Blank Sample PQR Form (GTAW & SMAW – page 1)
PROCEDURE QUALIFICATION RECORD (PQR)

Company Name _____ PQR No. _____ Rev. No. _____ Date _____

BASE METALS	Specification	Type or Grade	AWS Group No.	Thickness	Size (NPS)	Schedule	Diameter
Base Material							
Welded To							
Backing Material							
Other							

JOINT DETAILS	
Groove Type	
Groove Angle	
Root Opening	
Root Face	
Backgouging	
Method	

POSTWELD HEAT TREATMENT	
Temperature	
Time at Temperature	
Other	

JOINT DETAILS (Sketch)

PROCEDURE								
Weld Layer(s)								
Weld Pass(es)								
Process								
Type (*Manual, Mechanized, etc.*)								
Position								
Vertical Progression								
Filler Metal (AWS Spec.)								
AWS Classification								
Diameter								
Manufacturer/Trade Name								
Shielding Gas Compos. (GTAW)								
Flow Rate (GTAW)								
Nozzle Size (GTAW)								
Preheat Temperature								
Interpass Temperature								
Electrical Characteristics	—	—	—	—	—	—	—	—
Electrode Diameter (GTAW)								
Current Type & Polarity								
Amps								
Volts								
Cold or Hot Wire Feed (GTAW)								
Travel Speed								
Maximum Heat Input								
Technique	—	—	—	—	—	—	—	—
Stringer or Weave								
Multi or Single Pass (per side)								
Oscillation (GTAW Mech./Auto.)								
Traverse Length								
Traverse Speed								
Dwell Time								
Peening								
Interpass Cleaning								
Other								

Form J-1 (Front) (See http://go.aws.org/D1forms)

Blank Sample PQR Form (GMAW & FCAW – page 1)
PROCEDURE QUALIFICATION RECORD (PQR)

Company Name _____ PQR No. _____ Rev. No. _____ Date _____

BASE METALS	Specification	Type or Grade	AWS Group No.	Thickness	Size (NPS)	Schedule	Diameter
Base Material							
Welded To							
Backing Material							
Other							

JOINT DETAILS	
Groove Type	
Groove Angle	
Root Opening	
Root Face	
Backgouging	
Method	

POSTWELD HEAT TREATMENT	
Temperature	
Time at Temperature	
Other	

JOINT DETAILS (Sketch)

PROCEDURE								
Weld Layer(s)								
Weld Pass(es)								
Process								
Type *(Semiautomatic, Mechanized, etc.)*								
Position								
Vertical Progression								
Filler Metal (AWS Spec.)								
AWS Classification								
Diameter								
Manufacturer/Trade Name								
Shielding Gas Composition								
Flow Rate								
Nozzle Size								
Preheat Temperature								
Interpass Temperature								
Electrical Characteristics	—	—	—	—	—	—	—	—
Current Type & Polarity								
Transfer Mode (GMAW)								
Power Source Type (*cc, cv, etc.*)								
Amps								
Volts								
Wire Feed Speed								
Travel Speed								
Maximum Heat Input								
Technique	—	—	—	—	—	—	—	—
Stringer or Weave								
Multi or Single Pass (per side)								
Oscillation *(Mechanized/Automatic)*								
Traverse Length								
Traverse Speed								
Dwell Time								
Number of Electrodes								
Contact Tube to Work Dist.								
Peening								
Interpass Cleaning								
Other								

Form J-1 (Front) (See http://go.aws.org/D1forms)

Blank Sample PQR Form (SAW – page 1)
PROCEDURE QUALIFICATION RECORD (PQR)

Company Name _____ PQR No. _____ Rev. No. _____ Date _____

BASE METALS	Specification	Type or Grade	AWS Group No.	Thickness	Size (NPS)	Schedule	Diameter
Base Material							
Welded To							
Backing Material							
Other							

JOINT DETAILS	
Groove Type	
Groove Angle	
Root Opening	
Root Face	
Backgouging	
Method	

POSTWELD HEAT TREATMENT	
Temperature	
Time at Temperature	
Other	

JOINT DETAILS (Sketch)

PROCEDURE								
Weld Layer(s)								
Weld Pass(es)								
Process	**SAW**							
Type *(Semiautomatic, Mechanized, etc.)*								
Position								
Filler Metal (AWS Spec.)								
AWS Classification								
Electrode Diameter								
Electrode/Flux Classification								
Manufacturer/Trade Name								
Supplemental Filler Metal								
Preheat Temperature								
Interpass Temperature								
Electrical Characteristics	—	—	—	—	—	—	—	—
Current Type & Polarity								
Amps								
Volts								
Wire Feed Speed								
Travel Speed								
Maximum Heat Input								
Technique	—	—	—	—	—	—	—	—
Stringer or Weave								
Multi or Single Pass (per side)								
Number of Electrodes								
Longitudinal Spacing of Arcs								
Lateral Spacing of Arcs								
Angle of Parallel Electrodes								
Angle of Electrode (Mech./Auto.)								
Normal To Direction of Travel								
Oscillation *(Mechanized/Automatic)*								
Traverse Length								
Traverse Speed								
Dwell Time								
Peening								
Interpass Cleaning								
Other								

Form J-1 (Front) (See http://go.aws.org/D1forms)

Blank Sample PQR Form (Test Results – page 2)
PROCEDURE QUALIFICATION RECORD (PQR) TEST RESULTS

PQR No. _____ Rev. No. _____

TESTS

√	Type of Tests	Clause/Figure(s) Reference	Acceptance Criteria	Result	Remarks
	Visual Inspection	6.10.1	6.10.1		
	Radiographic Examination	6.10.2.1	6.10.2.2		
	Ultrasonic Testing	6.10.2.1	6.10.2.2		
	2 Transverse Root Bends	6.10.3.1/Fig. 6.8	6.10.3.3		
	2 Transverse Face Bends	6.10.3.1/Fig. 6.8	6.10.3.3		
	2 Longitudinal Root Bends	6.10.3.1/Fig. 6.8	6.10.3.3		
	2 Longitudinal Face Bends	6.10.3.1/Fig. 6.8	6.10.3.3		
	2 Side Bends	6.10.3.1/Fig. 6.9	6.10.3.3		
	4 Side Bends	6.10.3.1/Fig. 6.9	6.10.3.3		
	2 Tensile Tests	6.10.3.4/Fig. 6.10	6.10.3.5		
	All-Weld-Metal Tensions	6.10.3.6/Figs. 6.14 and 6.16	6.16.1.3(2)		
	3 Macroetch	6.10.4	6.10.4.1		
	4 Macroetch	6.10.4	6.10.4.1		
	CVN Tests	6 Part D/Fig. 6.29 – 6.31	6.31 and Table 6.16		

TENSILE TEST DETAILS

Specimen Number	Width	Thickness	Area	Ultimate Tensile Load	Ultimate Unit Stress	Type of Failure and Location

TOUGHNESS TEST DETAILS

Specimen Number	Notch Location	Specimen Size	Test Temperature	Absorbed Energy	Percent Shear	Lateral Expansion	Average

CERTIFICATION

Welder's Name	ID Number	Stamp Number

Tests Conducted by	
Laboratory	
Test Number	
File Number	

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Clause 6 of AWS D1.1/D1.1M, ( ) *Structural Welding Code—Steel.*
(year)

Title	
Name	Signature
Date	

Form J-1 (Back)

(See http://go.aws.org/D1forms)

Example PQR (GMAW & FCAW – page 1)
PROCEDURE QUALIFICATION RECORD (PQR)

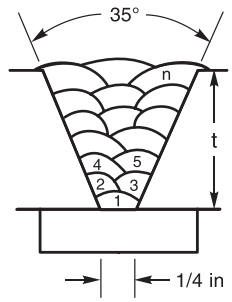
Red Inc.	**231**	**0**	01/18/2020
Company Name	PQR No.	Rev. No.	Date

BASE METALS	Specification	Type or Grade	AWS Group No.	Thickness	Size (NPS)	Schedule	Diameter
Base Material	ASTM A131	A	I	1 in	–	–	–
Welded To	ASTM A131	A	I	1 in	–	–	–
Backing Material	ASTM A131	A	I	1/4 in			
Other							

JOINT DETAILS	
Groove Type	Single V Groove Butt Joint
Groove Angle	35° included
Root Opening	1/4 in
Root Face	–
Backgouging	None
Method	–

POSTWELD HEAT TREATMENT	
Temperature	–
Time at Temperature	–
Other	–

JOINT DETAILS (Sketch)



PROCEDURE								
Weld Layer(s)	–	–	–	–	–			
Weld Pass(es)	1	2–8	9–11	12–15	16			
Process	**FCAW**	**FCAW**	**FCAW**	**FCAW**	**FCAW**			
Type *(Semiautomatic, Mechanized, etc.)*	Semi-automatic	Semi-automatic	Semi-automatic	Semi-automatic	Semi-automatic			
Position	4G	4G	4G	4G	4G			
Vertical Progression	–	–	–	–	–			
Filler Metal (AWS Spec.)	A5.20	A5.20	A5.20	A5.20	A5.20			
AWS Classification	E71T-1C	E71T-1C	E71T-1C	E71T-1C	E71T-1C			
Diameter	0.045 in	0.045 in	0.045 in	0.045 in	0.045 in			
Manufacturer/Trade Name	–	–	–	–	–			
Shielding Gas Composition	100% CO_2	100% CO_2	100% CO_2	100% CO_2	100% CO_2			
Flow Rate	45–55 cfh	45–55 cfh	45–55 cfh	45–55 cfh	45–55 cfh			
Nozzle Size	#4	#4	#4	#4	#4			
Preheat Temperature	75° min.	75° min.	75° min.	75° min.	75° min.			
Interpass Temperature	75°–350°	75°–350°	75°–350°	75°–350°	75°–350°			
Electrical Characteristics	—	—	—	—	—	—	—	—
Current Type & Polarity	DCEP	DCEP	DCEP	DCEP	DCEP			
Transfer Mode (GMAW)	–	–	–	–	–			
Power Source Type (*cc, cv, etc.*)	–	–	–	–	–			
Amps	180	200	200	200	200			
Volts	26	27	27	27	27			
Wire Feed Speed	(Amps)	(Amps)	(Amps)	(Amps)	(Amps)			
Travel Speed	8 ipm	10 ipm	11 ipm	9 ipm	11 ipm			
Maximum Heat Input	–	–	–	–	–			
Technique	—	—	—	—	—	—	—	—
Stringer or Weave	Stringer	Stringer	Stringer	Stringer	Stringer			
Multi or Single Pass (per side)	Multipass	Multipass	Multipass	Multipass	Multipass			
Oscillation *(Mechanized/Automatic)*	–	–	–	–	–			
Number of Electrodes	1	1	1	1	1			
Contact Tube to Work Dist.	3/4–1 in	3/4–1 in	3/4–1 in	3/4–1 in	3/4–1 in			
Peening	None	None	None	None	None			
Interpass Cleaning	Wire Brush	Wire Brush	Wire Brush	Wire Brush	Wire Brush			
Other								

Form J-1 (Front) (See http://go.aws.org/D1forms)

Example PQR (GMAW & FCAW – page 2)
PROCEDURE QUALIFICATION RECORD (PQR) TEST RESULTS

231 (PQR No.) 0 (Rev. No.)

TESTS

√	Type of Tests	Clause/Figure(s) Reference	Acceptance Criteria	Result	Remarks
√	Visual Inspection	6.10.1	6.10.1	Acceptable	
√	Radiographic Examination	6.10.2.1	6.10.2.2	Acceptable	
	Ultrasonic Testing	6.10.2.1	6.10.2.2		
	2 Transverse Root Bends	6.10.3.1/Fig. 6.8	6.10.3.3		
	2 Transverse Face Bends	6.10.3.1/Fig. 6.8	6.10.3.3		
	2 Longitudinal Root Bends	6.10.3.1/Fig. 6.8	6.10.3.3		
	2 Longitudinal Face Bends	6.10.3.1/Fig. 6.8	6.10.3.3		
	2 Side Bends	6.10.3.1/Fig. 6.9	6.10.3.3		
√	4 Side Bends	6.10.3.1/Fig. 6.9	6.10.3.3	Acceptable	< 1/16 in Opening
√	2 Tensile Tests	6.10.3.1/Fig. 6.10	6.10.3.5	Acceptable	
√	All-Weld-Metal Tensions	6.10.3.1/Figs. 6.14 and 6.16	6.15.3(2)	Acceptable	*See Note
	3 Macroetch	6.10.4	6.10.4.1		
	4 Macroetch	6.10.4	6.10.4.1		
√	CVN Tests	6 Part D/Fig 6.27	6.29 and Table 6.16		

TENSILE TEST DETAILS

Specimen Number	Width	Thickness	Area	Ultimate Tensile Load	Ultimate Unit Stress	Type of Failure and Location
231-1	0.75 in	100 in	0.75 in^2	52 500 lb	70 000 psi	Ductile/Weld Metal
231-2	0.75 in	100 in	0.75 in^2	52 275 lb	69 700 psi	Ductile/Weld Metal

TOUGHNESS TEST DETAILS

Specimen Number	Notch Location	Specimen Size	Test Temperature	Absorbed Energy	Percent Shear	Lateral Expansion	Average
231-7	BM	10 × 10 mm	–20 °F	126 ft·lbf	50%	45 mils	125/50/45
231-8	BM	10 × 10 mm	–20 °F	124 ft·lbf	50%	45 mils	
231-9	BM	10 × 10 mm	–20 °F	125 ft·lbf	50%	45 mils	
231-10	HAZ	10 × 10 mm	–20 °F	86 ft·lbf	50%	45 mils	85 ft·lbf 50% 45 mils
231-11	HAZ	10 × 10 mm	–20 °F	84 ft·lbf	50%	45 mils	
231-12	HAZ	10 × 10 mm	–20 °F	85 ft·lbf	50%	45 mils	
231-13	WM	10 × 10 mm	–20 °F	27 ft·lbf	50%	45 mils	28 ft·lbf 50% 45 mils
231-14	WM	10 × 10 mm	–20 °F	29 ft·lbf	50%	45 mils	
231-14	WM	10 × 10 mm	–20 °F	28 ft·lbf	50%	45 mils	

CERTIFICATION

Welder's Name	ID Number	Stamp Number
W. T. Williams	261	–

Tests Conducted by	
Laboratory	Red Inc. & ABC Testing
Test Number	PQR 231 (per D. Miller)
File Number	WeldingForms/PQR231.pdf

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Clause 6 of AWS D1.1/D1.1M, ( ) *Structural Welding Code—Steel*.
(year)

Title	
Q.C. Mgr.	
Name	Signature
R. M. Boncrack	
Date	
12/15/2020	

Form J-1 (Back)

(See http://go.aws.org/D1forms)

Blank Sample WPS Form (GTAW & SMAW)
WELDING PROCEDURE SPECIFICATION (WPS)

Company Name		WPS No.		Rev. No.	Date
Authorized by	Date	Supporting PQR(s)		CVN Report	

BASE METALS	Specification	Type or Grade	AWS Group No.
Base Material			
Welded To			
Backing Material			
Other			

BASE METAL THICKNESS	As-Welded	With PWHT
CJP Groove Welds		
CJP Groove w/CVN		
PJP Groove Welds		
Fillet Welds		
DIAMETER		

JOINT DETAILS	
Groove Type	
Groove Angle	
Root Opening	
Root Face	
Backgouging	
Method	

POSTWELD HEAT TREATMENT	
Temperature	
Time at Temperature	
Other	

JOINT DETAILS (Sketch)

PROCEDURE								
Weld Layer(s)								
Weld Pass(es)								
Process								
Type (*Manual, Mechanized, etc.*)								
Position								
Vertical Progression								
Filler Metal (AWS Spec.)								
AWS Classification								
Diameter								
Manufacturer/Trade Name								
Shielding Gas Compos. (GTAW)								
Flow Rate (GTAW)								
Nozzle Size (GTAW)								
Preheat Temperature								
Interpass Temperature								
Electrical Characteristics	—	—	—	—	—	—	—	—
Electrode Diameter (GTAW)								
Current Type & Polarity								
Amps								
Volts								
Cold or Hot Wire Feed (GTAW)								
Travel Speed								
Maximum Heat Input								
Technique	—	—	—	—	—	—	—	—
Stringer or Weave								
Multi or Single Pass (per side)								
Oscillation (GTAW Mech./Auto.)								
Traverse Length								
Traverse Speed								
Dwell Time								
Peening								
Interpass Cleaning								
Other								

Form J-2 (See http://go.aws.org/D1forms)

Blank Sample WPS Form (GMAW & FCAW)
WELDING PROCEDURE SPECIFICATION (WPS)

Company Name		WPS No.		Rev. No.	Date
Authorized by	Date	Supporting PQR(s)		CVN Report	

BASE METALS	Specification	Type or Grade	AWS Group No.
Base Material			
Welded To			
Backing Material			
Other			

BASE METAL THICKNESS	As-Welded	With PWHT
CJP Groove Welds		
CJP Groove w/CVN		
PJP Groove Welds		
Fillet Welds		
DIAMETER		

JOINT DETAILS	
Groove Type	
Groove Angle	
Root Opening	
Root Face	
Backgouging	
Method	

POSTWELD HEAT TREATMENT	
Temperature	
Time at Temperature	
Other	

JOINT DETAILS (Sketch)

PROCEDURE								
Weld Layer(s)								
Weld Pass(es)								
Process								
Type *(Semiautomatic, Mechanized, etc.)*								
Position								
Vertical Progression								
Filler Metal (AWS Spec.)								
AWS Classification								
Diameter								
Manufacturer/Trade Name								
Shielding Gas (Composition)								
Flow Rate								
Nozzle Size								
Preheat Temperature								
Interpass Temperature								
Electrical Characteristics	—	—	—	—	—	—	—	—
Current Type & Polarity								
Transfer Mode								
Power Source Type (*cc, cv, etc.*)								
Amps								
Volts								
Wire Feed Speed								
Travel Speed								
Maximum Heat Input								
Technique	—	—	—	—	—	—	—	—
Stringer or Weave								
Multi or Single Pass (per side)								
Oscillation (*Mechanized/Automatic*)								
Traverse Length								
Traverse Speed								
Dwell Time								
Number of Electrodes								
Contact Tube to Work Distance								
Peening								
Interpass Cleaning								
Other								

Form J-2 (See http://go.aws.org/D1forms)

Blank Sample WPS Form (SAW)
WELDING PROCEDURE SPECIFICATION (WPS)

Company Name		WPS No.		Rev. No.	Date
Authorized by	Date	Supporting PQR(s)		CVN Report	

BASE METALS	Specification	Type or Grade	AWS Group No.
Base Material			
Welded To			
Backing Material			
Other			

BASE METAL THICKNESS	As-Welded	With PWHT
CJP Groove Welds		
CJP Groove w/CVN		
PJP Groove Welds		
Fillet Welds		
DIAMETER		

JOINT DETAILS	
Groove Type	
Groove Angle	
Root Opening	
Root Face	
Backgouging	
Method	

POSTWELD HEAT TREATMENT	
Temperature	
Time at Temperature	
Other	

JOINT DETAILS (Sketch)

PROCEDURE								
Weld Layer(s)								
Weld Pass(es)								
Process	**SAW**							
Type *(Semiautomatic, Mechanized, etc.)*								
Position								
Filler Metal (AWS Spec.)								
AWS Classification								
Electrode Diameter								
Electrode/Flux Classification								
Manufacturer/Trade Name								
Supplemental Filler Metal								
Preheat Temperature								
Interpass Temperature								
Electrical Characteristics	—	—	—	—	—	—	—	—
Current Type & Polarity								
Amps								
Volts								
Wire Feed Speed								
Travel Speed								
Maximum Heat Input								
Technique	—	—	—	—	—	—	—	—
Stringer or Weave								
Multi or Single Pass (per side)								
Number of Electrodes								
Longitudinal Spacing of Arcs								
Lateral Spacing of Arcs								
Angle of Parallel Electrodes								
Angle of Electrode (Mech./Auto.)								
Normal To Direction of Travel								
Oscillation *(Mechanized/Automatic)*								
Traverse Length								
Traverse Speed								
Dwell Time								
Peening								
Interpass Cleaning								
Other								

Form J-2 (See http://go.aws.org/D1forms)

Example WPS (Prequalified)
WELDING PROCEDURE SPECIFICATION (WPS)

LECO	**W2081**	**2**	01/03/2020
Company Name	WPS No.	Rev. No.	Date
B. W. Hayes	**None (Prequalified)**	No	
Authorized by	Supporting PQR(s)	CVN Report	
01/03/2015			
Date			

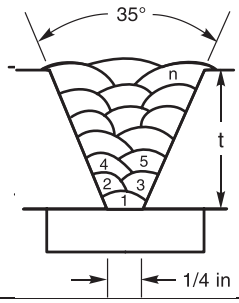
BASE METALS	Specification	Type or Grade	AWS Group No.
Base Material	ASTM A36	–	II
Welded To	ASTM A36	–	II
Backing Material	ASTM A36	–	–
Other			

BASE METAL THICKNESS	As-Welded	With PWHT
CJP Groove Welds	> 3/4–2.5 in	–
CJP Groove w/CVN	–	–
PJP Groove Welds	–	–
Fillet Welds	–	–
DIAMETER	–	–

JOINT DETAILS	
Groove Type	Single V Groove Butt Joint
Groove Angle	20°
Root Opening	5/8 in
Root Face	–
Backgouging	None
Method	–

POSTWELD HEAT TREATMENT	
Temperature	N.A.
Time at Temperature	–
Other	–

JOINT DETAILS (Sketch)



PROCEDURE								
Weld Layer(s)	All							
Weld Pass(es)	All							
Process	**SAW**							
Type *(Semiautomatic, Mechanized, etc.)*	Mechanized							
Position	F							
Filler Metal (AWS Spec.)	A5.17							
AWS Classification	EM12K							
Electrode Diameter	5/32 in							
Electrode/Flux Classification	F7A2-EM12K							
Manufacturer/Trade Name	(Flux XYZ)							
Supplemental Filler Metal	–							
Preheat Temperature	150°F min.							
Interpass Temperature	500°F max.							
Electrical Characteristics	—	—	—	—	—	—	—	—
Current Type & Polarity	DCEP							
Amps	500–600							
Volts	26–30							
Wire Feed Speed	–							
Travel Speed	20–25 ipm							
Maximum Heat Input	–							
Technique	—	—	—	—	—	—	—	—
Stringer or Weave	Stringer							
Multi or Single Pass (per side)	Multipass							
Number of Electrodes	1							
Longitudinal Spacing of Arcs	–							
Lateral Spacing of Arcs	–							
Angle of Parallel Electrodes	–							
Angle of Electrode (Mech./Auto.)	5° ± 2°							
Normal To Direction of Travel	90° ± 2°							
Oscillation *(Mechanized/Automatic)*	None							
Traverse Length	–							
Traverse Speed	–							
Dwell Time	–							
Peening	None							
Interpass Cleaning	Slag Removed							
Other	–							

Form J-2 (See http://go.aws.org/D1forms)

Example WPS (Single-Process)
WELDING PROCEDURE SPECIFICATION (WPS)

RED Inc.	**2010**	**0**	12/01/2020
Company Name	WPS No.	Rev. No.	Date
J. Jones	12/01/2015	**231**	No
Authorized by	Date	Supporting PQR(s)	CVN Report

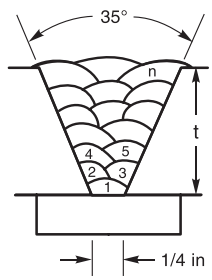
BASE METALS	Specification	Type or Grade	AWS Group No.
Base Material	ASTM A131	A	I
Welded To	ASTM A131	A	I
Backing Material	ASTM A131	A	I
Other			

BASE METAL THICKNESS	As-Welded	With PWHT
CJP Groove Welds	3/4–1-1/2 in	–
CJP Groove w/CVN	–	–
PJP Groove Welds	–	–
Fillet Welds	–	–
DIAMETER	–	–

JOINT DETAILS	
Groove Type	Single V Groove Butt Joint
Groove Angle	35° included
Root Opening	1/4 in
Root Face	–
Backgouging	None
Method	–

POSTWELD HEAT TREATMENT	
Temperature	None
Time at Temperature	–
Other	–

JOINT DETAILS (Sketch)



PROCEDURE								
Weld Layer(s)	All							
Weld Pass(es)	All							
Process	**FCAW**							
Type *(Semiautomatic, Mechanized, etc.)*	Semiauto							
Position	OH							
Vertical Progression	–							
Filler Metal (AWS Spec.)	A5.20							
AWS Classification	E71T-1C							
Diameter	0.045 in							
Manufacturer/Trade Name	–							
Shielding Gas (Composition)	100% CO_2							
Flow Rate	45–55 cfh							
Nozzle Size	#4							
Preheat Temperature	60° min.							
Interpass Temperature	60°–350°							
Electrical Characteristics	—							
Current Type & Polarity	DCEP							
Transfer Mode	–							
Power Source Type (*cc, cv, etc.*)	CV							
Amps	180–220							
Volts	25–26							
Wire Feed Speed	(Amps)							
Travel Speed	8–12 ipm							
Maximum Heat Input	–							
Technique	—							
Stringer or Weave	Stringer							
Multi or Single Pass (per side)	Multipass							
Oscillation (*Mechanized, Automatic*)	–							
Number of Electrodes	1							
Contact Tube to Work Dist.	1/2–1 in							
Peening	None							
Interpass Cleaning	Wire Brush							
Other	–							

Form J-2 (See http://go.aws.org/D1forms)

WPS QUALIFICATION TEST RECORD FOR ELECTROSLAG AND ELECTROGAS WELDING

PROCEDURE SPECIFICATION

Material specification _____
Welding process _____
Position of welding _____
Filler metal specification _____
Filler metal classification _____
Filler metal _____
Flux _____
Shielding gas _____ Flow rate _____
Gas dew point _____
Thickness range this test qualifies _____
Single or multiple pass _____
Single or multiple arc _____
Welding current _____
Preheat temperature _____
Postheat temperature _____
Welder's name _____
Guide tube flex _____
Guide tube composition _____
Guide tube diameter _____
Vertical rise speed _____
Traverse length _____
Traverse speed _____
Dwell _____
Type of molding shoe _____

VISUAL INSPECTION (Table 8.1, Cyclically loaded limitations)

Appearance _____
Undercut _____
Piping porosity _____
Test date _____
Witnessed by _____

TEST RESULTS

Reduced-section tensile test

Tensile strength, psi
1. _____
2. _____

All-weld-metal tension test

Tensile strength, psi _____
Yield point/strength, psi _____
Elongation in 2 in, % _____

Side-bend tests

1. _____ 3. _____
2. _____ 4. _____

Radiographic-ultrasonic examination

RT report no. _____
UT report no. _____

Impact tests

Size of specimen _____ Test temp _____
ft·lbf: 1. _____ 2. _____ 3. _____ 4. _____
5. _____ 6. _____ Avg. _____
High _____ Low _____
Laboratory test no. _____

WELDING PROCEDURE

Pass No.	Electrode Size	Welding Current		Joint Detail
		Amperes	Volts	

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 6 of AWS D1.1/D1.1M, (_____) *Structural Welding Code—Steel*.
(year)

Procedure no. _____ Manufacturer or Contractor _____

Revision no. _____ Authorized by _____

Form J-3 Date _____

(See http://go.aws.org/D1forms)

Sample Welder Qualification Blank Form (Single-Process)
WELDER, WELDING OPERATOR, OR TACK WELDER
PERFORMANCE QUALIFICATION TEST RECORD

Name		OPTIONAL PHOTO ID	Test Date		Rev.
ID Number			Record No.		
Stamp No.			Std. Test No.		
Company			WPS No.		
Division			Qualified To		

BASE METALS	Specification	Type or Grade	AWS Group No.	Size (NPS)	Schedule	Thickness	Diameter
Base Material							
Welded To							

VARIABLES	Actual Values		RANGE QUALIFIED
Type of Weld Joint			
Base Metal			

	Groove	Fillet		Groove	Fillet
Plate Thickness					
Pipe/Tube Thickness					
Pipe Diameter					

Welding Process			
Type *(Manual, Semiautomatic, Mechanized, Automatic)*			
Backing			
Filler Metal (AWS Spec.)			
AWS Classification			
F-Number			
Position			
Groove – Plate & Pipe ≥ 24 in			
Groove – Pipe < 24 in			
Fillet – Plate & Pipe ≥ 24 in			
Fillet – Pipe < 24 in			
Progression			
GMAW Transfer Mode			
Single or Multiple Electrodes			
Gas/Flux Type			

TEST RESULTS

Type of Test	Acceptance Criteria	Results	Remarks

CERTIFICATION

Test Conducted by	
Laboratory	
Test Number	
File Number	

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Clause 6 of AWS D1.1/D1.1M (_____) *Structural Welding Code—Steel*.
(year)

Manufacturer or Contractor _____ Authorized by _____

Date _____

Form J-4 (See http://go.aws.org/D1forms)

Example Welder Qualification (Single-Process)
WELDER, WELDING OPERATOR, OR TACK WELDER
PERFORMANCE QUALIFICATION TEST RECORD

Name	Z. W. Elder	OPTIONAL PHOTO ID	Test Date	12/12/2020	Rev.
ID Number	00-001-ZWE		Record No.	WPQ-001	0
Stamp No.	ZWE-1		Std. Test No.	ST-001	0
Company	RED Inc.		WPS No.	WPS-001	0
Division	–		Qualified To	AWS D1.1	

BASE METALS	Specification	Type or Grade	AWS Group No.	Size (NPS)	Schedule	Thickness	Diameter
Base Material	ASTM A36	UNS K02600	I	–	–	3/8 in	–
Welded To	ASTM A36	UNS K02600	I	–	–	3/8 in	–

VARIABLES	Actual Values		RANGE QUALIFIED
Type of Weld Joint	Plate – Groove (Fig. 6.20) with Backing		Groove, Fillet, Plug, and Slot Welds (T-, Y-, K-Groove PJP only)
Base Metal	Group I to Group I		Any AWS D1.1 Qualified Base Metal

	Groove	Fillet		Groove	Fillet
Plate Thickness	3/8 in	–		1/8 in – 3/4 in	1/8 in min.
Pipe/Tube Thickness	–	–		1/8 in – 3/4 in	Unlimited
Pipe Diameter	–	–		24 in min.	Unlimited

Welding Process	**GMAW**		**GMAW**
Type *(Manual, Semiautomatic, Mechanized, Automatic)*	Semiautomatic		Semiautomatic, Mechanized, Automatic
Backing	With		With (incl. Backgouging and Backwelding)
Filler Metal (AWS Spec.)	A5.18		A5.xx
AWS Classification	ER70S-6		All
F-Number	–		–
Position	2G, 3G, and 4G		
Groove – Plate and Pipe ≥ 24 in			All
Groove – Pipe < 24 in			–
Fillet – Plate and Pipe ≥ 24 in			All
Fillet – Pipe < 24 in			All
Progression	Vertical Up		Vertical Up
GMAW Transfer Mode	Globular		Spray, Pulsed, Globular
Single or Multiple Electrodes	Single		Single
Gas/Flux Type	A5.32 SG-C		A5.xx Approved

TEST RESULTS

Type of Test	Acceptance Criteria	Results	Remarks
Visual Examination per 6.10.1	6.10.1	Acceptable	–
Each Position: 1 Root Bend per 6.10.3.1 and Fig. 6.8	6.10.3.3	Acceptable	–
Each Position: 1 Face Bend per 6.10.3.1 and Fig. 6.8	6.10.3.3	Acceptable	3G: Small (<1/16 in) Opening

CERTIFICATION

Test Conducted by	
Laboratory	Welding Forms Lab
Test Number	Fictitious Test XYZ
File Number	Welding Forms/Sample-WPQ-for-GMAW.pdf

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Clause 6 of AWS D1.1/D1.1M (_____) *Structural Welding Code—Steel*.
(year)

Manufacturer or Contractor **Red Inc.** Authorized by **E. M. Ployee (Q.C. Mgr.)**

Date **12/12/2020**

Form J-4 (See http://go.aws.org/D1forms)

Sample Welder Qualification Blank Form (Multi-Process)
WELDER, WELDING OPERATOR, OR TACK WELDER
PERFORMANCE QUALIFICATION TEST RECORD

Name		OPTIONAL PHOTO ID	Test Date		Rev.
ID Number			Record No.		
Stamp No.			Std. Test No.		
Company			WPS No.		
Division			Qualified To		

BASE METALS	Specification	Type or Grade	AWS Group No.	Size (NPS)	Schedule	Thickness	Diameter
Base Material							
Welded To							

VARIABLES	Actual Values		RANGE QUALIFIED
Type of Weld Joint			
Base Metal			

	Groove	Fillet		Groove	Fillet
Plate Thickness					
Pipe/Tube Thickness					
Pipe Diameter					

Welding Process							
Type *(Manual, Semiautomatic, Mechanized, Automatic)*							
Backing							
Filler Metal (AWS Spec.)							
AWS Classification							
F-Number							
Position							
Groove – Plate and Pipe ≥ 24 in							
Groove – Pipe < 24 in							
Fillet – Plate and Pipe ≥ 24 in							
Fillet – Pipe < 24 in							
Progression							
GMAW Transfer Mode							
Single or Multiple Electrodes							
Gas/Flux Type							

TEST RESULTS

Type of Test	Acceptance Criteria	Results	Remarks

CERTIFICATION

Test Conducted by	
Laboratory	
Test Number	
File Number	

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Clause 6 of AWS D1.1/D1.1M (_____) *Structural Welding Code—Steel*.
(year)

Manufacturer or Contractor _____ Authorized by _____

Date _____

Form J-5 (See http://go.aws.org/D1forms)

Example Welder Qualification (Multi-Process)
WELDER, WELDING OPERATOR, OR TACK WELDER
PERFORMANCE QUALIFICATION TEST RECORD

Name	Z. W. Elder	OPTIONAL PHOTO ID	Test Date	12/12/2020	Rev.
ID Number	00-001-ZWE		Record No.	WPQ-003	0
Stamp No.	ZWE-01		Std. Test No.	ST-003	0
Company	RED Inc.		WPS No.	WPS-003	0
Division	–		Qualified To	AWS D1.1	

BASE METALS	Specification	Type or Grade	AWS Group No.	Size (NPS)	Schedule	Thickness	Diameter
Base Material	ASTM A36	UNS K02600	II	–	–	1 in	–
Welded To	ASTM A36	UNS K02600	II	–	–	1 in	–

VARIABLES	Actual Values		RANGE QUALIFIED
Type of Weld Joint	Plate – Groove (Fig. 6.20) with Backing		Groove, Fillet, Plug, and Slot Welds (T-, Y-, K-Groove PJP only)
Base Metal	Group II to Group II		Any AWS D1.1 Qualified Base Metal

	Groove	Fillet		Groove	Fillet
Plate Thickness	1 in	–		1/8 in min.	1/8 in min.
Pipe/Tube Thickness	–	–		1/8 in min.	Unlimited
Pipe Diameter	–	–		24 in min.	Unlimited

Welding Process	**GTAW**	**SMAW**	**FCAW**		**GTAW**	**SMAW**	**FCAW**
Type *(Manual, Semiautomatic, Mechanized, Automatic)*	Manual	Manual	Semiauto		Man/Mech/ Auto	Manual	Semi/Mech/ Auto
Backing	With	With	With		With	With	With
Filler Metal (AWS Spec.)	A5.18	A5.1	A5.20		A5.xx	A5.xx	A5.xx
AWS Classification	ER70S-2	E7018	E70T-6		All	All	All
F-Number	–	4	–		–	1 thru 4	–
Position	1G	1G	1G				
Groove – Plate and Pipe ≥ 24 in					F	F	F
Groove – Pipe < 24 in					–	–	–
Fillet – Plate and Pipe ≥ 24 in					F, H	F, H	F, H
Fillet – Pipe < 24 in					F, H	F, H	F, H
Progression	–	–	–		–	–	–
GMAW Transfer Mode	–	–	–		–	–	–
Single or Multiple Electrodes	Single	–	Single		Single	–	Single
Gas/Flux Type	A5.32 SG-A	–	None		A5.xx Approved	–	A5.xx Approved

TEST RESULTS

Type of Test	Acceptance Criteria	Results	Remarks
Visual Examination per 6.10.1	6.10.1	Acceptable	–
2 Transverse Side Bends per 6.10.3.1 and Fig. 6.9	6.10.3.3	Acceptable	–

CERTIFICATION

Test Conducted by	
Laboratory	Welding Forms Lab
Test Number	Fictitious Test XYZ
File Number	Welding Forms/Sample-WPQ-for-GTAW-SMAW-FCAW.pdf

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 6 of AWS D1.1/D1.1M (_____) *Structural Welding Code—Steel*.
(year)

Manufacturer or Contractor **Red Inc.** Authorized by **E. M. Ployee (Q.C. Mgr.)**

Date **12/12/2020**

Form J-5 (See http://go.aws.org/D1forms)

REPORT OF RADIOGRAPHIC EXAMINATION OF WELDS

Project _____
Quality requirements—Clause No. _____
Reported to _____

WELD LOCATION AND IDENTIFICATION SKETCH

Technique
Source _____
Film to source _____
Exposure time _____
Screens _____
Film type _____

(Describe length, width, and thickness of all joints radiographed)

Date	Weld identification	Area	Interpretation		Repairs		Remarks
			Accept.	Reject	Accept.	Reject	

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

Radiographer(s) _____ Manufacturer or Contractor _____

Interpreter _____ Authorized by _____

Test date _____ Date _____

Form J-6 (See http://go.aws.org/D1forms)

REPORT OF MAGNETIC-PARTICLE EXAMINATION OF WELDS

Project _____

Quality requirements—Clause No. _____

Reported to _____

WELD LOCATION AND IDENTIFICATION SKETCH

Quantity: _____ Total Accepted: _____ Total Rejected: _____

Date	Weld identification	Area Examined		Interpretation		Repairs		Remarks
		Entire	Specific	Accept.	Reject	Accept.	Reject	

PRE-EXAMINATION

Surface Preparation: _____

EQUIPMENT

Instrument Make: _____ Model: _____ R. No.: _____

METHOD OF INSPECTION

☐ Dry ☐ Wet ☐ Visible ☐ Fluorescent

How Media Applied: _____

☐ Residual ☐ Continuous ☐ True-Continuous

☐ AC ☐ DC ☐ Half-Wave

☐ Prods ☐ Yoke ☐ Cable Wrap ☐ Other _____

Direction for Field: ☐ Circular ☐ Longitudinal

Strength of Field: _____

(Ampere turns, field density, magnetizing force, number, and duration of force application.)

POST EXAMINATION

Demagnetizing Technique (if required): _____

Cleaning (if required): _____ Marking Method: _____

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

Inspector _____ Manufacturer or Contractor _____

Level _____ Authorized By _____

Test Date _____ Date _____

Form J-7 (See http://go.aws.org/D1forms)

STUD WELDING APPLICATION QUALIFICATION TEST DATA FORM PER SUBCLAUSE 9.6 Yes ☐
PRE-PRODUCTION TEST PER SUBCLAUSE 9.7.1 (WPS) Yes ☐
OR PROCEDURE QUALIFICATION RECORD (PQR) Yes ☐
OR WELDER QUALIFICATION RECORD (WQR) Yes ☐

Company name _____
Operator name _____
Test number _____
Weld stud material _____
Weld stud size and PN#/Manufacturer _____

Base Material
Specification _____
Alloy and temper _____
Surface condition HR ☐ CR ☐
Coating _____
Cleaning method _____
Decking gage _____

Shape of Base Material
Flat ☐ Round ☐ Tube ☐
Angle ☐ Inside ☐ Outside ☐ Inside radius ☐
Thickness _____

Ferrule
Part No./Manufacturer _____
Ferrule description _____

Equipment Data
Application Settings, Current, and Time Settings
Make _____ Model _____
Stud gun: Make _____ Model _____
Weld time (seconds) _____
Current (amperage) _____
Polarity: DCEN _____ DCEP _____
Lift _____
Plunge (protrusion) _____
Weld cable size _____ Length _____
Number of grounds (workpiece leads) _____

Stud Base Sketch/Application Detail

Welding Position
Flat (Down hand) ☐ Horizontal (Side hand) ☐ Angular—degrees from normal ☐ Overhead ☐

Shielding Gas
Shielding gas(es)/Composition _____
Flow rate _____

WELD TEST RESULTS

Stud No.	Visual Acceptance	Option #1 Bend Test	Option #2 Tension Test	Option #3 Torque Test*
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

*Note: Torque test optional for threaded fasteners only.

Mechanical tests conducted by _____ Date _____
(Company)

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 9 of AWS D1.1/D1.1M, (_____) *Structural Welding Code—Steel.*
(year)

Signed by _____ Title _____ Date _____
(Contractor/Applicator/Other)

Form J-8 Company _____

(See http://go.aws.org/D1forms)