

CONSTRUCTION: JOINING OF PIPES BY WELDING

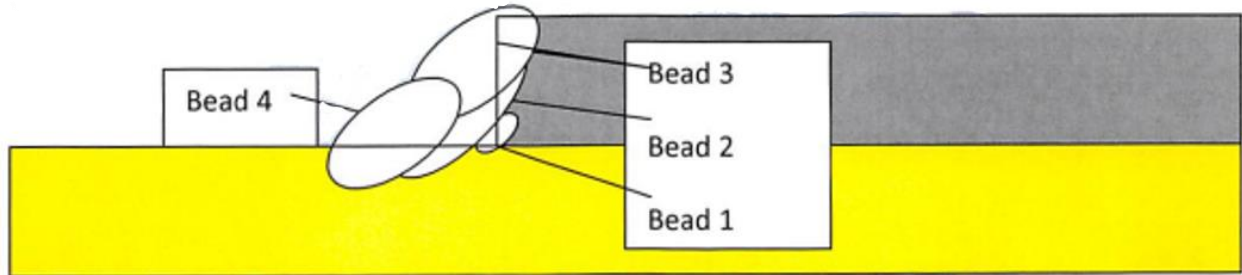
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STANDARD WELDING PROCEDURE SPECIFICATION #: F-22

- A. Process: Manual Electric Arc
 - B. Material: API-5L Grade X42 thru X65
 - C. Diameter and Wall Thickness: Less than 2 3/8" and 22" less than 0.188 WT thru 0.75 WT
 - D. Joint Design: Standard Vee Groove 90 degrees 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: Vertical 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 30% 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	Amperage Range	Voltage Range	Type Rod	Notes
1	1/8	75-115	22-34	E6010 5P+	
2	5/32	100-135	15-35	E8010	
3	5/32	100-135	15-35	E8010	
4	5/32	115-155	15-35	E8010	May use 3/16
5					

Bead No.	Notes
	If necessary, more passes may be made at bead #4 amperage and voltage settings
	Electrodes may be substituted within rod group 1&2 of AWS specification A5.1-A5.5

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WELD TEST REPORT (USE SEPARATE FORM FOR EACH WELDING PROCEDURE)

DATE <i>8-11-20</i>		WELDER'S NAME <i>Ronell Lawford</i>		SOCIAL SECURITY NUMBER <i>2519</i>	
LOCATION <i>Dalhousie</i>		NAME OF CONTRACTOR OR COMPANY <i>WTO</i>		RIGHT HANDED <input checked="" type="checkbox"/> LEFT HANDED <input type="checkbox"/>	
POSITION <input checked="" type="checkbox"/> INCLINED <input type="checkbox"/> FIXED <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>		ELECTRIC ARC <input checked="" type="checkbox"/> INDOORS <input checked="" type="checkbox"/> OX-ACETYLENE <input type="checkbox"/> OUTDOORS <input type="checkbox"/>		WEATHER-TEMPERATURE <i>N/A 90°</i>	
PIPE SPECIFICATION <i>API X65</i>		PIPE MANUFACTURER <i>Dresser Corp</i>		TIME OF DAY <i>Noon</i>	
MAKE OF WELDING MACHINE <i>Lin.</i>		SIZE <i>250</i>		WELDING NOZZLE SIZE <i>N/A</i>	
BRAND OF ELECTRODE <i>Lin.</i>		BRAND OF OX-ACETYLENE ROD AND SIZE <i>N/A</i>		NUMBER OF PASSES - OX-ACETYLENE WELD <i>N/A</i>	
				WELDING PROCEDURE NO. <i>N/A F-22</i>	

	ELECTRODE TYPE AND SIZE	MACHINE SETTINGS		AMPERAGE RG.	VOLTAGE RG.
		COARSE	FINE		
PIPE WELD	STRINGER <i>LIN SA 5PT 1/8</i>	<i>120-190</i>	<i>55</i>	<i>75-115</i>	<i>22-34</i>
	HOT PASS <i>LIN SA 70T 5/32</i>	<i>120-190</i>	<i>70</i>	<i>100-135</i>	<i>15-35</i>
	FILLER (S) <i>LIN SA 70T 5/32</i>	<i>120-190</i>	<i>70</i>	<i>100-135</i>	<i>15-35</i>
	CAP PASS <i>LIN SA 70T 5/32</i>	<i>160-240</i>	<i>60</i>	<i>115-155</i>	<i>15-35</i>

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	<i>T1</i>	<i>Clear Gray Metal No defect</i>	<input checked="" type="checkbox"/>
2	<i>T2</i>	<i>Small slag 1/2 Clear</i>	<input checked="" type="checkbox"/>	
3	<i>B3</i>	<i>Clear Gray Metal No defect</i>	<input checked="" type="checkbox"/>	
4	<i>B4</i>	<i>Clear No defect</i>	<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 <input type="checkbox"/> COLDROLL <input type="checkbox"/> UNDERCUT <input type="checkbox"/>		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 checked="" 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 <i>Ronell Lawford</i>		TITLE	<i>Inspr.</i>	