

G&G Fabrication & Machining
2605 S. Highway 66
Claremore, OK 74019

AWS D1.1 Welding Procedure Specification (WPS)

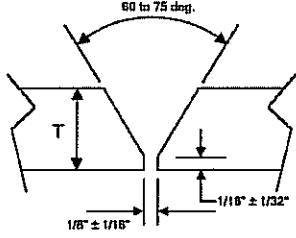
WPS No. GG-FCAW-1 Date 3/6/2020 Rev. No. 0

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Supporting PQR(s) GG-FCAW-1a

Approved By: [Signature] Date 3-11-2020

Welding Process(es)/Type(s): FCAW / Semiautomatic

<p>Joint Design Used Weld Type: <u>CJP Groove, fillet, and plug welds</u> Joint Type: <u>Butt joint</u> Double Welded: <u>No</u> Backing: <u>Yes</u> Material: <u>Back welded.</u> Root Opening: <u>1/16 in.</u> Root Face: <u>0 in.</u> Groove Angle: <u>70°</u> Radius: <u>N/A</u> Back Gouging: <u>Yes</u> Method: <u>Grind to sound weld metal.</u></p> <p>Base Metals Base Metal: <u>ASTM A 36</u> Thickness: Groove <u>1/8 - 1.500 in.</u> Thickness: Fillet <u>1/8 in. min.</u> Pipe Diameter: <u>24 in. min.</u> Thickness: Plug/Slot <u>1/8 in. min.</u></p> <p>Filler Metals AWS Specification: <u>5.20</u> AWS Classification: <u>E71T-1M</u> Trade Name: <u>Frontiarc-711</u></p> <p>Shielding Gas: <u>75% Argon, 25% CO2</u> Flow Rate: <u>36 - 48 CFH</u> Gas Cup Size: <u>5/8"</u> Electrode-Flux (Class): <u>N/A</u> Flux Trade Name: <u>N/A</u></p> <p>Preheat Preheat Temperature, Min.: <u>69°F</u> Interpass Temperature, Min.: <u>69°F</u> Max.: <u>500°F</u></p>	<p>Joint Detail</p>  <p style="text-align: center;">SINGLE VEE GROOVE</p> <p>Position Weld Position: Fillet <u>Flat & Horizontal (2G)</u> Weld Position: Groove <u>Flat & Horizontal (2G)</u> Vertical Progression: <u>N/A</u></p> <p>Electrical Characteristics Power Source: _____ Output: <u>Constant Voltage</u> Current / Polarity: <u>DCEP (reverse)</u> Transfer Mode: <u>Globular arc</u> Tungsten Electrode: Type <u>N/A</u> Tungsten Electrode: Size <u>N/A</u></p> <p>Technique Stringer or Weave Bead: <u>Stringer bead</u> Multi/Single Pass: <u>Single and multipass</u> Number of Electrodes: <u>1</u> Electrode Spacing: Longitudinal: <u>N/A</u> Lateral: <u>N/A</u> Angle: <u>N/A</u> Contact Tube to Work Distance: <u>3/8"-1"</u> Peening: <u>N/A</u> Interpass Cleaning: <u>Power wire wheel or brush</u></p> <p>Postweld Heat Treatment Temperature: <u>None</u> Time (hr.): <u>None</u></p>
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Welding Procedure

Pass or Weld Layer(s)	Process	Filler Metal		Current		Volts	Travel Speed (in/min)
		AWS Classification	Size (in.)	Type & Polarity	Amps		
Root	FCAW	E71T-1M	0.045	DCEP (reverse)	180-240	22-26	9 - 15
Fill	FCAW	E71T-1M	0.045	DCEP (reverse)	189-231	22-26	9 - 15
Cap	FCAW	E71T-1M	0.045	DCEP (reverse)	189-231	22-26	9 - 15