WELDWIRE COMPANY, INC.  Technical Information

Nickel Alloy Wire

Alloy: WWG-2  Conforms to Certification: AWS A5.14
Class: ERNiCrMo-8  ASME SFA A5.14

Alloy: ERNiCrMo-8  (Alloy G-2)
Weld Process: GMAW, GTAW Welding Processes

AWS Chemical Composition Requirements

C = 0.03 max  Cu = 0.7 – 1.2
Mn = 1.0 max  Ni = 47.0 – 52.0
Fe = Remainder  Ti = 0.7 – 1.5
P = 0.03 max  Cr = 23.0 – 26.0
S = 0.03 max  Mo = 5.0 – 7.0
Si = 1.0 max  Other = 0.50 max

Deposited All Weld Metal Properties % (AW)

Tensile Strength  91,000psi
Elongation  27%

Deposited Chemical Composition % (Typical)

C = 0.01  Cr = 24.75  Ni = 50.5
Cu = 0.90  Mo = 6.1  Fe = Balance
Si = 0.70

Deposited Charpy-V-Notch Impact Properties %

Not applicable

Application

ERNiCrMo-8 is used for welding nickel-chromium-molybdenum base materials to itself, steel and other nickel base alloys, and for cladding steel with NI-CR-MO weld materials.

Recommended Welding Parameters for TIG and MIG Welding of Nickel Alloys

<table>
<thead>
<tr>
<th>Process</th>
<th>Diameter of Wire</th>
<th>Voltage (V)</th>
<th>Amperage (A)</th>
<th>Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIG</td>
<td>.035 inches x 36</td>
<td>12 - 15</td>
<td>60 - 90</td>
<td>100% Argon</td>
</tr>
<tr>
<td></td>
<td>.045 inches x 36</td>
<td>13 - 16</td>
<td>80 - 110</td>
<td>100% Argon</td>
</tr>
<tr>
<td></td>
<td>1/16 inches x 36</td>
<td>14 - 18</td>
<td>90 - 130</td>
<td>100% Argon</td>
</tr>
<tr>
<td></td>
<td>3/32 inches x 36</td>
<td>15 - 20</td>
<td>120 - 175</td>
<td>100% Argon</td>
</tr>
<tr>
<td></td>
<td>1/8 inches x 36</td>
<td>15 – 20</td>
<td>150 - 220</td>
<td>100% Argon</td>
</tr>
<tr>
<td>MIG</td>
<td>.035 inches</td>
<td>26 – 29</td>
<td>150 – 190</td>
<td>75% Argon + 25% Helium</td>
</tr>
<tr>
<td></td>
<td>.045 inches</td>
<td>28 – 32</td>
<td>180 – 220</td>
<td>75% Argon + 25% Helium</td>
</tr>
<tr>
<td></td>
<td>1/16 inches</td>
<td>29 – 33</td>
<td>200 - 250</td>
<td>75% Argon + 25% Helium</td>
</tr>
</tbody>
</table>

Note: Other shielding Gases may be used for Mig and Tig welding. Shielding gases are chosen taking Quality, cost, and Operability into consideration.