

WELDING CHARACTERISTICS:

Current: DCEN and DCEP **Tungsten type:** EWTH-2 **Transfer Mode:** GMA-Globuler
Ranges: Amps 75 to 140 **Pulsing Cycle:** N/A to N/A
Volts 12 to 22 **Background Current:** N/A
Fuel Gas: N/A **Flame:** N/A **Braze temp. °F** N/A to N/A

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

Technique: GMA Semi-auto **Cleaning Method:** Grind/wire brush/file
Single Pass or Multi Pass: M **Stringer or Weave bead (S/W):** S/W **Oscillation:** N/A
GMAW Gun Angle °: 5 to 15 **Forehand or Backhand for GMAW (F/B):** F only
GMAW/FCAW Tube to work distance: 3/8" to 1/2"
Maximum K/J Heat Input: N/A **Travel speed:** **Gas Cup Size:** 1/2"-5/8"

No single pass shall deposit greater than 1/2" thickness of material.

PROCEDURE QUALIFIED FOR:

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

Comments: (1) ASME GMA Weld metal thickness range=.0187" thru 1.75". (2) AWS GMA Weld metal thickness range=.087" thru 1.0". (3) No single pass or bead shall be greater than 1/2" in thickness. (4) AWS Pipe dia. thickness ==4.0"

Weld Layer	Manual Process	Filler Metals	Size	Amp Range	Volt Range	Travel/ipm	Nozzel Angle	Other
1	GTAW	ER-70S-x	.035	75 to 125	12 to 16	0 to 0	5 - 15	
2	GMAW-SC	ER-70S-x	3/32	110 to 140	19 to 22	2 to 6		
3	GMAW-SC	ER-70S-x	1/8	0 to 0	0 to 0	2 to 6		
4								
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.

Use of LANL Welding Procedures and Welder Qualifications for non-LANL work shall be at the sole risk and responsibility of the Subcontractor, and the Subcontractor shall indemnify and save LANL and the Government harmless from any and all claims, demands, actions or causes of action, and for any expense or loss by reason of Subcontractor's and their employees possession and use of LANL procedures and qualifications.