WELDING PROCEDURE SPECIFICATION

WPS- 1000-1/11B **REV. NO.:** 0 **DATE:** 9/1/2004 ****APPLICABILITY****

WELDING PROCESS/ES SMAW- **and** SMAW- **ASME:** X **AWS:** X

SUPPORTING PQ P-WS-224 **OTHER:**

JOINT **This WPS shall be used in conjunction with the General Welding Standards (GWS) and Welding Fabrication Procedure (WFP) sections and criteria for joint details, repairs, NDE, inspection etc.**

Weld Joint Type	Butt/Fillet	**Class:**	Full or Partial Penetration
See GWS 1-06 for details		**Preparation:**	Thermal/Mechanical
Root Opening:	.065" to .187"	**Backing:**	With/Without
Backgrind root:	on double sided joints	**Backing Mat.:**	None
Bkgrd Method:	Arc Gouge and or grind	**GTAW Flux:** N/A	**Backing Retainer:** N/A

FILLER METALS: **Class:** E7018 **and** E7018

A No: 1 **SFA Class:** 5.1 **and** 5.1 **F No:** 4 **and** 4 **Size:** 1/8 1/8 1/8 1/8

Insert: N **Insert Desc.:** N/A **Weld Metal Thickness Range:**

Flux: Type: 0 **Size:** 0 **AWS:** 0.120 **thru** 99.999

Filler Metal Note: **ASME:** 0.062 **thru** 8.000

BASE MATERIAL **P No.** 1 **Gr No.** All **to: P No.** 11B **Gr No.** All

Spec. Mild Steel **Grade:** All **to: Spec.** ASTM A-517 Q **Grade:** All

Pipe Dia Range: **Groove >** 0

Thickness Range: **Groove :** **AWS:** 0.120 **thru** 99.999 **ASME:** 0.062 **thru** 8.000

QUALIFIED POSITIONS All **Vertical Progression:** Up

Preheat Min. Temp.:	200 **F**	**GAS: Shielding:**	N/A **or** N/A
Interpass Max. Temp.	400 **F**	**Gas Composition:**	0 **%** 0 **%** 0 **%**
Preheat Maintinance:	300 **F**	**Gas Flow Rate cfh**	0 **to** 0
		Backing Gas/Comp:	None 0 **%**
PWHT: Time @ F Temp.		**Backing Gas Flow cfh**	0 **to** 0
Temp. Range:	**F to F**	**Trailing Gas/Comp:**	N/A **%**

PREPARED BY Kelly Bingham **DATE:** 3/30/2004

Signature on file at FWO-DECS

APPROVED BY Tobin Oruch **DATE:** 9/1/2004

Signature on file at FWO-DECS

Note:For SC/SS/ML-1/ML-2 work, this WPS requires independent review.

WELDING CHARACTERISTICS:

Current: DCEP **and** DCEP **Tungsten type:** N/A **Transfer Mode:** N/A

Ranges: Amps 90 **to** 130 **Pulsing Cycle:** 0 **to** 0

Volts 22 **to** 28 **Background Current:** 0

Fuel Gas: N/A **Flame:** N/A **Braze temp. F to**

WELDING TECHNIQUE: **For cleaning, grinding, and inspection criteria refer to Volume 2, Welding Fabrication Procedures**

Technique: Manual **Cleaning Method:** Wire Brush, File, Grind, Chip

Single Pass of Multi Pass: M **Stringer or Weave bead (S/W):** S **Oscillation:** N

GMAW Gun Angle °: 0 **to** 0 **Forehand or Backhand for GMAW (F/B):** N/A

Maximum K/J Heat Input **Travel speed/ipm:** 6 - 12 **Gas Cup Size:** N/A

PROCEDURE QUALIFIED FOR:

Charpy "V" Notch: N **Nil-Ductil Transition Temperature:** N **Dynamic Tear:** N

Comments:

Weld Layer	Manual Process	Filler Metals	Size	Amp Range		Volt Range		Travel ipm		Nozzel Angle	Other
1	SMAW-	E7018	1/8	90	130	22	28	6	10	0	
2	SMAW-	E7018	1/8	90	130	22	28	8	12	0	
3			1/8								
4			1/8								
5											
6											
7											
8											

REM. *** Weld layers are representative only - actual number of passes and layer sequence may vary due to variations in joint design, thickness and fitup.**