed | | | | | |
| 1/8" 5/32" | 90-150 120-200 | 20-23 21-24 | 6-9 ipm 6-10 ipm | | SEE ATTA | | ACHMENT | |
| PREHEAT COMMENTS: | | | | | | | | |
| Thickness Min. Temp. | | | Remove all coating, rust, dirt and mill scale within one inch of the area to be | | | | | |
| - | | | welded prior to fit-up. Remove all slag, spatter and weld discontinuities between | | | | | |
| | | | passes. C | iean th | <u>e completea v</u> | weid of all debris, si | ag and spatter. | |
| | | | | | | | | |
| WPS Description: Encasement-Pipe | | | | · · · · · · · · · · · · · · · · · · · | | | | |
| WPS #: 081109012 | | | Authorize | d By: | By: Steve Walton, Metals Engineer | | | |
| on #: 3 | | | Signature: | : | Stather | | | |
| | Specifications Process: al Specificati NC urer: current: femp: 10 Electrode Size 1/8" 5/32" PREHEA ckness to 3/4" 4" to 1 1/2" /2" to 2 1/2" r 2 1/2" sion: Enc | NCDOT Approducer: NCDOT Approducer: Electrodes | Specifications: SMAW | Specifications: SMAW Manual | Specifications: SMAW Manual or Sement-Pipe Single or Multiple Pass Current: DC Polarity: Process: SMAW Manual or Sement AWS A5.1 Classi NCDOT Approved Single or Multiple Pass Multiple Pass Current: DC Polarity: Position: AWS A5.1 Classi Number of Multiple Pass Multiple Pass Multiple Pass Amperes Volts Speed 1/8" 90-150 20-23 6-9 ipm 6-10 ipm COMMENTS: Remove all coati welded prior to fee passes. Clean the coation of the | Specifications: ASTM A-36, A572, (A709-36, 50), (Process: SMAW Manual or Semi- Automatic all Specification: AWS A5.1 Classification: Single or Multiple Pass both Current: DC Polarity: Positive Size Top of Multiple Pass Size Amperes Volts Speed 1/8" 90-150 20-23 6-9 ipm 120-200 21-24 6-10 ipm PREHEAT CKNess Min. Temp. to 3/4" 100° 4" to 1 1/2" 100° 4" to 1 1/2" 100° 72 1/2" 150° 72 1/2" 225° Signature: COMMENTS: Remove all coating, rust, dirt welded prior to fit-up. Remove all coating asses. Clean the completed of Signature: Completed Signature | ASTM A-36, A572, (A709-36, 50), (M270-GR250, 345) Process: SMAW | |

WPS ENCASEMENT-PIPE 081109012 R3 JOINT DETAIL ATTACHMENT



ENCASEMENT-PIPE SPLICE DETAILS

Weld Symbol definitions per AWS A2.4:2007



Illustrations for Encasement Pipe Welding



Unacceptable weld (interior of pipe not welded)



Acceptable weld (incomplete area cleaned and then welded)

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)