## WELDING PROCEDURE SPECIFICATION (WPS) for SAW, SMAW, GMAW, GTAW, FCAW

WPS No.    Date      WPS Revision No.    Rev. Date      Supporting PQR Nos.	Company						
WPS Revision No.    Rev. Date      Welding Process(es)    Type(s)      (Manual, Semiautomatic, Automatic, Robotic, Mechanized      Joint Type			(Signature Required)				
Supporting POR Nos.    Type(s)      (Manual, Semiautomatic, Automatic, Robotic, Mechanized      Joint Type							
Welding Process(es)    Type(s)      (Manual, Semiautomatic, Automatic, Robotic, Mechanized      Joint Type      Backing      Backing Material (Type)      Groove Angle      Nool Face      Backgouging: Yes   No        Backgouging Method      Sketches, production drawings, welding symbols, or written description should show the general arrangement of the parts to be welded. Where applicable, the root details of the weld groove may be specified.      Base Metals      M-No.    Group No.      or to M-No.    Group No.      Specification Type and Grade    to Specification Type and Grade      Pipe Diameter Range of Base Metal:    Groove      Groove    Fillet      Deposited Metal:    Groove      Yeild Metal F-No.    Other      AWS Classification    AWS Specification.      Weld Metal Analysis A-No.    Other      Filler Metals Size    Electrode Flux (Class)      Weld Metal Inckness    Flux Trade Name      Consumable Insert    Other      Metal Analysis A-No.    Other      Position(s) of Groove    Preheat Temperature (Min.)      Preheat Temperature (Max).    Continuous of Special Heating or Main							
(Manual, Semiautomatic, Automatic, Robotic, Mechanized      Joint Type      Backing      Backing Material (Type)      Groove Angle      Backgouging Method      Backgouging Method      Backgouging Method      Backgouging Method      Sketches, production drawings, welding symbols, or written description should show the general arrangement of the parts to be welded. Where applicable, the root details of the weld groove may be specified.      Base Metals      M-No.    Group No.      groove    Fillet      Deposited Metal:    Groove      Filler Metals    Fillet      Pipe Diameter Range:    Groove      Filler Metal F-No.    Other      AVS Classification    AVS Specification      Weld Metal Analysis A-No.    Other      Weld Metal Thickness    Filler Metals      Filler Metal Size    Fluc Tade Name      Other    Other      AVS Classification    Preheat Temperature (Min.)      Preheat Temperature (Max.)    Continuous of Special Heating or Maintenance:      Filler Metal Thickness    Preheat Temperature (Max.)	Supporting PQR Nos.		<b>T</b> ()				
Joint Type	Welding Process(es)						
Backing Material (Type) Backing Material (Type) Grove Angle Root Opening Radius: U J J Root Face Backgouging: Yes No B Backgouging Method Backgouging Method The Weld Show He general arrangement of the weld groove may be specified. Backgouging Method Thickness Range of Base Metal: Groove Fillet Pillet Metals Filler Metals Filler Metals Filler Metal F-No. Chter Filler Metal Sze Filler M							
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Backing Material (Type)							
Groove Angle	-						
Root Opening Radius:    U    J      Root Face							
Root Face							
Backgouging: Yes No Backgouging Method							
Backgouging Method							
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Specification Type and Grade    to Specification Type and Grade      Thickness Range of Base Metal:    Groove      Deposited Metal:    Groove      Pipe Diameter Range:    Groove      Other    Fillet      Other    Fillet      AWS Classification    Other      AWS Classification    Other      Filler Metal Size    Electrode Flux (Class)      Filler Metal Size    Flux Trade Name      Consumable Insert    Other      Position(s) of Groove    Preheat      Position(s) of Fillet    Preheat Temperature (Max.)      Metal Progression    Interpass Temperature (Max.)      Continuous of Special Heating or Maintenance:    Continuous of Special Heating or Maintenance:			Base Metals				
Thickness Range of Base Metal:    Groove    Fillet      Deposited Metal:    Groove    Fillet      Pipe Diameter Range:    Groove    Fillet      Other    Filler Metals      Filler Metal F-No.    Other      AWS Classification    AWS Specification      Weld Metal Analysis A-No.    Other      Filler Metal Size    Electrode Flux (Class)      Weld Metal Thickness    Flux Trade Name      Consumable Insert    Other      Position(s) of Groove    Preheat      Position(s) of Fillet    Preheat Maintenance      Weld Progression    Interpass Temperature (Max.)      Continuous of Special Heating or Maintenance:    Continuous of Special Heating or Maintenance:      Fumperature	M-No Gro	up No	or to M-No Group No				
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Pipe Diameter Range:    Groove	Deposited Metal:	Groove	to Specification Type and Grade Fillet Fillet Fillet				
Other	Pipe Diameter Range:						
Filler Metal F-No.    Other      AWS Classification    AWS Specification      Weld Metal Analysis A-No.    Other      Filler Metal Size    Other      Filler Metal Size    Electrode Flux (Class)      Weld Metal Thickness    Flux Trade Name      Consumable Insert    Other      Positions    Preheat      Position(s) of Groove    Preheat Temperature (Min.)      Position(s) of Fillet    Preheat Maintenance      Weld Progression    Interpass Temperature (Max.)      Continuous of Special Heating or Maintenance:	Other						
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Filler Metal Size							
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Positions  Preheat    Position(s) of Groove  Preheat Temperature (Min.)    Position(s) of Fillet  Preheat Maintenance    Weld Progression  Interpass Temperature (Max.)    PWHT  Continuous of Special Heating or Maintenance:    Temperature							
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Weld Progression    Interpass Temperature (Max.)      PWHT    Continuous of Special Heating or Maintenance:      Temperature							
PWHT    Continuous of Special Heating or Maintenance:      Temperature							
PWHT	Weld Progression		• • • • •				
Temperature	DW//		Continuous of Special Heating or Maintenance:				
Time							
	Time						

Shielding

	Torch Shielding	Root Shielding	Trailing	Environmental Shielding
Gas(es)				
Composition				
Flow Rate				

## **Electrical Characteristics**

Current Type/Polarity
Pulsing: Yes No
Current (Range)
Voltage (Range)
Wire Feed Speed (Range)
Tungsten Electrode Size/Type
Pulsing Parameters
Transfer Mode
Other

## Other Variables

Cup or Nozzle Size				
Collet Body or Glass Lens				
Cleaning Method				
Technique: Stringer 🗌 or Weave Bead 🗌				
Cleaning Method				
Number of Electrodes				
Single or Multipass				
Contact Tip to Work Distance				
Other				

## Welding Parameters

		Filler Metal		Electrical				Travel
Layers	Process	Class	Diameter	Type and Polarity	Current Range	Wire Feed Speed	Voltage Range	Speed Range

We, the undersigned, certify that the statements in this record are correct and the test welds were prepared, welded, and tested in accordance with the requirements of AWS B2.1/B2.1M, (\_\_\_\_\_\_), Specification for Welding Procedure and Performance Qualification. (year)

Manufacturer or Contractor\_\_\_

Date \_\_\_\_\_ By\_\_\_\_

(Please Print)

(Signature Required)

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