WELDING PROCEDURE SPECIFICATION (WPS) Yes ■
PREQUALIFIED Yes QUALIFIED BY TESTING Yes
or PROCEDURE QUALIFICATION RECORDS (PQR) Yes ■

Identification # 93
Revision _____ Date 4-21-18 By _____
Authorized by _____ Date 4-21-18

Company Name G&G Fabricating & Machining
Welding Process(es) D1.1
Supporting PQR No.(s) AWS

Type—Manual ■ Semiautomatic ☐
Machine ■ Automatic ☐

JOINT DESIGN USED
Type:
Single ■ Double Weld ■
Backing: Yes ☐ No ■
Backing Material:
Root Opening 1/8 Root Face Dimension 1/2"
Groove Angle: 15 Degrees Radius (J–U) GMAW
Back Gouging: Yes ☐ No ■ Method _____

BASE METALS
Material Spec. ASTM 500
Type or Grade _____
Thickness: Groove 1/2" Fillet 1/2"
Diameter (Pipe) 6"

FILLER METALS
AWS Specification 70 S-6
AWS Classification _____

SHIELDING
Flux _____ Gas C-10
Composition _____
Electrode-Flux (Class) _____ Flow Rate 30
Gas Cup Size T-30

PREHEAT
Preheat Temp., Min. 300
Interpass Temp., Min. 300 Max. 300

POSITION
Position of Groove: 3g Fillet: YES
Vertical Progression: Up ■ Down ☐

ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW) Short-Circuiting ■
Globular ■ Spray ■
Current: AC ■ DCEP ☐ DCEN ☐ Pulsed ■
Power Source: CC ☐ CV ☐
Other _____
Tungsten Electrode (GTAW)
Size: 3/32
Type: 2 Percent

TECHNIQUE
Stringer or Weave Bead: Stringer
Multi-pass or Single Pass (per side) 3
Number of Electrodes _____
Electrode Spacing Longitudinal _____
Lateral _____
Angle _____
Contact Tube to Work Distance _____
Peening N/A
Interpass Cleaning: YES

POSTWELD HEAT TREATMENT
Temp. N/A
Time _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
1	gmaw	70 S-6	.035	straight	22-254	22	10"	fillets
2	gmaw	70 S-6	.035	straight	22-254	22	10"	stack
3	gmaw	70 S-6	.035	straight	22-254	22	10"	stack

WELDING PROCEDURE SPECIFICATION (WPS) Yes ☐
PREQUALIFIED _____ QUALIFIED BY TESTING _____
or PROCEDURE QUALIFICATION RECORDS (PQR) Yes ☐

Identification # _____
Revision A Date 11-21-18 By _____
Authorized by _____ Date _____
Type—Manual ☒ Semiautomatic ☐
Machine ☒ Automatic ☐

Company Name _____
Welding Process(es) D1.1
Supporting PQR No.(s) AWS

JOINT DESIGN USED
Type:
Single ☒ Double Weld ☒
Backing: Yes ☐ No ☒
Backing Material:
Root Opening 1/8 Root Face Dimension 1/2"
Groove Angle: 15° Radius (J–U) GMAW
Back Gouging: Yes ☐ No ☒ Method _____

POSITION
Position of Groove: 3G Fillet: yes
Vertical Progression: Up ☒ Down ☐

ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW) Short-Circuiting ☒
Globular ☒ Spray ☒
Current: AC ☒ DCEP ☐ DCEN ☐ Pulsed ☒
Power Source: CC ☐ CV ☐
Other _____
Tungsten Electrode (GTAW)
Size: 3/32
Type: 2%Th

BASE METALS
Material Spec. ASTM 500
Type or Grade _____
Thickness: Groove 1/5" Fillet 1/4"
Diameter (Pipe) 6"

FILLER METALS
AWS Specification 70S-6
AWS Classification _____

TECHNIQUE
Stringer or Weave Bead: STRINGER
Multi-pass or Single Pass (per side) 3
Number of Electrodes _____
Electrode Spacing Longitudinal _____
Lateral _____
Angle _____
Contact Tube to Work Distance _____
Peening N/A
Interpass Cleaning: YES

SHIELDING
Flux _____ Gas C-10
Composition _____
Electrode-Flux (Class) _____ Flow Rate 30
Gas Cup Size T-30

PREHEAT
Preheat Temp., Min. 300
Interpass Temp., Min. 300 Max. 300

POSTWELD HEAT TREATMENT
Temp. N/A
Time _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
1	GMAW	70S-6	.035	STRAIGHT	22-234	22	10"	STRINGER
2	"	"	"	"	22-254	22	10"	STACK
3	"	"	"	"	22-254	22	10"	STACK

Form N-1 (Front)

Procedure Qualification Record (PQR) # _____
Test Results

TENSILE TEST

Specimen No.	Width	Thickness	Area	Ultimate Tensile Load, lb	Ultimate Unit Stress, psi	Character of Failure and Location

GUIDED BEND TEST

Specimen No.	Type of Bend	Result	Remarks

VISUAL INSPECTION
Appearance_____
Undercut _____
Piping porosity _____
Convexity_____
Test date _____
Witnessed by_____

Radiographic-ultrasonic examination
RT report no.: _____ Result_____
UT report no.:_____ Result_____

FILLET WELD TEST RESULTS

Minimum size multiple pass		Maximum size single pass	
Macroetch		Macroetch	
1. _____	3. _____	1. _____	3. _____
2. _____		2. _____	

Other Tests

All-weld-metal tension test

Tensile strength, psi _____
Yield point/strength, psi _____
Elongation in 2 in, % _____
Laboratory test no. _____

Welder's name _____ Clock no. _____ Stamp no._____

Tests conducted by _____ Laboratory

Test number _____

Per _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in conformance with the requirements of Clause 4 of AWS D1.1/D1.1M, (_____) *Structural Welding Code—Steel.*
(year)

Signed _____
Manufacturer or Contractor

By_____

Title _____

Date _____

Form N-1 (Back)