



Welding Procedure Specification (WPS) AWS D1.6

Company Name: Sample

Date: 7/18/2007

PQR No. (s): Pre-Qualified

Revision No.: 0

Revision Date:

By: _____

Authorized By: _____

WPS No. (s): RTF-6

Welding Process (es): GTAW

Type: Manual

Joint Detail

Type of Joint: V-Groove Weld

Backing: Prequalified Stainless

Single or Double Welded: Single Welded

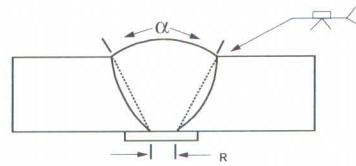
Root Opening: 3/8" - 1/2"

Groove Angle: 20 - 30°

Back Gouging: None

Root Face Dimension: None

Radius (J-U): n/a



Base Metals

Material Group (s): A,B to: A,B

Type or Grade: All to: All

Thickness-Grooves: 1.00" Max. Fillet: All

Diameter of (Pipe): 2 7/8" OD & Over

Postweld Heat Treatment

Temperature: None

Time: n/a

Position

Position: All Positions

Weld Progression: Uphill Only

Filler Metals

	1	2	3
SFA Spec.:	A 5.9	n/a	n/a
AWS Class.	ER 308L	n/a	n/a
F Number:	6	n/a	n/a
A Number:	8	n/a	n/a

Flux: n/a

Electrode Flux (Class): n/a

Other: (GTAW) Solid or Metal Cored Only

Electrical Characteristics

Current: DCEN

Transfer Mode: n/a

Tungsten Electrode Size: 3/32" dia.

Type: 2% Thoriated

Technique

Stringer or Weave: Both

Multi Pass or Single Pass (per side): Multiple pass

Number of Electrodes: Single electrode

Electrode Spacing - Longitudinal: n/a

Lateral: n/a

Angle: n/a

Contact Tube to Work Distance: n/a

Peening: None

Interpass Cleaning: Mechanical Cleaning

Shielding

Gas(es)	Percent of Composition	Flow Rate (CFH)
Argon	100%	10 - 25

Gas Cup Size: n/a

Preheat

Preheat Temp. (Min.): 50 °F (sufficient preheat to remove moisture)

Interpass Temp. (Min.): 50 °F (Max.): 350 °F

Passes	Process	Class	Diam.	Type & Polarity	Amps	Volts	Travel Speed
All	GTAW	ER 308L	.045"	DCEN	60 - 100	8 - 12	9 - 15 ipm
					75 - 125	9 - 15	9 - 15 ipm
		ER 308L	1/16"	DCEN	90 - 150	11 - 16	9 - 15 ipm
					105 - 175	11 - 19	9 - 15 ipm
		ER 308L	3/32"	DCEN	150 - 250	12 - 20	7 - 13 ipm
					187 - 312	13 - 23	7 - 13 ipm



PREQUALIFIED WPS REQUIREMENTS AWS D1.6

Welding Process: GTAW (Notes 3, 7, 8)

Variable	Position	Weld Type	
Maximum Electrode Diameter-	Flat	Fillet	5/32"
		Groove	5/32"
		Root Pass	5/32"
	Horizontal	Fillet	5/32"
		Groove	5/32"
	Vertical Overhead	All	5/32"
Maximum Current-	All	Fillet	See Note 7
	All	Groove weld root pass (with opening)	
		Groove weld root pass (without opening)	
		Groove weld fill pass	
		Groove weld cap pass	
Maximum Root Pass Thickness- (Note6)	Flat	All	3/16"
	Horizontal		3/16"
	Vertical		3/16"
	Overhead		3/16"
Maximum Fill Pass Thickness-	Flat	All	1/8"
	Horizontal		1/8"
	Vertical		1/8"
	Overhead		1/8"
Maximum Single Pass Fillet Weld Size-	Flat	All	1/4"
	Horizontal		3/16"
	Vertical		3/16"
	Overhead		3/16"
Maximum Single Pass Layer Width- (Note9)	All	Any individual layer of width 'w'	1/2"

Notes:

#3. See 3.29

#6. See Figure 3.29 for width to depth limitations

#7. GTAW and pulse GTAW is prequalified in all welding positions, DCEN only. Prequalified shielding gases are restricted to welding grade (or higher purity) argon, helium, and argon-helium mixes. Prequalified current range depends upon tungsten electrode diameter as follows:

Electrode Diameter	Current Range, DCEN
1/16"	40 - 150
3/32"	60 - 250
1/8"	100 - 400
5/32"	150 - 500

#8. For GTAW the electrode is per ANSI/AWS A5.12, Specification for tungsten and tungsten alloy electrodes for arc welding and cutting.

#9. Split layers when the maximum single pass layer is exceeded.