

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

6G PIPE CERTIFICATION TEST (BRIDGE WELDER)

WELDING PROCEDURE SPECIFICATION (WPS) AWS D1.1

Specifications & Codes: NCDOT Standard Specifications & AWS D1.1

Material Specifications: ASTM A-500, 7/16" THICK

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

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

Manufacturer: Made in the USA Single or Multiple Pass: Multiple Position of Weld: ALL

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		
<u>All</u>	<u>3/32"</u>	<u>70 - 110</u>	<u>Ampere Controlled</u>	<u>4-11 ipm</u>	SEE ATTACHMENT
<u>All</u>	<u>1/8"</u>	<u>90 - 140</u>		<u>4-11 ipm</u>	

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

COMMENTS:

The backing bar must be in close contact with the test material.

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.

Fill the groove to the full cross section of the member.

WPS Description: 6G Pipe Certification Test

Written By: Michael Pulley, CWI, Metals Products Specialist
 Signature: *Michael Pulley* Date: 11/04/2021

WPS #: 040209010

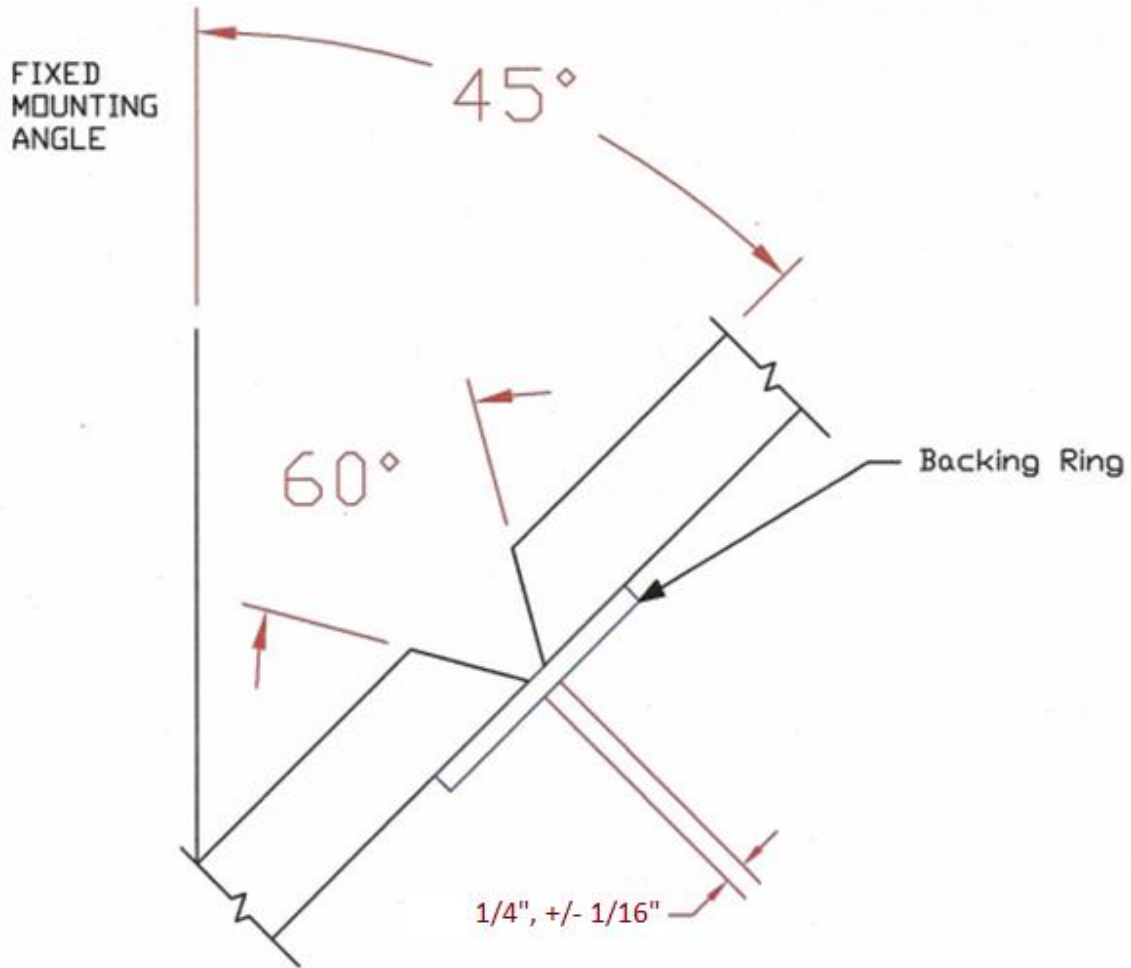
Authorized By: Randy Porter, CWI, Metals Engineer

Revision #: 4

Signature: *Stephen R Porter* Date: 11/04/2021

Revision Date: 11/04/2021

WPS 6G PIPE CERTIFICATION TEST 040209010 R4
JOINT DETAIL ATTACHMENT



6G Pipe Groove Weld Joint Details

Weld Symbol definitions per AWS A2.4:2007



BACKING
BAR



WELD ALL
AROUND



BEVEL WELD, ARROW
SIDE with BEVEL
ANGLE

Illustrations for Pipe Weld Tests

Coupon Fit-up



Completed Coupon

