

# WELD PROCEDURE SPECIFICATION

W.P.S. # 89615

## PROCEDURE SPECIFICATION

MATERIAL SPECIFICATION: *ASTM A36, A572-GR.50*

WELDING PROCESS: *FLUX CORE ARC WELD - SS*

MANUAL OR MACHINE: *SEMI-AUTOMATIC*

POSITION OF WELDING: *1G*

FILLER METAL SPECIFICATION: *AWS A5.29*

FILLER METAL CLASSIFICATION: *E70TG-K2*

SINGLE OR MULTIPLE PASS: *MULTIPLE*

SINGLE OR MULTIPLE ELECTRODE: *SINGLE*

WELDING CURRENT: *DIRECT*

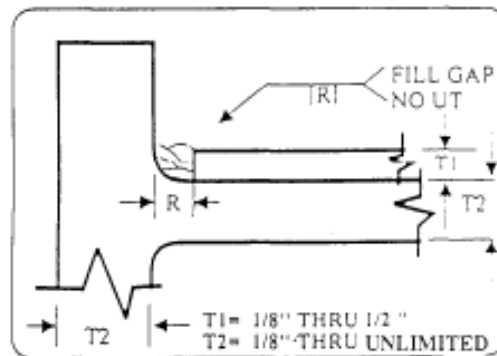
POLARITY: *NEGATIVE*

PREHEAT AND INTERPASS TEMP: *PER TABLE 4.3 MINIMUM*

IN ACCORDANCE WITH WELD PROCEDURE RECORD 89615  
COMPLETE JOINT PENETRATION GROOVE WELD AT DOUBLER PLATES

PASS NO.	ELECT DIA	AMPS	VOLTS	TRAVEL SPEED INCHES
ALL AS REQ	7/64	414 to 506	26 to 30	8 - 14

ELECTRICAL STICKOUT: 1 1/2"



THIS PROCEDURE MAY VARY WITHIN THE LIMITATIONS OF VARIABLES GIVEN  
IN SECTION 4 AND 5 OF A.W.S. D1.1, 1994 STRUCTURAL WELDING CODE

# WELD PROCEDURE QUALIFICATION TEST RECORD

## COMPLETE JOINT PENETRATION GROOVE WELD AT DOUBLER PLATES

### WELD PROCEDURE RECORD #: 89615

#### PROCEDURE SPECIFICATION

MATERIAL SPECIFICATION: *ASTM A572-50*  
 WELDING PROCESS: *FLUX CORE ARC WELD*  
 MANUAL OR MACHINE: *MANUAL*  
 POSITION OF WELDING: *1-G*

FILLER METAL SPECIFICATION: *A5.29*  
 FILLER METAL CLASSIFICATION: *E70TGK2*  
 FILLER METAL TRADE NAME: *NR311NI*  
 FLUX CLASSIFICATION: *N/A*  
 SHIELDING GAS: *N/A*

SINGLE OR MULTIPLE PASS: *MULTIPLE*  
 SINGLE OR MULTIPLE ELECTRODE: *SINGLE*  
 WELDING CURRENT: *DIRECT*  
 POLARITY: *NEGATIVE*  
 PREHEAT AND INTERPASS TEMP: *50° - 550°*

WELDERS NAME:  
 WELDERS S.S. NUMBER:  
 WELDERS I.D.:

TEST DATE:  
 WITNESSED BY:  
 A.W.S. QC-1 #:

#### VISUAL TEST RESULTS

VISUAL APPEARANCE: *ACCEPT*  
 UNDERCUT: *NONE*  
 PIPING POROSITY: *NONE*

#### U.T. TEST RESULTS

ULTRASONIC TESTING: *N/A*  
 U.T. TEST BY: *N/A*  
 ASNT U.T. LEVEL II

#### MACRO TEST RESULTS

MACRO TEST:  
 1: *PASS* 2: *PASS*  
 3: *PASS* 4: *N/A*  
 TESTED BY:  
 A.W.S. QC-1 #:

#### MATERIAL SPEC.

ASTM: *A572 GRADE 50*  
 HEAT #: *376838*  
 YIELD: *55,000 - 56,500*  
 TENSILE: *81,000 - 80,500*  
 ELONGATION @ 8": *24% - 21%*  
 MILLED TO THICKNESS

#### IMPACT TEST RESULTS

ALL WELD METAL IMPACTS  
 FT. LBS ABSORBED ENERGY  
 TESTED AT 0° FAHRENHEIT  
 1: *43* 2: *30* 3: *18*

AVERAGE: *30.3*

HEAT AFFECTED ZONE IMPACTS  
 FT. LBS ABSORBED ENERGY  
 TESTED AT + 70° FAHRENHEIT  
 1: *72* 2: *68* 3: *66*

AVERAGE: *68.6*

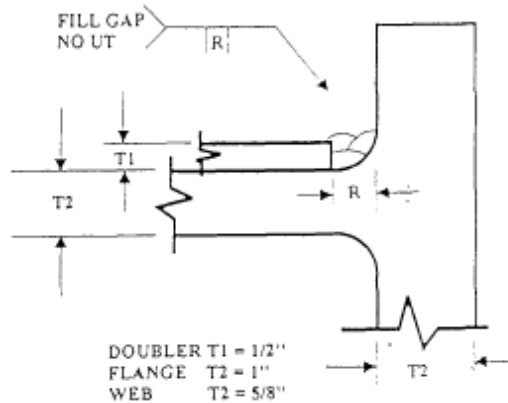
#### R.S. TENSILE TEST

ULTIMATE TENSILE STRENGTH  
 1: *71,500*  
 2: *70,400*

TESTED BY:

PASS NO	ELECTRODE DIAMETER	AMPS	VOLTS	TRAVEL SPEED I.P.M.
1	7/64	460	28	9
2				10
3	7/64	460	28	12

ELECTRICAL STICK OUT: *1 1/2"*



# WELD PROCEDURE SPECIFICATION

W.P.S. # 89616

## PROCEDURE SPECIFICATION

MATERIAL SPECIFICATION: *ASTM A36, A572-GR.50*

WELDING PROCESS: *FLUX CORE ARC WELD - SS*

MANUAL OR MACHINE: *SEMI-AUTOMATIC*

POSITION OF WELDING: *1G*

FILLER METAL SPECIFICATION: *AWS A5.29*

FILLER METAL CLASSIFICATION: *E70TG-K2*

SINGLE OR MULTIPLE PASS: *MULTIPLE*

SINGLE OR MULTIPLE ELECTRODE: *SINGLE*

WELDING CURRENT: *DIRECT*

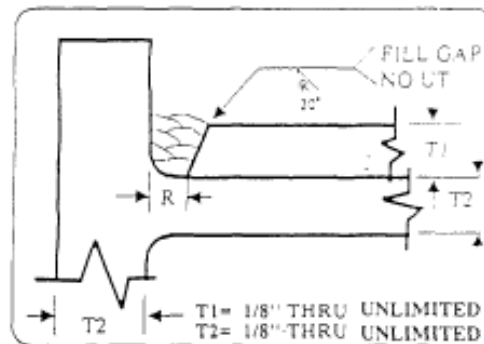
POLARITY: *NEGATIVE*

PREHEAT AND INTERPASS TEMP: *PER TABLE 4.3 MINIMUM*

IN ACCORDANCE WITH WELD PROCEDURE RECORD 89616  
COMPLETE JOINT PENETRATION GROOVE WELD AT DOUBLER PLATES

PASS NO.	ELECT DIA	AMPS	VOLTS	TRAVEL SPEED INCHES
ALL AS REQ	7/64	414 to 506	26 to 30	8 - 14

ELECTRICAL STICKOUT: 1 1/2"



THIS PROCEDURE MAY VARY WITHIN THE LIMITATIONS OF VARIABLES GIVEN  
IN SECTION 4 AND 5 OF A.W.S. D1.1, 1994 STRUCTURAL WELDING CODE

# WELD PROCEDURE QUALIFICATION TEST RECORD

## COMPLETE JOINT PENETRATION GROOVE WELD AT DOUBLER PLATES

### WELD PROCEDURE RECORD #: 89616

PROCEDURE SPECIFICATION

MATERIAL SPECIFICATION: *ASTM A572-50*  
 WELDING PROCESS: *FLUX CORE ARC WELD*  
 MANUAL OR MACHINE: *MANUAL*  
 POSITION OF WELDING: *1-G*

FILLER METAL SPECIFICATION: *A5.29*  
 FILLER METAL CLASSIFICATION: *E70TGK2*  
 FILLER METAL TRADE NAME: *NR311NI*  
 FLUX CLASSIFICATION: *N/A*  
 SHIELDING GAS: *N/A*

SINGLE OR MULTIPLE PASS: *MULTIPLE*  
 SINGLE OR MULTIPLE ELECTRODE: *SINGLE*  
 WELDING CURRENT: *DIRECT*  
 POLARITY: *NEGATIVE*  
 PREHEAT AND INTERPASS TEMP: *50° - 550°*

WELDERS NAME:  
 WELDERS S.S. NUMBER:  
 WELDERS I.D.:

TEST DATE:  
 WITNESSED BY:  
 A.W.S. QC-1 #:

VISUAL TEST RESULTS

VISUAL APPEARANCE: *ACCEPT*  
 UNDERCUT: *NONE*  
 PIPING POROSITY: *NONE*

U.T. TEST RESULTS

ULTRASONIC TESTING: *N/A*  
 U.T. TEST BY: *N/A*  
 ASNT U.T. LEVEL II

MACRO TEST RESULTS

MACRO TEST:  
 1: *PASS* 2: *PASS*  
 3: *PASS* 4: *N/A*  
 TESTED BY:  
 A.W.S. QC-1 #:

MATERIAL SPEC.

ASTM: *A572 GRADE 50*  
 HEAT #: *376838*  
 YIELD: *55,000 - 56,500*  
 TENSILE: *81,000 - 80,500*  
 ELONGATION @ 8": *24% - 21%*

IMPACT TEST RESULTS

ALL WELD METAL IMPACTS  
 FT. LBS ABSORBED ENERGY  
 TESTED AT 0° FAHRENHEIT  
 1: *36* 2: *36* 3: *26*

AVERAGE: *33*

HEAT AFFECTED ZONE IMPACTS  
 FT. LBS ABSORBED ENERGY  
 TESTED AT + 70° FAHRENHEIT  
 1: *100* 2: *108* 3: *77*

AVERAGE: *95*

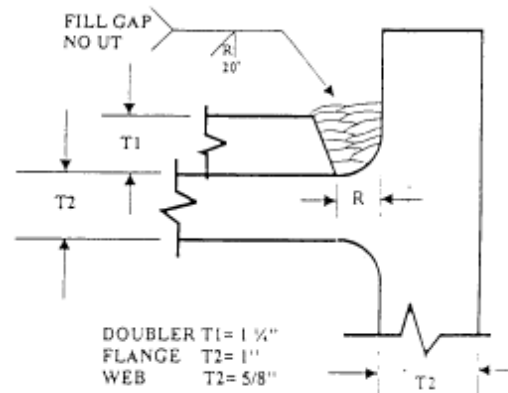
R.S. TENSILE TEST

ULTIMATE TENSILE STRENGTH  
 1: *73,100*  
 2: *73,100*

TESTED BY:

PASS NO	ELECTRODE DIAMETER	AMPS	VOLTS	TRAVEL SPEED I.P.M.
1	7/64	460	28	14
2				12
3				9
4				8
5	7/64	460	28	12
6				10
7				10
8				9

ELECTRICAL STICK OUT: *1 1/2"*



# WELD PROCEDURE SPECIFICATION

W.P.S. # 89618

## PROCEDURE SPECIFICATION

MATERIAL SPECIFICATION: *ASTM A36, A572-GR.50 A500-B & C*

WELDING PROCESS: *FLUX CORE ARC WELD - SS*

MANUAL OR MACHINE: *SEMI-AUTOMATIC*

POSITION OF WELDING: *2F*

FILLER METAL SPECIFICATION: *AWS A5.29*

FILLER METAL CLASSIFICATION: *E70TG-K2*

SINGLE OR MULTIPLE PASS: *MULTIPLE*

SINGLE OR MULTIPLE ELECTRODE: *SINGLE*

WELDING CURRENT: *DIRECT*

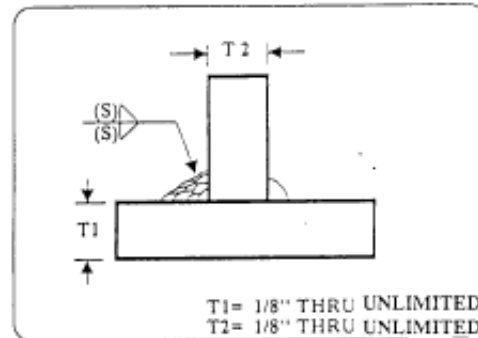
POLARITY: *NEGATIVE*

PREHEAT AND INTERPASS TEMP: *PER TABLE 4.3 MINIMUM*

IN ACCORDANCE WITH WELD PROCEDURE RECORD 89618  
SINGLE OR MULTIPLE PASS FILLET WELD

PASS NO.	ELECT DIA	AMPS	VOLTS	TRAVEL SPEED INCHES
ALL AS REQ	7/64	414 to 506	26 to 30	7 - 13

ELECTRICAL STICKOUT: 1 1/2"



THIS PROCEDURE MAY VARY WITHIN THE LIMITATIONS OF VARIABLES GIVEN  
IN SECTION 4 AND 5 OF A.W.S. D1.1, 1994 STRUCTURAL WELDING CODE