Solar Flux

P.O. Box 9145, Calabasas, CA 91372

ASME - Welding Procedure Specification (WPS)

WeldOffice WPS

WPS record number	SF_P8-P8-GT-308-TypB Revision 0	Qualified to	ASME Section IX
Date	2/11/2020	Company name	Solar Flux
Supporting PQR(s)	PQ20-0034 - Rev 0		
Reference docs.			

Scope	For GTAW production welding of P8 material with the use of Solar Flux Type B. Groove, fillet, no PWHT (As-welded)
Joint	Joint details for this welding procedure specification in: JOINTS section of this WPS, Production drawings, Engineering specifications

BASE METALS (QW-403)

Type	Stainless Steel	P-no. 8	Grp-no. Any
Welded to	Stainless Steel	P-no. 8	Grp-no. Any
Backing:	Flux*	P-no. -	Grp-no. -
Retainers	None		
Notes	*Apply Type B Solar Flux to back-side of root		

THICKNESS RANGE QUALIFIED (in.)

	As-welded Min.	As-welded Max.	With PWHT Min.	With PWHT Max.
Complete pen.	3/16	1	-	-
Impact tested	-	-	-	-
Partial pen.	3/16	1	-	-
Fillet welds	no min.	no max.	-	-

DIAMETER RANGE QUALIFIED (in.)

	As-welded Min.	As-welded Max.	With PWHT Min.	With PWHT Max.
Nominal pipe size	no min.	no max.	-	-

FILLER METALS (QW-404)

	SFA	Classification	F-no.	A-no.	Chemical analysis or Trade name	THICKNESS RANGE QUALIFIED (in.) As-welded Min.	As-welded Max.	With PWHT Min.	With PWHT Max.
GTAW	5.9	ER308L	6	8	Avesta ER308/308L / equivalent	no min.	1	-	-
Cons. insert	-	-	-	-	-	- None -			
Flux	-	-	-	-		- None -			

WELDING PROCEDURE

Welding process		GTAW	
Type		Manual	
Minimum preheat/interpass temperature	(°F)	75	
Maximum interpass temperature	(°F)	350	
Tungsten size	(in.)	3/32, 1/8	
Tungsten type		SFA 5.12 EWTh-2	
Filler metal size	(in.)	3/32	1/8
Layer number		All	All
Position		All	All
Weld progression		Uphill	Uphill
Current/polarity		DCEN (straight polarity)	DCEN (straight polarity)
Waveform control		None	None
Energy	(J)		
Power	(J/s)		
Amperes		95 - 145	130 - 245
Volts		7 - 12	9 - 14
Travel speed	(in./min)	2 - 8	3.5 - 11.5
Maximum heat input	(kJ/in.)	N/A	N/A
DC pulsing current		Not used	Not used
Shielding: Gas type		99.997% Argon	
Flow rate	(cfh)	30 - 70	30 - 70
Trailing: Gas type		None	
Flow rate	(cfh)	-	-
Backing: Gas type		None	
Flow rate	(cfh)	-	-
String or weave		Stringer or Weave	
Orifice/gas cup size		#6 - #12	
Multi/Single pass per side		Multiple passes	
Weld deposit chemistry		Cr - Ni - Mn	
Notes		No autogenous welding	

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5809 Fleet Landing Blvd., Atlantic Beach, FL 32233

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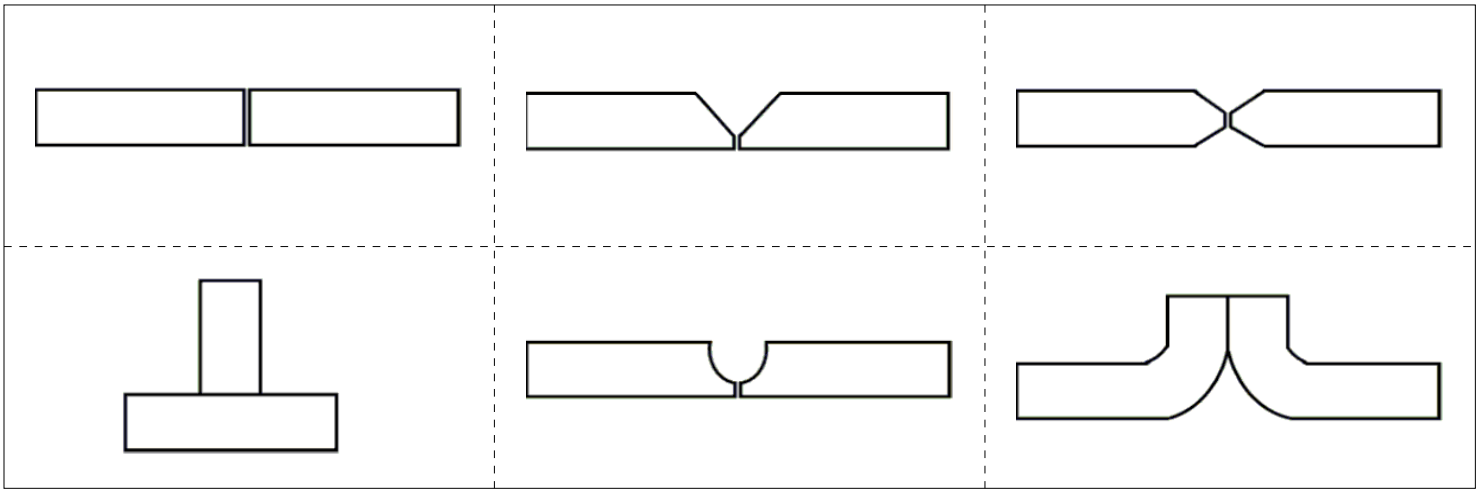
JOINTS (QW-402) Typical joint(s). See actual production drawings and engineering specifications for details.



TECHNIQUE (QW-410)

Peening	None permitted
Surface preparation	Brush and / or Grinding a minimum 2" back from edge of groove
Initial/interpass cleaning	Brushing and Grinding
Back gouging method	None

NOTES

1. Bare solid wire shall be used.

2. Maximum weave width shall not exceed 1.5x the GTAW cup size.

3. No single pass fillet welds allowed.

Rev. 0 2/12/2020 Initial Document Release