

WELDING PROCEDURE SPECIFICATION (WPS) BTC GMAW 90-10 2011

PREQUALIFIED **Per AWS D1.1 2010**

QUALIFIED BY TESTING

Identification # GMAW 90-10 2011

Revision 1

Date Oct 28, 2011

By Robert Rutile

Company Name: Slagboy Enterprises

Authorized by Samuel Slaghammer

Oct 28, 2011

Welding Process(es) GMAW

Type—Manual Semi-Automatic
Machine Automatic

JOINT DESIGN USED **Butt**

Type Single Double Weld
Backing Yes No
Backing Material ASTM A-36
Root Opening 1/4 in.
Root Face Dimension 1/16 +0 -1/16"
Back Gouging No

Position
Position of Groove Flat
Fillet Position/s Flat and Horizontal

Vertical Progression N/A

BASE METALS

Material Spec ASTM A 36
Type or Grade
Thickness: Groove 1/8" to 1" Fillet .
Diameter (Pipe)

ELECTRICAL CHARACTERISTICS

Transfer Mode (GMAW) N/A
Current DCEP
Tungsten Electrode Size (GTAW)
Size N/A
Type N/A

FILLER METALS

AWS Specification AWS A5.18
AWS Classification ER70S-6

TECHNIQUE

Stringer or Weave Bead Stringer
Multi-pass or Single Pass (per side) Multi
Number of Electrodes 1

SHIELDING

Flux: N/A
Electrode-Flux (Class): N/A
Composition: N/A

Gas 90/10 Ar/Co2
Flow Rate 35 Cfh
Cup Size 5/8 in

Contact Tube to Work Distance 5/8 to 3/4 in.
Peening None
Interpass Cleaning Oxide Removal (mechanical)

PREHEAT

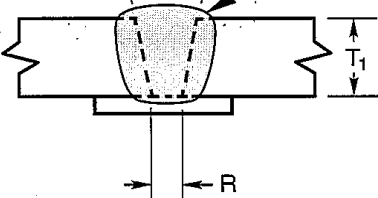
Preheat Temp Min., 50F
Interpass Temp., Min Max 500F

POST WELD HEAT TREATMENT

Temp N/A
Time N/A

GMAW B-U2a-GF (D1.1 2010)

α	70 degrees
R	1/4"



Special instructions:

1. No grinding on cover pass
2. Inter-pass grinding must be approved by instructor and done in test position

Hold points:

1. Inspect bevels
2. Inspect tack-up
3. Inspect root pass
4. Inspect cover pass
5. Inspect backing strip removal prior to cutting straps

WELDING PROCEDURE

Pass or Weld Layers	Process GMAW	Filler Metals		Current	Volts	Travel Speed
		Class	Dia.			
		ER70S-60.35 in	Type & Polarity DCEP	Amps or Wire Feed speed (IPM) 400-550 ipm	24-27
						14 IPM + or - 15%