

PRE - QUALIFIED WELD PROCEDURE SPECIFICATION

W.P.S. # PRE-Q- 1006

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: *1F 2F*

FILLER METAL SPECIFICATION: *AWS A5.20*

FILLER METAL CLASSIFICATION: *E70T-7*

SINGLE OR MULTIPLE PASS: *AS REQUIRED*

SINGLE OR MULTIPLE ELECTRODE: *SINGLE*

WELDING CURRENT: *DIRECT*

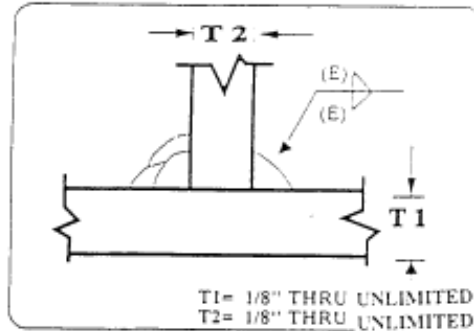
POLARITY: *NEGATIVE*

PREHEAT AND INTERPASS TEMP: *PER TABLE 4.3 MINIMUM*

AWS JOINT DESIGNATION FILLET
SINGLE OR MULTIPASS FILLET

PASS NO.	ELECT DIA	AMPS	VOLTS	TRAVEL SPEED INCHES
ALL	7/64	360-440	24-27	10-16
AS	7/64	360-440	24-27	14-24
REQ.	7/64	405-495	25-29	10-16
	7/64	405-495	25-27	14-24
	7/64	495-605	28-33	10-16
	7/64	495-605	28-33	14-24

ELECTRICAL STICKOUT: 1 1/2"



THIS PROCEDURE MAY VARY WITHIN THE LIMITATIONS OF VARIABLES GIVEN
IN SECTION 4 OF A.W.S. D.I.I. 1994 STRUCTURAL WELDING CODE

PRE - QUALIFIED WELD PROCEDURE SPECIFICATION

W.P.S. # PRE-Q- 1021

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: *1G*

FILLER METAL SPECIFICATION: *AWS A5.20*

FILLER METAL CLASSIFICATION: *E70T-7*

SINGLE OR MULTIPLE PASS: *MULTIPLE*

SINGLE OR MULTIPLE ELECTRODE: *SINGLE*

WELDING CURRENT: *DIRECT*

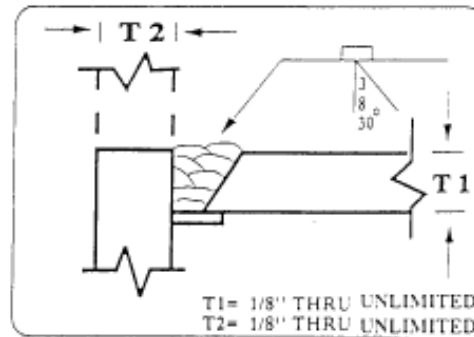
POLARITY: *NEGATIVE*

PREHEAT AND INTERPASS TEMP: *PER TABLE 4.3 MINIMUM*

AWS JOINT DESIGNATION TC-U4a-GF
COMPLETE JOINT PENETRATION SINGLE BEVEL GROOVE WELD

PASS NO.	ELECT DIA	AMPS	VOLTS	TRAVEL SPEED INCHES
ALL AS REQ	7/64	360-440	24-27	6 - 10
	7/64	360-440	24-27	10-18
	7/64	405-495	25-29	6 - 10
	7/64	405-495	25-29	10-18
	7/64	495-605	28-33	6 - 10
	7/64	495-605	28-33	10-18

ELECTRICAL STICKOUT: 1 1/2"



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

WELD PROCEDURE SPECIFICATION

W.P.S. # 14301

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: *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*

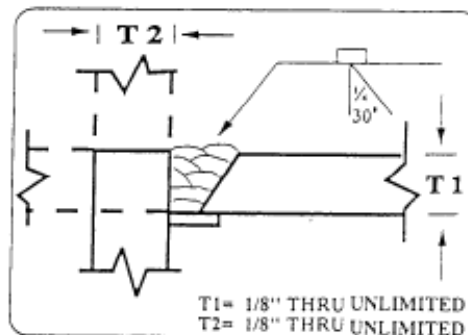
POLARITY: *NEGATIVE*

PREHEAT AND INTERPASS TEMP: *PER TABLE 4.3 MINIMUM*

IN ACCORDANCE WITH WELD PROCEDURE RECORD 14301
COMPLETE JOINT PENETRATION SINGLE BEVEL GROOVE WELD

PASS NO.	ELECT. DIA.	AMPS	VOLTS	TRAVEL SPEED INCHES
1 & 2	7/64	414 to 506	27-31	7-13
3 thru as req.	"	"	"	11-19

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 SINGLE BEVEL GROOVE WELD

WELD PROCEDURE RECORD #: 14301

PROCEDURE SPECIFICATION

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

FILLER METAL SPECIFICATION: *A5.29*
 FILLER METAL CLASSIFICATION: *E70TG-K2*
 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: *ACCEPT*
 U.T. TEST BY:
 ASNT U.T. LEVEL II

BEND TEST RESULTS

SIDE BEND TEST:
 1: *PASS* 2: *PASS*
 3: *PASS* 4: *PASS*
 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: *23* 2: *25* 3: *32*

AVERAGE: *26.6*

HEAT AFFECTED ZONE IMPACTS
 FT. LBS ABSORBED ENERGY
 TESTED AT + 70° FAHRENHEIT
 1: *109* 2: *118* 3: *122*

AVERAGE: *116.3*

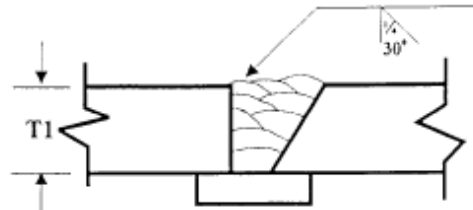
R.S. TENSILE TEST

ULTIMATE TENSILE STRENGTH II
 1: *84,500*
 2: *85,100*

TESTED BY:

PASS NO	ELECTRODE DIAMETER	AMPS	VOLTS	TRAVEL SPEED L.P.M.
1	7/64	460	29	10
2				10
3				12
4				14
5				13
6				15
7				12
8				16
9	7/64	460	29	17

ELECTRICAL STICK OUT: *1 1/2"*



T1 = 1/4"

WELD PROCEDURE SPECIFICATION

W.P.S. # 38301

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: *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*

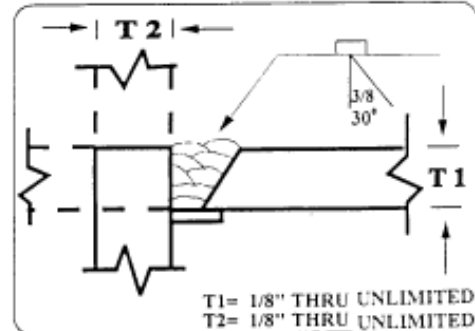
POLARITY: *NEGATIVE*

PREHEAT AND INTERPASS TEMP: *PER TABLE 4.3 MINIMUM*

IN ACCORDANCE WITH WELD PROCEDURE RECORD 38301
COMPLETE JOINT PENETRATION SINGLE BEVEL GROOVE WELD

PASS NO.	ELECT. DIA.	AMPS	VOLTS	TRAVEL SPEED INCHES
1 & 2	7/64	414 to 506	27-31	7-13
3 thru as req.	"		"	11-19

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 SINGLE BEVEL GROOVE WELD

WELD PROCEDURE RECORD #: 38301

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: *E70TG-K2*
 FILLER METAL TRADE NAME: *NR3111N1*
 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: *ACCEPT*
 U.T. TEST BY:
 ASNT U.T. LEVEL II

BEND TEST RESULTS

SIDE BEND TEST:
 1: *PASS* 2: *PASS*
 3: *PASS* 4: *PASS*
 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: *27* 2: *38* 3: *29.5*

AVERAGE: *31.5*

HEAT AFFECTED ZONE IMPACTS
 FT. LBS ABSORBED ENERGY
 TESTED AT + 70° FAHRENHEIT
 1: *110* 2: *110* 3: *92*

AVERAGE: *104*

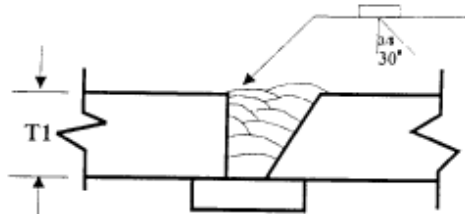
R.S. TENSILE TEST

ULTIMATE TENSILE STRENGTH
 1: *83,800*
 2: *83,900*

TESTED BY:

PASS NO	ELECTRODE DIAMETER	AMPS	VOLTS	TRAVEL SPEED I.P.M.
1	7/64	460	29	10
2				10
3				12
4				14
5				13
6				15
7				12
8	7/64	460	29	16
9				13
10				14

ELECTRICAL STICK OUT: *1 1/2"*



T1 = 1 1/4"