

**FORM QW-482 SUGGESTED FORMAT FOR WELDING PROCEDURE SPECIFICATIONS (WPS)**  
**(See QW-200.1, Section IX, ASME Boiler and Pressure Vessel Code)**

Organization Name \_\_\_\_\_ By \_\_\_\_\_

Welding Procedure Specification No. \_\_\_\_\_ Date \_\_\_\_\_ Supporting PQR No.(s) \_\_\_\_\_

Revision No. \_\_\_\_\_ Date \_\_\_\_\_

Welding Process(es) \_\_\_\_\_ Type(s) \_\_\_\_\_

(Automatic, Manual, Machine, or Semi-Automatic)

JOINTS (QW-402)	Details
Joint Design _____ Root Spacing _____ Backing: Yes _____ No _____ Backing Material (Type) _____ <p align="center"><small>(Refer to both backing and retainers)</small></p> <input type="checkbox"/> Metal <input type="checkbox"/> Nonfusing Metal <input type="checkbox"/> Nonmetallic <input type="checkbox"/> Other Sketches, Production Drawings, Weld Symbols, or Written Description should show the general arrangement of the parts to be welded. Where applicable, the details of weld groove may be specified.  Sketches may be attached to illustrate joint design, weld layers, and bead sequence (e.g., for notch toughness procedures, for multiple process procedures, etc.)]	

**\*BASE METALS (QW-403)**

P-No. \_\_\_\_\_ Group No. \_\_\_\_\_ to P-No. \_\_\_\_\_ Group No. \_\_\_\_\_

OR

Specification and type/grade or UNS Number \_\_\_\_\_  
 to Specification and type/grade or UNS Number \_\_\_\_\_

OR

Chem. Analysis and Mech. Prop. \_\_\_\_\_  
 to Chem. Analysis and Mech. Prop. \_\_\_\_\_

Thickness Range:

Base Metal:      Groove \_\_\_\_\_      Fillet \_\_\_\_\_

Maximum Pass Thickness  $\leq 1/2$  in. (13 mm)      (Yes) \_\_\_\_\_      (No) \_\_\_\_\_

Other \_\_\_\_\_

*FILLER METALS (QW-404)	1	2
Spec. No. (SFA) _____	_____	_____
AWS No. (Class) _____	_____	_____
F-No. _____	_____	_____
A-No. _____	_____	_____
Size of Filler Metals _____	_____	_____
Filler Metal Product Form _____	_____	_____
Supplemental Filler Metal _____	_____	_____
Weld Metal	_____	_____
Deposited Thickness:	_____	_____
Groove _____	_____	_____
Fillet _____	_____	_____
Electrode-Flux (Class) _____	_____	_____
Flux Type _____	_____	_____
Flux Trade Name _____	_____	_____
Consumable Insert _____	_____	_____
Other _____	_____	_____

\*Each base metal-filler metal combination should be recorded individually.

**FORM QW-482 (Back)**

WPS No. \_\_\_\_\_ Rev. \_\_\_\_\_

<b>POSITIONS (QW-405)</b> Position(s) of Groove _____ Welding Progression: Up _____ Down _____ Position(s) of Fillet _____ Other _____	<b>POSTWELD HEAT TREATMENT (QW-407)</b> Temperature Range _____ Time Range _____ Other _____																							
<b>PREHEAT (QW-406)</b> Preheat Temperature, Minimum _____ Interpass Temperature, Maximim _____ Preheat Maintenance _____ Other _____ (Continuous or special heating, where applicable, should be recorded)	<b>GAS (QW-408)</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="3" style="text-align: center;">Percent Composition</th> </tr> <tr> <th style="text-align: center;">Gas(es)</th> <th style="text-align: center;">(Mixture)</th> <th style="text-align: center;">Flow Rate</th> </tr> </thead> <tbody> <tr> <td>Shielding</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Trailing</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Backing</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Other</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Percent Composition			Gas(es)	(Mixture)	Flow Rate	Shielding	_____	_____	_____	Trailing	_____	_____	_____	Backing	_____	_____	_____	Other	_____	_____	_____
	Percent Composition																							
	Gas(es)	(Mixture)	Flow Rate																					
Shielding	_____	_____	_____																					
Trailing	_____	_____	_____																					
Backing	_____	_____	_____																					
Other	_____	_____	_____																					

**ELECTRICAL CHARACTERISTICS (QW-409)**

Weld Pass(es)	Process	Filler Metal		Current Type and Polarity	Amps (Range)	Wire Feed Speed (Range)	Energy or Power (Range)	Volts (Range)	Travel Speed (Range)	Other (e.g., Remarks, Comments, Hot Wire Addition, Technique, Torch Angle, etc.)
		Classifi-cation	Diameter							

Amps and volts, or power or energy range, should be recorded for each electrode size, position, and thickness, etc.

Pulsing Current \_\_\_\_\_ Heat Input (max.) \_\_\_\_\_

Tungsten Electrode Size and Type \_\_\_\_\_  
(Pure Tungsten, 2% Thoriated, etc.)

Mode of Metal Transfer for GMAW (FCAW) \_\_\_\_\_  
(Spray Arc, Short Circuiting Arc, etc.)

Other \_\_\_\_\_

**TECHNIQUE (QW-410)**

String or Weave Bead \_\_\_\_\_

Orifice, Nozzle, or Gas Cup Size \_\_\_\_\_

Initial and Interpass Cleaning (Brushing, Grinding, etc.) \_\_\_\_\_

Method of Back Gouging \_\_\_\_\_

Oscillation \_\_\_\_\_

Contact Tube to Work Distance \_\_\_\_\_

Multiple or Single Pass (Per Side) \_\_\_\_\_

Multiple or Single Electrodes \_\_\_\_\_

Electrode Spacing \_\_\_\_\_

Peening \_\_\_\_\_

Other \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_