

Vitans
Received
OK'd BY JWC

MAY 11 2012

Steel Pipe Fabricators, Inc.

Welding Procedure Specification (WPS)

Prequalified or Procedure Qualification Record (PQR)

Qualified By Testing Yes No

Resubmit
BY

APPROVED
DATE

5/11/12

Identification # SPT-FCAW-SAW1
Revision 0 Date 2/13/08 By J. Klehm
Authorized By J. Klehm Date 2/13/08

Type - Manual Semi - Auto
Machine Automatic

Company Steel Pipe Fabricators, Inc.
Welding Process(es) FCAW/SAW
Supporting PQR(s) SPT-FCAW-001A Rev. 0
SPT-SAW-001 Rev. 0

JOINT DESIGN USED

Type: B-U2-GF
Single Double Weld
Backing
Backing Material Weld Metal
Root Opening 0 - 1/8" Root Face 0 - 1/4"
Groove Angle 55 - 70° Radius (J-U) N/A
Back Gouging Yes Method Grinding

POSITION
Groove Flat Fillet Flat
Progression Up Down

ELECTRICAL CHARACTERISTICS

Transfer Mode (GMAW)
Short Circuit Globular
Spray AC DCEP
Current: DCEN Pulsed
Other: _____

Material Specification A36
Type or Grade _____
Thickness: _____
Groove 1/4" - Unlimited Fillet All
Diameter (Pipe) 24" and Greater

Tungsten Electrode (GTAW)
Size: N/A Type N/A

FILLER METALS

AWS Specification A5.20 / A5.17
AWS Classification E71T-1 / EM12K

TECHNIQUE

Stringer or Weave Bond: Stringer
Multi or Single Pass (per side) Multiple
Number of Electrodes 1
Electrode Spacing Longitudinal N/A
Lateral N/A
Angle N/A
Contact Tube to Work Distance 1/2 - 1"
Peening None
Interpass Cleaning Chipping/Wire Brush

SHIELDING

Flux Lincoln 780 Flux - Class F7A2
Gas CO₂ Composition 100%
Flow Rate 28 - 52 Gas Cup Size #4 /

PREHEAT

Preheat Temp., Min 70°
Interpass Temp., Min 70°
Max 450°

POSTWELD HEAT TREATMENT

Temp. None
Time N/A

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Travel Speed	Volts	Joint Details
		Class	Diameter	Type & Polarity	Amps or Wire Feed Speed			
Root	FCAW	E71T-1	0.052"	DCEP	276 - 338	13-21	26-30	
Hot Pass	FCAW	E71T-1	0.052"	DCEP	276 - 338	13-21	26-30	
Hot Pass	SAW	EM12K	5/32"	DCEP	441 - 539	9-12	29-33	
Fill / Cover	SAW	EM12K	5/32"	DCEP	441 - 539	9-12	29-33	