

# WELDING PROCEDURE SPECIFICATION – AWS D1.1

Company -

WPS # - WPS-D1.1-001

Rev # - 0

Date – 11/16/2017

Authorized By –

Date – 11/13/2017

Supporting PQR(s) – Prequalified BTC-P10-GF

CVN Report - No

BASE METALS	Specification	Type or Grade	AWS Group #	BASE METAL THICKNESS	As Welded	With PWHT
Base Material	ASTM A500	C	I	CJP Groove Welds	NA	NA
Welded To	ASTM A500	C	1	CJP Groove W/CVN	NA	NA
Backing Material	NONE	NA	NA	PJP Groove Welds	3/16" - Unlimited	NA
Details – Procedure for performing flare groove welds in corner and t joints in square tubing				Fillet Welds	NA	NA
				DIAMETER	NA	NA

JOINT DETAILS		JOINT DETAILS (Sketch)
Groove Type	Flare Bevel Groove	<p><b>Not qualified</b></p> <p>These welds are partially pregnant?</p> <p><b>See Page 2 For Sketch</b></p> <p>You either are performing PWHT or your not. It's like a woman, she either pregnant or she isn't. NA is not an option.</p>
Groove Angle	See Sketch for Details	
Root Opening	0" – 1/8"	
Root Face	3/16" Minimum	
<b>Backgouging</b>	NA	
Method	NA	
POSTWELD HEAT TREATMENT		
Temperature	NA	
Time at Temperature	NA	
Other	NA	

PROCEDURE	
Weld Layer(s)	1
Weld Pass(es)	1
<b>Process</b>	GMAW
Type (manual, mechanized, etc)	Semi-Automatic
<b>Position</b>	Flat
<b>Filler Metal (AWS Spec)</b>	A5.18
AWS Classification	ER70S-6
Diameter	.035"
<b>Shielding Gas Composition</b>	Don Will Advise
Flow Rate CFH	Don Will Advise
<b>Preheat Temperature</b>	32°F (If material temperature is below 32°F, it is to be brought to 70°F before welding and that temperature is to be maintained while welding)
Interpass Temperature	32°F (If material temperature is below 32°F, it is to be brought to 70°F before welding and that temperature is to be maintained while welding)
<b>Electrical Characteristics</b>	
Current Type and Polarity	DCEP
Transfer Mode	Spray
Power Source Type (cc, cv, etc)	CV
Amps	190 - 280
Volts	22 - 30
Wire Feed Speed	350 - 600
Travel Speed	Time welder to calculate
Maximum Heat Input	Calculate using $\text{Heat Input} = (60 \times \text{Amps} \times \text{Volts}) / (1,000 \times \text{Travel Speed in in/min}) = \text{KJ/in}$
<b>Technique</b>	
Weld Size	1/16" minimum -
Stringer or Weave	Either
Multi or Single Pass (per side)	Single
Oscillation (mechanized, auto)	NA
Contact Tube to Work Distance	1/2" – 3/4"
Peening	None
Interpass Cleaning	NA
<b>Other</b>	

This is wrong if you are working to D1.1

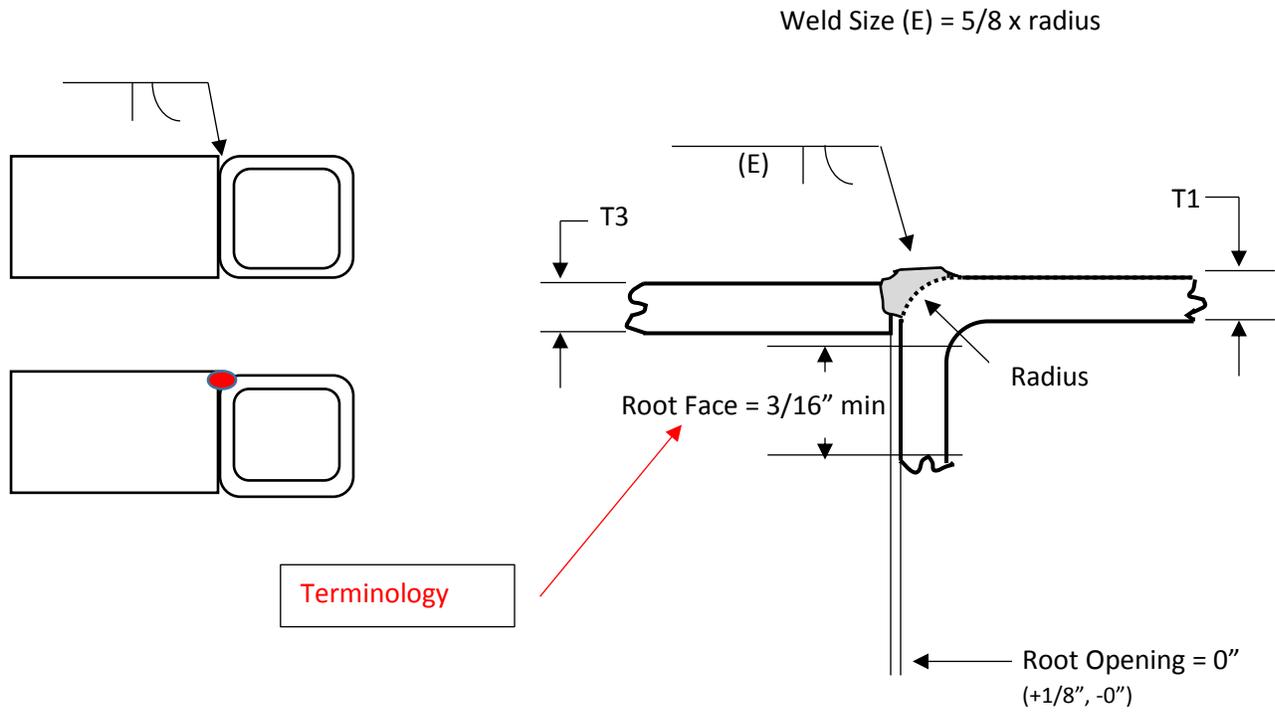
Who writing this WPS? The welder? How do you expect him to weld and watch the stop watch at the same time?

You need to review the Annex for the applicable clauses that need to be address for prequal. WPSs.

There are minimum weld sizes for different base metal thicknesses. Single pass for all thicknesses? Really?

# Joint Details – Sketch

(Figure 3.2, P.72)



## Notes

- T1 shall be  $\frac{3}{16}$ " minimum
- T3 shall be greater than or equal to T1
- Weld shall be flush with the surface of the Joint
- Radius =  $2(T1)$
- Weld Size (E) =  $\frac{5}{8}(2(T1))$
- Welds are to be flush with the top of the joint, concavity is not allowed
- Maximum reinforcement is not to exceed  $\frac{1}{8}$ " per Table 5.9

Not consistent with D1.1 figures for prequalified details.

Check the dimensions.

Only true if the maximum weld size is required.