Midalloy Ni-MAX A Coated Electrode

Classification
• AWS/SFA 5.11 Class ENiCrFe-2/ASME SFA 5.11 Class ENiCrFe-2  ASME SEC IX, F43

Description
• Midalloy Ni-MAX A coated electrode is an all-position, coated electrode used for joining alloys listed under the UNS numbers N06600 and N08800 to themselves.
• UNS# W86133
• ISO 14172 comparison ENi6133
• Ni-MAX A can also be used to weld these same alloys to mild, low alloy, and stainless steels.
• Used for cryogenic applications involving 3%-9% nickel.

Application
• Ni-MAX A is widely used for general maintenance welding of high nickel alloys to themselves for equipment exposed to difficult service conditions. These applications include furnace equipment and petrochemical plants up to approximately 1,000°C.
• Ni-MAX A can also be used for dissimilar welds of nickel alloys to mild steel or stainless steel up to approximately 600°C. These welds can generally be done without preheat (avoid free machining grades). Stress relief is acceptable if necessary, and the transition welds for high temperature service have good structural stability.

Typical Chemistry

<table>
<thead>
<tr>
<th>C</th>
<th>Mn</th>
<th>Fe</th>
<th>P</th>
<th>S</th>
<th>Si</th>
<th>Cu</th>
<th>Ni</th>
<th>Cr</th>
<th>Cb+Ta</th>
<th>Mo</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>.04</td>
<td>1.75</td>
<td>9.0</td>
<td>.012</td>
<td>.013</td>
<td>.32</td>
<td>.02</td>
<td>7.0</td>
<td>15.5</td>
<td>1.25</td>
<td>1.5</td>
<td>&lt;0.05</td>
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</tbody>
</table>

Typical Mechanical Properties

<table>
<thead>
<tr>
<th>Tensile Strength</th>
<th>89,000 PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield Strength</td>
<td>72,000 PSI</td>
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<tr>
<td>Elongation</td>
<td>36%</td>
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</tbody>
</table>

Recommended Welding Parameters

<table>
<thead>
<tr>
<th>Diameter</th>
<th>3/32”</th>
<th>1/8”</th>
<th>5/32”</th>
<th>3/16”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>SMAW</td>
<td>SMAW</td>
<td>SMAW</td>
<td>SMAW</td>
</tr>
<tr>
<td>Voltage</td>
<td>24-28</td>
<td>26-30</td>
<td>28-32</td>
<td>28-32</td>
</tr>
<tr>
<td>Amperage Flat</td>
<td>70-85</td>
<td>65-100</td>
<td>110-140</td>
<td>120-160</td>
</tr>
<tr>
<td>Amperage Vertical/Overhead</td>
<td>65-75</td>
<td>65-90</td>
<td>100-120</td>
<td>110-130</td>
</tr>
</tbody>
</table>

Standard Packaging
• 3/32” – 8 lb. Can, 48 lb. Carton
• 1/8”, 5/32”, 3/16” – 10 lb. Can, 60 lb. Carton

12-1-08

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