FORM QW-482 SUGGESTED FORMAT FOR WELDING PROCEDURE SPECIFICATIONS (WPS)
(See QW-200.1, Section IX, ASME Boiler and Pressure Vessel Code)

Organization Name: Gran Tierra Energy — By: UD-JR

Welding Procedure Specification No.: WPS-01 — Date: 13/08/2023 — Supporting PQR No.(s): PQR-01

Revision No.: 01 — Date: 13/08/2023

Welding Process(es): SMAW — Type(s): Manual, Semi-Automatic
(Automatic, Manual, Machine, or Semi-Automatic)

JOINTS (QW-402)

Joint Design: All-Groove Weld

Root Spacing: 1/8"

Backing: Yes ____ No: X

Backing Material (Type): NA
(Refer to both backing and retainers)

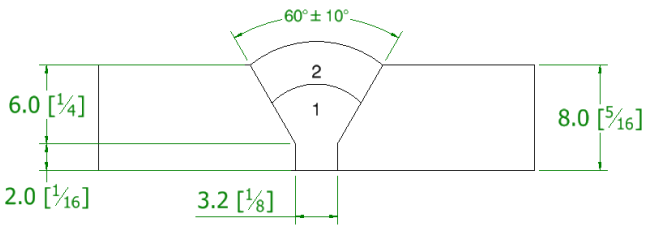
☑ Metal ☐ Nonfusing Metal

☐ Nonmetallic ☐ Other

Sketches, Production Drawings, Weld Symbols, or Written Descripti should show the general arrangement of the parts to be welded. Whe applicable, the details of weld groove may be specified.

Sketches may be attached to illustrate joint design, weld layers, and bead sequence (e.g., for notch toughness procedures, for multiple process procedures, etc.)]

Details



*BASE METALS (QW-403)

P-No.: 1 — Group No.: 1 — to P-No.: 1 — Group No.: 1

OR

Specification and type/grade or UNS Number: SA-283 Grade C

to Specification and type/grade or UNS Number: SA-283 Grade C

OR

Chem. Analysis and Mech. Prop.: C

to Chem. Analysis and Mech. Prop.: C

Thickness Range:

Base Metal: Groove: 3/8 " to 3/4 " — Fillet: All sizes

Maximum Pass Thickness ≤ 1/2 in. (13 mm) (Yes): X (No): ____

Other: --

*FILLER METALS (QW-404)

	1	2
Spec. No. (SFA)		
AWS No. (Class)	E6011	E6013
F-No.	3	2
A-No.	1	1
Size of Filler Metals	1/8" - 5/32"	3/32" - 1/8"
Filler Metal Product Form	Mild Steel - High Cellulose	Mild Steel - High Cellulose
Supplemental Filler Metal	---	---
Weld Metal		
Deposited Thickness:		
Groove	5/32"	1/8"
Fillet	All	All
Electrode-Flux (Class)	---	---
Flux Type	---	---
Flux Trade Name	---	---
Consumable Insert	---	----
Other	---	---

*Each base metal-filler metal combination should be recorded individually.

FORM QW-482 (Back)

WPS No. WPS-01 **Rev.** 01

POSITIONS (QW-405)

Position(s) of Groove: All

Welding Progression: Up: X Down: X

Position(s) of Fillet: All Positions

Other: ---

PREHEAT (QW-406)

Preheat Temperature, Minimum: 0 °C

Interpass Temperature, Maximim: --

Preheat Maintenance: Yes, preheat during 2 minutes

Other:

(Continuous or special heating, where applicable, should be recorded)

POSTWELD HEAT TREATMENT (QW-407)

Temperature Range: NA

Time Range: NA

Other: ---

GAS (QW-408)

	Percent Composition Gas(es)	(Mixture)	Flow Rate
Shielding	---	---	---
Trailing	---	---	---
Backing	---	---	---
Other	---	---	---

ELECTRICAL CHARACTERISTICS (QW-409)

Weld Pass(es)	Process	Filler Metal Classification	Filler Metal Diameter	Current Type and Polarity	Amps (Range)	Wire Feed Speed (Range)	Energy or Power (Range)	Volts (Range)	Travel Speed (Range)	Other (e.g., Remarks, Comments, Hot Wire Addition, Technique, Torch Angle, etc.)
1	Smaw	E6011	3/32"-1/8"	DCEP	60-80 75-120	N/A	N/A	20-35	3"-7" /min	Upward
2	Smaw	E6013	3/32"-1/8"	DCEP	60-90 90-130	N/A	N/A	20-35	3"-7" /min	Upward

Amps and volts, or power or energy range, should be recorded for each electrode size, position, and thickness, etc.

Pulsing Current: N/A

Heat Input (max.): N/A

Tungsten Electrode Size and Type: N/A

(Pure Tungsten, 2% Thoriated, etc.)

Mode of Metal Transfer for GMAW (FCAW): N/A

(Spray Arc, Short Circuiting Arc, etc.)

Other: ---

TECHNIQUE (QW-410)

String or Weave Bead: String or Weave

Orifice, Nozzle, or Gas Cup Size: N/A

Initial and Interpass Cleaning (Brushing, Grinding, etc.): Abrasive wheel power tools on root, hand metal brush or wire wheels on pass

Method of Back Gouging:

Oscillation: 2.5 Electrode Diameter Max

Contact Tube to Work Distance: ---

Multiple or Single Pass (Per Side): E6011 Single --- E6013 Single

Multiple or Single Electrodes: ---

Electrode Spacing: ----

Peening: No apply peenig

Other: