



# WELDING PROCEDURE SPECIFICATION

WPS: 7000-Gasx-PPE3

REV. NO.: 0

DATE: 7/20/2022

\*\*APPLICABILITY\*\*

WELDING PROCESS: TF and TF

CODE: ASME B31.8

OTHER:

SUPPORTING PQR: 8300 DOT Qual 8400 DOT Qual 8100 DOT Qual  
8400 - 8300 DOT Qual 8400 - 8100 DOT Qual

**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: Square Butt

Class: Full thermal fusion

See GWS 1-06 and WFP's for joint details.

Preparation: Faced Square Butt

Root Opening: N/A

Backing: N/A

Backgrind Root: N/A

Backing Mat.: N/A

Bkgrd Method: N/A

GTAW Flux: N/A

Backing Retainer: N/A

**FILLER METALS:**

Class: N/A and N/A

A No: N/A

SFA Class:

F No: N/A and N/A

Size: N/A N/A N/A N/A

Insert: N/A

Insert Type: N/A

Weld Metal Thickness Ranges:

Flux: Type: N/A

Size: N/A

AWS Root Pass:

Filler Material Note: N/A

AWS Balance: N/A

ASME Root Pass:

ASME Balance: N/A

**BASE MATERIAL:**

	P No: N/A	Gr No.: N/A	to P No.: N/A	Gr No.: N/A
Spec.: ASTM D2513 - PE 4710	Grade: N/A	to Spec.: ASTM D2513 - PE 4710		Grade: N/A
Qualified Pipe Dia. Range: >=	AWS:	ASME: 12		
Qualified Thickness Range:	AWS:	ASME:		

<b>QUALIFIED POSITIONS:</b>	AWS: N/A	ASME: 1G	Vert. Prog.: N/A
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Preheat Min. Temp.:	60	GAS: Shielding: N/A	or	N/A
Interpass Max. Temp.:	N/A °F	Gas Composition: N/A / N/A / N/A %		N/A / N/A / N/A %
Preheat Maintenance:	N/A °F	Gas Flow Rate cfh:		
PWHT: Time @ °F Temp.:		Backing Gas/Comp: N/A		N/A %
Temperature Range:	N/A °F to N/A °F	Backing Gas Flow cfh:		
		Trailing Gas/Comp: N/A		N/A %

**WELDING CHARACTERISTICS:**

Current: N/A and N/A	Tungsten Type: N/A	Transfer Mode: N/A
Ranges: Amps:	Tungsten Dia.: N/A to N/A	Pulsing Cycle: N/A
Volts:		Background Current: N/A
Fuel Gas: N/A	Flame: N/A	Braze Temp °F: N/A to N/A

**WELDING TECHNIQUE:** For fabrication specific requirements such as fitup, cleaning, grinding, PWHT and inspection criteria, refer to Volume 2, Welding Fabrication Procedures.

Technique:	Thermal fusion	Cleaning Method: N/A
Single or Multi Pass:	Single	Stringer or Weave Bead (S/W): N/A or N/A
GMAW Gun Angle:		Oscillation: N/A
No Pass > 1/2":	N/A	Forehand or Backhand for GMAW: N/A
		GMAW/FCAW Tube to Work Distance (in): N/A

**Maximum K/J Heat Input:****Travel Speed:****Gas Cup Size:** N/A**PROCEDURE QUALIFIED FOR:****Charpy "V" Notch:** N/A**Nil-Ductile Transition Temperature:** N/A**Dynamic Tear:** N/A

**Comments:** Driscopipe 8100 Has been discontinued. This WPS can be used to weld Performance Pipe DriscoPlex 8400 Series to itself and Yellowstripe 8300 to itself, and DriscoPlex 8400 Series to Yellowstripe 8300 and existing Driscopipe 8100 to DriscoPlex 8400 Series.

Use piping manufacturer heating and joining equipment or a manufacturer approved equivalent. Heating, pressure, holding, and time @ temperature shall be in accordance with manufacturer's instructions/requirements.

The manufactures Performance Pipe Manual 750 list the requirements to follow. A Performance Pipe slide rule should be used. HDPE Fusion template is to be completed for each joint welded and submitted to the project files.

<b>Weld Layer</b>	<b>Manual Process</b>	<b>Filler Metals</b>	<b>Size</b>	<b>Amp Range</b>	<b>Volt Range</b>	<b>Travel/ipm</b>	<b>Nozzle Angle</b>	<b>Other</b>
1	TF	N/A	N/A					
2	TF	N/A	N/A					
3	TF	N/A	N/A					
4	TF	N/A	N/A					

**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:**