

PROCEDURE QUALIFIED FOR:**Charpy "V" Notch:** Yes**Nil-Ductile Transition Temperature:** N/A**Dynamic Tear:** Yes

Comments: This WPS uses GTAW Tip-Tig with hot wire feed. Charpy Impact values meet 111 ftlbs @ -60 F. Dynamic Tear Test values meet 1058 ftlbs @ -20 F.

Weld Layer	Manual Process	Filler Metals	Size	Amp Range	Volt Range	Travel/ipm	Nozzle	
							Angle	Other
1	GTAW	ER1xxS-x	.045	180 to 195	18 to 19	3 to 5		
2	GTAW	ER1xxS-x	.045	190 to 205	19 to 20	3 to 5		
3	GTAW	ER1xxS-x	.045	200 to 215	20 to 21	3 to 5		
4	GTAW	ER1xxS-x	.045	210 to 225	21 to 22	3 to 5		

REM. * Weld layers are representative only - actual number pf passes and layer sequence may vary.

ML-1/2 projects or jobs must determine if the supporting documentation for this WPS complies with quality requirements of the project/job.

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 the reason of Subcontractor's and their employees possession and use of LANL procedures and qualifications.

APPROVAL: Signatures on file at ES-DE

DATE: 5/16/2017