

CONSTRUCTION: JOINING OF PIPES BY WELDING

Issued: 08-12-10 Revised: _____ Number: F-22 Page: _____

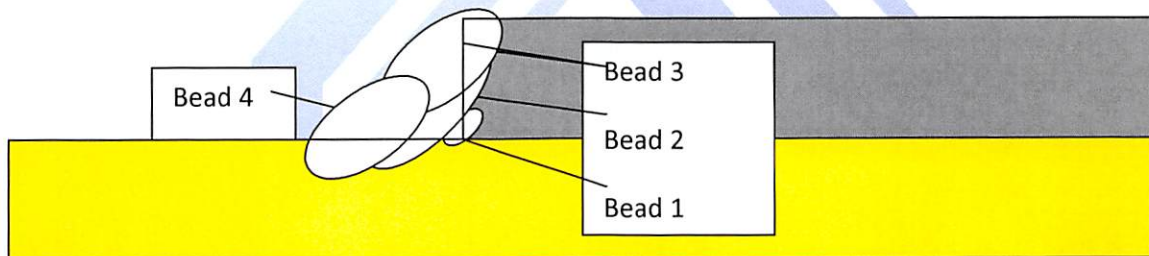
STANDARD WELDING PROCEDURE SPECIFICATION # F-22

- A. Process: Manual Electric Arc
- B. Material: API 5L Grade X42 thru X65
- C. Diameter and Wall Thickness: 2 3/8" and 22" .188 thru .750 wall thickness
- D. Joint Design: Standard Vee Groove, 90 Degree Bevel
- E. Filler Metal and Number of Beads: Electrode Classification:
Electrode E6010 and E8010, AWS Class A5.1—A5.5, Minimum of 4 Passes
- F. Electrical or Flame Characteristics: Reverse Polarity, Electrode Positive
- G. Position: Fixed Horizontal
- H. Direction of Welding: Verticle Down
- I. Number of Welders: 1
- J. Time Lapse Between Passes: Maximum of 5 minutes between stringer and hot pass;
3 minutes maximum when temperature is below 35° F.
- K. Type of Line-Up Clamp: External
- L. Removal of Line-Up Clamp: After 50% completion of stringer bead.
- M. Cleaning: Taper grind starts and craters and flatten crown by grinding stringer bead,
power buff all remaining passes.
- N. Speed of Travel: String bead 10 to 12 inches per minute maximum.
- O. *Preheat, Stress Relief: Maximum of 300°F. Minimum of 150°F. Preheating shall
be done with device or equipment which will heat entire circumference(s) in single
application 2" back from pipe ends.

*X-Rated pipe must be stress relief if the carbon content exceeds 32% or C+1/4 Mn exceeds 65%. Heating of X-Rated pipe is limited to 600°F.

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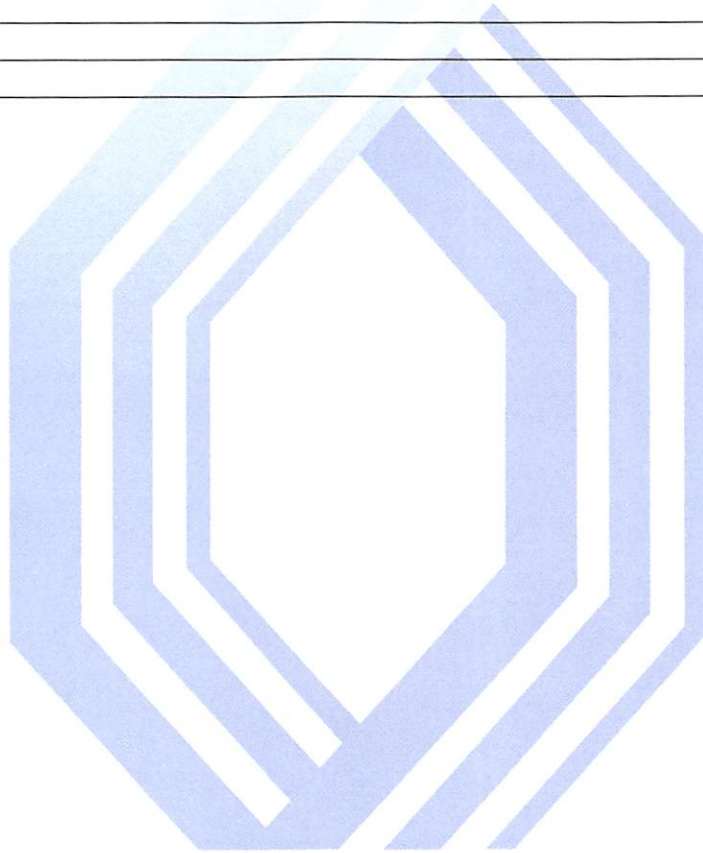
Bead No.	Electrode Diameter	Amp Range	Voltage Range	Type Rod	Notes
1	1/8	75-115	22-34	E6010 5P+	
2	5/32	100-135	15-35	E8010 70+	
3	5/32	100-135	15-35	E8010 70+	
4	5/32	115-155	15-35	E8010 70+	May use 3/16
5					

Bead No.

Notes

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_____ If necessary more passes may be made at bead #4 amperage and
_____ Voltage settings.



WTG

WELD TEST REPORT

(USE SEPARATE FORM FOR EACH WELDING PROCEDURE)

DATE 8-11-70	WELDER'S NAME Derrell Lawford		SOCIAL SECURITY NUMBER 2519	
LOCATION Dalhousie	NAME OF CONTRACTOR OR COMPANY WTG	RIGHT HANDED <input checked="" type="checkbox"/> LEFT HANDED <input type="checkbox"/>	REQUALIFYING TEST <input type="checkbox"/> QUALIFYING TEST <input checked="" type="checkbox"/> Procedure LINE TEST <input type="checkbox"/>	
POSITION INCLINED <input type="checkbox"/> FIXED <input checked="" type="checkbox"/> HORIZONTAL <input checked="" type="checkbox"/>	ELECTRIC ARC <input checked="" type="checkbox"/> OX-ACETYLENE <input type="checkbox"/>	INDOORS <input checked="" type="checkbox"/> OUTDOORS <input type="checkbox"/>	WEATHER N/A	TEMPERATURE 90°
PIPE SPECIFICATION API X65	PIPE MANUFACTURER Dresser Corp	WALL THICKNESS .375	DIAMETER (OD) 22	WIND BREAK USED N/A
MAKE OF WELDING MACHINE Lin.	SIZE 250	MAKE OF OX-ACETYLENE APPARATUS N/A	WELDING NOZZLE SIZE N/A	OX-ACETYLENE PRESSURE FLOWING N/A
BRAND OF ELECTRODE Lin.	BRAND OF OX-ACETYLENE ROD AND SIZE N/A	NUMBER OF PASSES - OX-ACETYLENE WELD N/A	WELDING PROCEDURE NO. New F-22	

PIPE WELD	ELECTRODE TYPE AND SIZE			MACHINE SETTINGS		AMPERAGE RG.	VOLTAGE RG.	AC-CEPTED	RE-JECTED
	COARSE	FINE							
STRINGER	Lin SA 5P+ 1/8	120-190	55	75-115	22-34				
HOT PASS	Lin SA 70+ 5/32	120-190	70	100-135	15-35				
FILLER (S)	Lin SA 70+ 5/32	120-190	70	100-135	15-35				
CAP PASS	Lin SA 70+ 5/32	160-240	60	115-155	15-35				

TENSILE TESTS	COUPON			CROSS SEC. AREA SQ. IN.	LOAD	% ELONG.	COMPUTED TENSIL PSI	REMARKS	AC-CEPTED	RE-JECTED
	LOCATION	LENGTH	WIDTH							
1										
2										
3										
4										

BEND TESTS	COUPON LOCATION	TYPE OF BEND	REMARKS	AC-CEPTED	RE-JECTED
	1				
2					
3					
4					

NICK-BREAK TESTS	COUPON LOCATION	REMARKS	AC-CEPTED	RE-JECTED
	1	T1	Clear Gray Metal No defect	<input checked="" type="checkbox"/>
2	T2	Small slag 1/32 Clear	<input checked="" type="checkbox"/>	
3	B3	Clear Gray Metal No defect	<input checked="" type="checkbox"/>	
4	B4	Clear No defect	<input checked="" type="checkbox"/>	

TEE WELD TEST	SIZE AND WALL THICKNESS OF MAIN		GAS PRESSURE ON MAIN PSIG	LOCATION OF FRACTURE WELD <input type="checkbox"/>	NIPPLE <input type="checkbox"/>	MAIN <input type="checkbox"/>
	DID WELD CONTAIN: PINHOLES COLDROLL UNDERCUT			DEPTH OF UNDERCUT	LENGTH OF UNDERCUT	
	REMARKS ON TEE WELD					

PIPE WELD	QUALIFIED <input checked="" type="checkbox"/> NOT QUALIFIED <input type="checkbox"/>	ELECTRIC ARC <input type="checkbox"/> OX-ACETYLENE <input type="checkbox"/>	TEE WELD	QUALIFIED <input type="checkbox"/> NOT QUALIFIED <input type="checkbox"/>	ELECTRIC ARC <input type="checkbox"/> OX-ACETYLENE <input type="checkbox"/>
TESTED BY	SIGNATURE Derrell Lawford		TITLE Ins.		