

# 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)

Company Address: [info@WPSAmerica.com](mailto:info@WPSAmerica.com), 1 (877) WPS-WELD

Welding Procedure Specification WPS No.: DEMO-WPS  
Supporting PQR No. (s): DEMO-PQR

Revision No.: (0)

Date: 12,12, 2005

Date: 11,12, 2005

### BASE METALS (QW-403)

P-No.: 4	Group No.: 1	Material Specification: SA-335	Type or Grade: P11
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Welded to			
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P-No.: 4	Group No.: 1	Material Specification: SA-234	Type or Grade: WP11, Class 1
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OR

Chem. Analysis and Mech. Prop.	N/A
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Welded to Chem. Analysis and Mech. Prop.	N/A
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Qualified Thickness Range mm (in)	Groove: 5 mm (3/16 in.) to 60 mm (2.36 in.)	Fillet: Unlimited
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Qualified Diameter Range mm (in)	Groove: All Sizes	Fillet: Unlimited
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Other information: This is a DEMO WPS from [www.WPSAmerica.com](http://www.WPSAmerica.com)

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

### POSITIONS (QW-405)

Position (s) of Groove	ALL Position	ALL Position
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Welding Progression	Up	Up
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Position (s) of Fillet	ALL Position	ALL Position
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### PREHEAT (QW-406)

Preheat Temp. °C (°F)	150 °C	150 °C
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Interpass Temp. Max. °C (°F)	280 °C	280 °C
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Preheat Maintenance °C (°F)	New Joint	New Joint
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### GAS (QW-408)

Shielding Gas Type (Mixture)	100% Ar	N/A
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Flow Rate l/min. (CFH)	7 to 9 l/min.	-
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Trailing Gas Type (Mixture)	N/A	N/A
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Flow Rate l/min. (CFH)	-	-
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Gas Backing (Mixture)	N/A	N/A
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Flow Rate l/min. (CFH)	-	-
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### POSTWELD HEAT TREATMENT (QW-407)

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