

CONSTRUCTION: JOINING OF PIPES BY WELDING

Issued: 11-18-08 Revised: 11-22-10 Number: 52G Page: _____

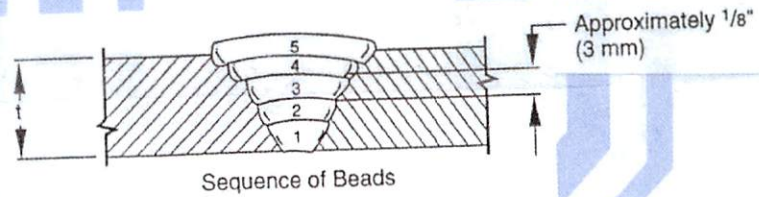
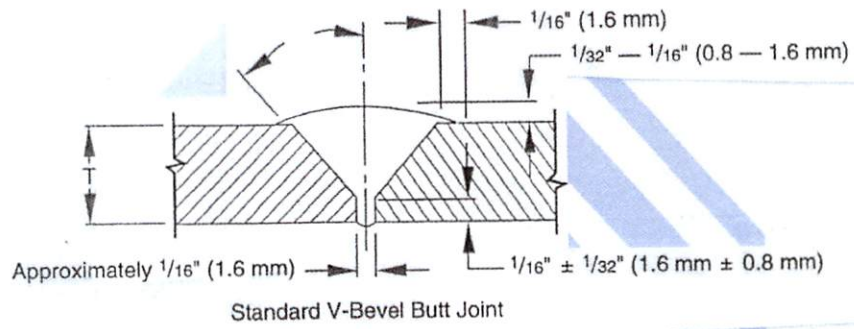
STANDARD WELDING PROCEDURE SPECIFICATION # 52G

- A. Process: Manual Electric Arc
- B. Material: API-5L Grade X52
- C. Diameter and Wall Thickness: 8" thru 12" and .188 WT thru .500 WT
- D. Joint Design: Standard Vee Groove 30 degrees
- E. Filler Metal and Number of Beads: Electrode Classification
Electrode E6010 & 8010 AWS Class A5.1-A5.5
- 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 10-12 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.
- 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 8 miles per hour.

*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	100-120	25-35	E6010 5P+	
2	1/8	105-130	25-38	E8010 70+	
3	5/32	115-140	25-38	E8010 70+	
4	5/32	115-140	25-40	E8010 70+	
5					

Bead No.	Notes
	Additional passes may be made using 8010 70+ 3/16 at amperage Range 132-170 and 25-35 volt range
	The above may also be substituted for pass #4

WELD TEST REPORT

(USE SEPARATE FORM FOR EACH WELDING PROCEDURE)

DATE <i>11-22-10</i>	WELDER'S NAME <i>Derrell Lanford</i>		SOCIAL SECURITY NUMBER <i>2519</i>		
LOCATION <i>Dalhousie</i>	NAME OF CONTRACTOR OR COMPANY <i>West Texas Gas</i>	RIGHT HANDED <input checked="" type="checkbox"/> LEFT HANDED <input type="checkbox"/>	<input checked="" type="checkbox"/> REQUALIFYING TEST <input type="checkbox"/> QUALIFYING TEST <input type="checkbox"/> LINE TEST <input type="checkbox"/>		
POSITION INCLINED <input checked="" type="checkbox"/> 45° <input type="checkbox"/> FIXED <input type="checkbox"/> <input type="checkbox"/> HORIZONTAL	ELECTRIC ARC <input checked="" type="checkbox"/> INDOORS <input type="checkbox"/> OX-ACETYLENE <input type="checkbox"/> OUTDOORS <input type="checkbox"/>	WEATHER <i>CL</i>	TEMPERATURE <i>75</i>	TIME OF DAY <i>Afternoon</i>	WIND BREAK USED <i>Indoors</i>
PIPE SPECIFICATION <i>API 5L-X52</i>	PIPE MANUFACTURER <i>American Steel</i>	WALL THICKNESS <i>1.219</i>	DIAMETER (OD) <i>12.75</i>	WEIGHT PER FOOT <i>29.31</i>	
MAKE OF WELDING MACHINE <i>Lin</i>	SIZE <i>300</i>	MAKE OF OX-ACETYLENE APPARATUS <i>N/A</i>	WELDING NOZZLE SIZE <i>N/A</i>	OX-ACETYLENE PRESSURE FLOWING RE-QUALIFYING TEST FOR	
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>526</i>		

PIPE WELD	ELECTRODE TYPE AND SIZE	MACHINE SETTINGS		AMPERAGE RG.	VOLTAGE RG.
		COARSE	FINE		
STRINGER	<i>1/8 5P+</i>	<i>120-190</i>	<i>50</i>	<i>100-120</i>	<i>25-35</i>
HOT PASS	<i>1/8 70+</i>	<i>120-190</i>	<i>60</i>	<i>105-130</i>	<i>25-38</i>
FILLER (S)	<i>5/32 70+</i>	<i>120-190</i>	<i>65</i>	<i>115-140</i>	<i>25-38</i>
CAP PASS	<i>5/32 70+</i>	<i>120-190</i>	<i>65</i>	<i>115-140</i>	<i>25-40</i>

TENSILE TESTS	COUPON			CROSS SEC. AREA SQ. IN.	LOAD	% ELONG.	COMPUTED TENSIL PSI	REMARKS	AC-CEPTED	RE-JECTED
	LOCATION	LENGTH	WIDTH							
1	<i>T1</i>	<i>8"</i>	<i>1.10</i>	<i>.240</i>	<i>16,200</i>	<i>1</i>	<i>67,500</i>	<i>New Gauge</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<i>B7</i>	<i>8"</i>	<i>1.10</i>	<i>.240</i>	<i>16,200</i>	<i>1</i>	<i>67,500</i>	<i>New Gauge</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3										
4										

BEND TESTS	COUPON LOCATION	TYPE OF BEND	REMARKS	AC-CEPTED	RE-JECTED
	1	<i>T3</i>	<i>Root</i>	<i>No defect</i>	<input checked="" type="checkbox"/>
2	<i>T4</i>	<i>Face</i>	<i>No defect</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<i>B6</i>	<i>Root</i>	<i>No defect</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	<i>B5</i>	<i>Face</i>	<i>No defect</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

NICK-BREAK TESTS	COUPON LOCATION	REMARKS	AC-CEPTED	RE-JECTED
	1	<i>B8</i>	<i>Clear metal no defect</i>	<input checked="" type="checkbox"/>
2	<i>T2</i>	<i>Clear metal no defect</i>	<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 <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 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 <i>Ed Murchak</i>		TITLE <i>Welding Inspector</i>		