

CONSTRUCTION: JOINING OF PIPES BY WELDING

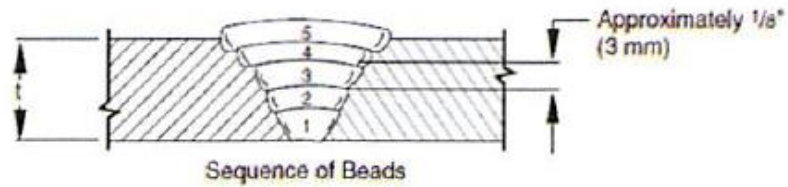
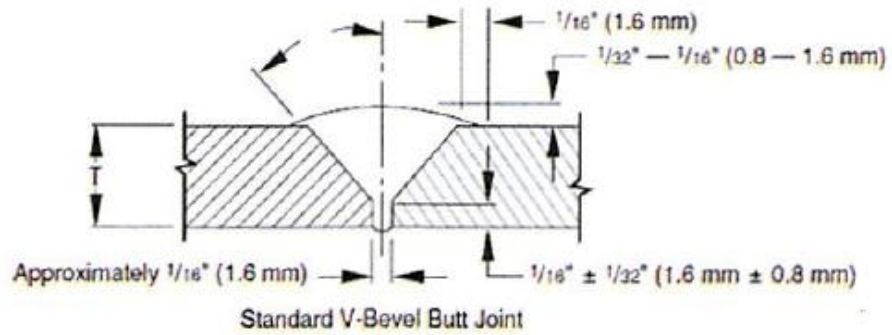
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STANDARD WELDING PROCEDURE SPECIFICATION #: 7C

- A. Process: Manual Electric Arc
 - B. Material: API-5L Grade A thru X42
 - C. Diameter and Wall Thickness: 2 3/8 thru 6 5/8 and less than 0.188 WT thru 0.500 WT
 - D. Joint Design: Standard Vee Groove 30 degrees
 - E. Filler Metal and Number of Beads: Electrode Classification Electrode E6010 AWS Class A5.1 Minimum of 3 Passes
 - F. Electrical or Flame Characteristics: D.C. Reverse Polarity, Electrode Positive
 - G. Position: Inclined 45 degrees
 - 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 N/A
 - 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
 - P. Notes: Welded pipe strings shall be temporarily capped to prevent air draft cooling of stringer beads. Weld shall be completely protected from moisture until it has cooled to ambient temperature. Weld zone shall be protected so that the wind velocity near it does not exceed 8mph.
- * 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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Note: Dimensions are for example only.

Bead No.	Electrode Diameter	Amperage Range	Voltage Range	Type Rod	Notes
1	1/8	95-110	22-26	E6010 5P+	
2	1/8	105-115	24-40	E6010 5P+	
3	1/8	105-120	25-50	E6010 5P+	
4	1/8	105-135	25-35	E6010 5P+	
5					

Bead No.	Notes
	Electrodes may be substituted within rod group 1&2 AWS A5.1-A5.5

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WELD TEST REPORT

(USE SEPARATE FORM FOR EACH WELDING PROCEDURE)

DATE 3-4-08		WELDER'S NAME Darrell Langford		SOCIAL SECURITY NUMBER XXX XX 2519	
LOCATION Toddman #		NAME OF CONTRACTOR OR COMPANY West Texas Gas		RIGHT HANDED <input checked="" type="checkbox"/> LEFT HANDED <input type="checkbox"/>	
POSITION INCLINED <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/> FIXED <input checked="" type="checkbox"/>		ELECTRIC ARC <input checked="" type="checkbox"/> INDOORS <input checked="" type="checkbox"/> OX-ACETYLENE <input type="checkbox"/> OUTDOORS <input type="checkbox"/>		WEATHER C1	
PIPE SPECIFICATION API 5L GR X42		PIPE MANUFACTURER Rip		WALL THICKNESS .280	
MAKE OF WELDING MACHINE Linco		SIZE 300		WELDING NOZZLE SIZE N/A	
BRAND OF ELECTRODE Linco		BRAND OF OX-ACETYLENE ROD AND SIZE N/A		NUMBER OF PASSES - OX-ACETYLENE WELD N/A	
				WELDING PROCEDURE NO. 7-C Qual.	

	ELECTRODE TYPE AND SIZE	MACHINE SETTINGS		AMPERAGE RG.	VOLTAGE RG.
		COARSE	FINE		
PIPE WELD	STRINGER 1/8 5P+	120-190	40	95-110	22-30
	HOT PASS 1/8 5P+	120-190	50	105-115	24-40
	FILLER (S) 1/8 5P+	120-190	55	105-120	25-40
	CAP PASS 5/32 5P+	120-190	60	105-135	25-35

	COUPON			CROSS SEC. AREA SQ. IN.	LOAD	% ELONG.	COMPUTED TENSIL PSI	REMARKS	AC-CEPTED	RE-JECTED
	LOCATION	LENGTH	WIDTH							
TENSILE TESTS	1 T1	8"	1"	.280	18,200	12%	64,285	No defect	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	2 B1	8"	1"	.280	18,400	12%	65,714	No defect	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	3									
	4									

	COUPON LOCATION	TYPE OF BEND	REMARKS	AC-CEPTED	RE-JECTED
BEND TESTS	1 T2	Face	No defect	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	2 T3	Root	No defect	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	3 B2	Face	No defect	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	4 B3	Root	No defect	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	COUPON LOCATION	REMARKS	AC-CEPTED	RE-JECTED
NICK-BREAK TESTS	1 T4	Clean Gray Metal	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	2 B4	" " "	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	3			
	4			

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
REMARKS ON TEE WELD				LENGTH OF UNDERCUT		

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>D. Munch</i>		TITLE	SIGNATURE <i>Welding Inspector</i>	