

# Welding Procedure Specification (WPS)

Sheet 1 of 3

ASME Boiler and Pressure Vessel Code , Section IX

Company Name: [www.WPSAmerica.com](http://www.WPSAmerica.com)

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Welding Procedure Specification WPS No.: DEMO-WPS	Revision No.: (0)	Date: 12,12, 2005
Supporting PQR No. (s): DEMO-PQR		Date: 11,12, 2005

### BASE METALS (QW-403)

P-No.: 4	Group No.: 1	Material Specification: SA-335	Type or Grade: P11
Welded to			
P-No.: 4	Group No.: 1	Material Specification: SA-234	Type or Grade: WP11, Class 1
OR			
Chem. Analysis and Mech. Prop.		N/A	
Welded to Chem. Analysis and Mech. Prop.		N/A	
Qualified Thickness Range mm (in)		Groove: 5 mm (3/16 in.) to 60 mm (2.36 in.)	
Qualified Diameter Range mm (in)		Groove: All Sizes	
		Fillet: Unlimited	
Other information: This is a DEMO WPS from <a href="http://www.WPSAmerica.com">www.WPSAmerica.com</a>			

### FIRST PROCESS

### SECOND PROCESS

Welding Process (es):	Gas Tungsten Arc Welding (GTAW)	Shielded Metal Arc Welding (SMAW)
Type (s):	Manual	Manual

### FILLER METALS (QW-404)

AWS Classification	ER80S-G (see sheet 3)	E8016-B2 (see sheet 3)
Electrode-Flux Class (SAW)	SFA 5.28	SFA 5.5
SFA Specification	6	4
Filler Metal F-No.	-	3
Weld Metal Analysis A-No.	2.0 mm (see sheet 3)	3.25 mm (see sheet 3)
Size of Filler Metals mm (in)	Solid copper coated wire	Iron powder low hydrogen
Filler Metal Product Form	1/8 in.	3/16 in.
Max. Weld Pass Thickness mm (in)	10 mm (3/8 in.)	60 mm (2.36 in.)
Qualified Weld Metal Range: Groove mm (in)	Unlimited	Unlimited
Qualified Weld Metal Range: Fillet mm (in)	-	-
Weld Deposit Chemistry	N/A	N/A
Flux Trade Name and Flux Type (SAW)	-	-
Consumable Insert, Class and Size	-	-
Other information: This is a DEMO WPS from <a href="http://www.WPSAmerica.com">www.WPSAmerica.com</a>		

### POSITIONS (QW-405)

Position (s) of Groove	ALL Position	ALL Position
Welding Progression	Up	Up
Position (s) of Fillet	ALL Position	ALL Position

### PREHEAT (QW-406)

Preheat Temp. °C (°F)	150 °C	150 °C
Interpass Temp. Max. °C (°F)	280 °C	280 °C
Preheat Maintenance °C (°F)	New Joint	New Joint

### GAS (QW-408)

Shielding Gas Type (Mixture)	100% Ar	N/A
Flow Rate l/min. (CFH)	7 to 9 l/min.	-
Trailing Gas Type (Mixture)	N/A	N/A
Flow Rate l/min. (CFH)	-	-
Gas Backing (Mixture)	N/A	N/A
Flow Rate l/min. (CFH)	-	-

### POSTWELD HEAT TREATMENT (QW-407)

Holding Temperature Range °C (°F): 680 °C + or - 10 °C	Holding Time Range: 1 hr/in. (15 minutes Min.)
Heating Rate °C/hr (°F/hr): 120 °C/hr	Method: Furnace
Cooling Rate °C/hr (°F/hr): 120 °C/hr	Method: Open Air