

**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) _____ <small>(Refer to both backing and retainers)</small>	
<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 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 specified 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 _____
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<b>PREHEAT (QW-406)</b> Preheat Temperature, Minimum _____ Interpass Temperature, Maximim _____ Preheat Maintenance _____ Other _____ (Continuous or special heating, where applicable, should be specified)	<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																							
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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 specified 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 \_\_\_\_\_