Midalloy NI-Max 182 Coated Electrode

Classification
- AWS/SFA 5.11 Class ENiCrFe-3/ASME SFA 5.11 Class ENiCrFe-3
- ASME SEC IX, F43

Description
- Midalloy NI-MAX182 coated electrode is an all-position, coated electrode used for joining alloys listed under the UNS number N06600 to themselves.
- UNS# W86182
- NI-MAX 182 can also be used for dissimilar welds between most nickel-based alloys such as UNS number N04400, stainless steel, and low alloy or carbon steels, without need to preheat. (Stress-relief may follow if called for.)
- ISO 14172 comparison classification ENi6182

Application
- Because of the excellent high-temperature strength, NI-MAX 182 coated electrodes are used in petrochemical and power generation plants for long-term service at elevated temperatures.
- Other high temperature applications are in furnace equipment up to 1800°F under most conditions.
- Low temperature applications are in 3% to 5% nickel steels used for cryogenic vessels and pipe work in service down to −150°F.

Typical Chemistry

<table>
<thead>
<tr>
<th></th>
<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>Ti</th>
<th>Cr</th>
<th>Cb+Ta</th>
<th>Others</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>.045</td>
<td>6.43</td>
<td>7.52</td>
<td>.006</td>
<td>.004</td>
<td>.38</td>
<td>.06</td>
<td>68.5</td>
<td>.30</td>
<td>14.75</td>
<td>1.56</td>
<td>&lt;0.5</td>
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</tbody>
</table>

Typical Mechanical Properties
- Tensile Strength: 84,500 PSI
- Yield Strength: 53,000 PSI
- Elongation: 35%

Recommended Welding Parameters

<table>
<thead>
<tr>
<th>Diameter</th>
<th>3/32&quot;</th>
<th>1/8&quot;</th>
<th>5/32&quot;</th>
<th>3/16&quot;</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>
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</tbody>
</table>

Standard Packaging

12-1-08

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