

# NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

## 1G PLATE CERTIFICATION TEST (SIP WELDER)

### WELDING PROCEDURE SPECIFICATION (WPS) AWS D1.5

Specifications & Codes: NCDOT Standard Specifications/AASHTO/AWS D1.5

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

Welding Current: DC Polarity: Positive Progression: N/A

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: SIP Weld Certification Test

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

WPS #: 040209011

Authorized By: Randy Porter, CWI, Metals Engineer

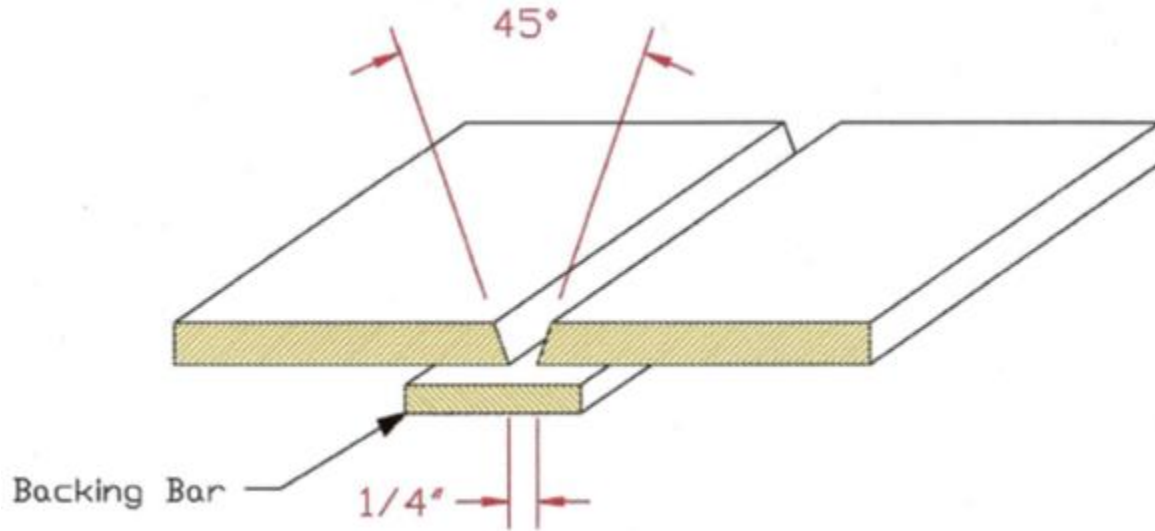
Revision #: 4

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

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WPS 1G PLATE CERTIFICATION TEST 040209011 R4  
JOINT DETAIL ATTACHMENT

1G Position



## 1G Groove Weld Joint Details

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Weld Symbol definitions per AWS A2.4:2007



BACKING BAR



BEVEL WELD,  
ARROW SIDE with  
BEVEL ANGLE &  
ROOT OPENING

# Illustrations for Plate Weld Tests

Unacceptable Weld



Acceptable Weld

