



# CERTIFICATE of Compliance



Quality Management System  
in accordance with  
**ISO 9001:2000**  
Cert # 05-R0925

**TRADE NAME: USA 120S-1**  
Specification: AWS A 5.28 : ASME SFA 5.28  
Classification: ER120S-1

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## Chemical Composition % for Weld Wire

	AWS Requirements	Typical <sup>1</sup>
<b>Carbon (C)</b>	<b>0.10 max.</b>	<b>0.07</b>
<b>Manganese (Mn)</b>	<b>1.40-1.80</b>	<b>1.55</b>
<b>Silicon (Si)</b>	<b>0.25-0.60</b>	<b>0.35</b>
<b>Phosphorus (P)</b>	<b>0.010 max.</b>	<b>0.006</b>
<b>Sulfur (S)</b>	<b>0.010 max.</b>	<b>0.008</b>
<b>Aluminum (Al)</b>	<b>0.10 max.</b>	
<b>Zirconium (Zr)</b>	<b>0.10 max.</b>	
<b>Titanium (Ti)</b>	<b>0.10 max.</b>	
<b>Nickel (Ni)</b>	<b>2.00-2.80</b>	<b>2.40</b>
<b>Molybdenum (Mo)</b>	<b>0.30-0.65</b>	<b>0.55</b>
<b>Copper (Cu)</b>	<b>0.25 max.</b>	
<b>Chromium (Cr)</b>	<b>0.60 max.</b>	<b>0.45</b>
<b>Vanadium (V)</b>	<b>0.03 max.</b>	

## Mechanical Properties

	Minimum AWS Requirements	Typical <sup>1</sup>
<b>Tensile Strength</b>	<b>120,000 psi</b>	<b>125,000 psi</b>
<b>Yield Strength</b>	<b>105,000 psi</b>	<b>110,000 psi</b>
<b>Elongation in 2"</b>	<b>14 %</b>	<b>15%</b>
<b>Charpy V-notch Impact Average</b>	<b>50 ft · lbs at -60°F</b>	<b>70 ft · lbs at -60°F</b>

*This certification is provided by Washington Alloy Co. with the expressed understanding that if the product supplied fails to conform the stated specifications, there shall be no personal liability of any kind on the undersigned and the obligation and liability of Washington Alloy Co., with respect to such non-conformance or specification failure, shall be limited to a) an obligation to furnish the purchaser, at no additional charge, material that meets the specifications and conformances or b) to refund to the purchaser the full amount of money paid to Washington Alloy Co. for the return of the product in full. In no event shall Washington Alloy Co. be liable for consequential damage.*

**This certifies that the product supplied will meet the requirements of the noted classification and data above. Products supplied in accordance to the Quality Management System of Washington Alloy Company.**

Certification Administrator

<sup>1</sup>Typical Results based on 98% Ar & 2% CO<sub>2</sub>

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