

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 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. _____

POSITIONS (QW-405) Position(s) of Groove _____ Welding Progression: Up _____ Down _____ Position(s) of Fillet _____ Other _____	POSTWELD HEAT TREATMENT (QW-407) Temperature Range _____ Time Range _____ Other _____
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PREHEAT (QW-406) Preheat Temperature, Minimum _____ Interpass Temperature, Maximim _____ Preheat Maintenance _____ Other _____ (Continuous or special heating, where applicable, should be recorded)	GAS (QW-408) <table style="width:100%; border-collapse: collapse;"> <tr> <td></td> <td align="center" colspan="3">Percent Composition</td> </tr> <tr> <td></td> <td align="center">Gas(es)</td> <td align="center">(Mixture)</td> <td align="center">Flow Rate</td> </tr> <tr> <td style="border: none;">Shielding</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td style="border: none;">Trailing</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td style="border: none;">Backing</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td style="border: none;">Other</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </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.)
		Classification	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 _____
