

# NORTH CAROLINA DEPARTMENT OF TRANSPORTATION FILLET WELD CERTIFICATION TEST (PREREQUISITE FOR GROOVE TEST) WELDING PROCEDURE SPECIFICATION (WPS) AWS D1.5

Specifications & Codes: NCDOT Standard Specifications/AASHTO/AWS D1.5, Section 2, 5 and 12

Material Specifications: ASTM A-36, 3/8" THICK

Welding Process: SMAW Manual or Semi- Automatic or Automatic: Manual

Filler Metal Specification: AWS A5.1 Classification: E-7018

Manufacturer: NCDOT Approved Electrodes Single or Multiple Pass both Position of Weld Vertical

Welding Current: DC Polarity: Positive Progression: Vertical - up

Root Treatment: N/A

Preheat Temp: 50° minimum Interpass: 450° maximum Post Heat: N/A

Pass Num.	Electrode Size	Welding Current		Travel Speed		Joint Details
		Amperes	Volts			
All	1/8"	90-150	20-23	6-9 ipm		SEE ATTACHMENT

PREHEAT	
Thickness	Min Temp.
Up to 3/4"	50°

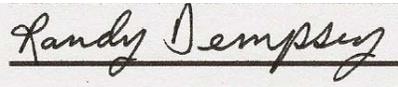
**COMMENTS:**

Remove all rust and mill scale within one inch of the area to be welded prior to fit-up. Remove all slag and spatter between passes. Clean the completed weld of all debris, slag and spatter.

The fillet weld size shall be as directed by the examination proctor.

WPS Description Fillet Weld Certification Test

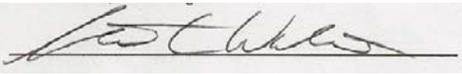
Written By: Randy Dempsey, CWI/CWE, Transportation Technician IV

Signature: 

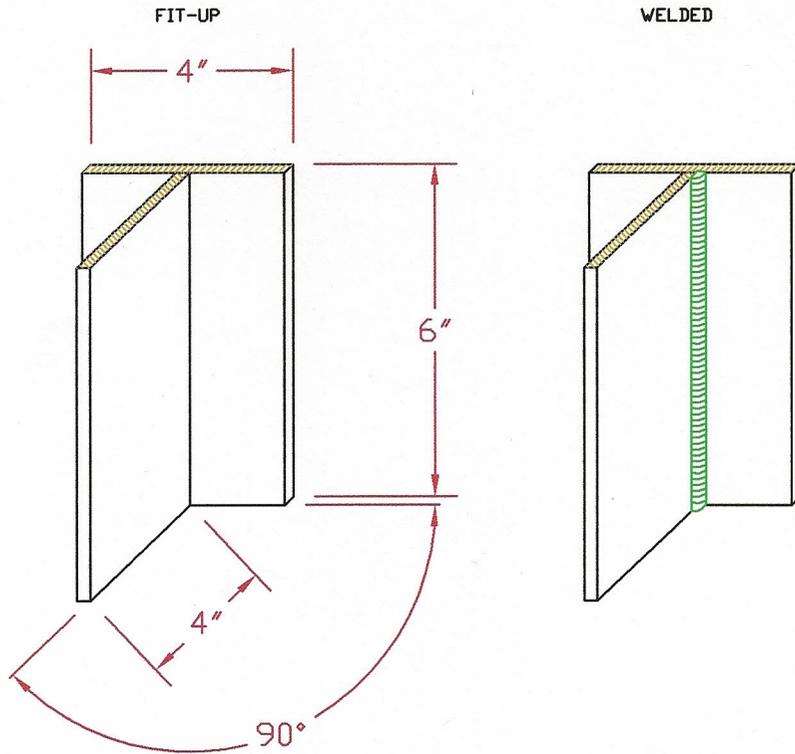
WPS #: 040209008

Authorized By: Steve Walton, Metals Engineer

Revision #: 3

Signature: 

WPS FILLET WELD CERTIFICATION TEST 040209008 R3  
prerequisite for groove test  
JOINT DETAIL ATTACHMENT



FILLET WELD  
TEE JOINT DETAILS

Weld Symbol definitions per AWS A2.4:2007



FILLET WELD, BOTH  
SIDES OF ARROW

## Illustrations for Fillet Weld Certification

(prerequisite for Bridge Welder and Pipe Welder Certification).



Coupon Fit-up.



Completed weld.

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)