AI-0376T

Specifications
AS/NZS 1167.2 : ERNiCrMo-4
AWS/ASME A5.14-89 : ERNiCrMo-4

Description and Applications
AI-0376T is a TIG consumable for the welding of Hastalloy® C and Hastalloy® C C 276 to themselves to Stainless Steel or to other Nickel-based alloys.
The as welded deposit exhibits outstanding resistance to deformation from cycling or static loads at elevated temperatures.
AI-0376T is an excellent choice as an overlay on the nickel-based alloys such as Hastelloys and Inconels.

Applications
AI-0376T is an alloy used for applications where the combined effects of impact, heat, and corrosion resistance are required. It has been successfully used for the refurbishment of hot extrusion dies and moulds, die-stamping tools, hot forging moulds and cutting tools. The welded overlay will withstand oxidising atmospheres up to 1100°C.

Typical Weldmetal Analysis

<table>
<thead>
<tr>
<th>C</th>
<th>Mn</th>
<th>Si</th>
<th>Cr</th>
<th>Ni</th>
<th>Fe</th>
<th>W</th>
<th>Co</th>
<th>Mo</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.01</td>
<td>0.8</td>
<td>0.06</td>
<td>15.5</td>
<td>Bal</td>
<td>6.0</td>
<td>3.9</td>
<td>0.2</td>
<td>16.0</td>
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Mechanical Properties of Weldmetal

<table>
<thead>
<tr>
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<th>As Welded</th>
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<tbody>
<tr>
<td>Tensile Strength</td>
<td>740MPa</td>
</tr>
<tr>
<td>Yield Strength (0.2%)</td>
<td>600MPa</td>
</tr>
<tr>
<td>Elongation (A5)</td>
<td>32%</td>
</tr>
<tr>
<td>Hardness</td>
<td>HRc 32-36 (Full Hardness)</td>
</tr>
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Welding Instructions

Shielding Gas: Argon 100% or Oxy-Acetylene
Gas Rate 15-18 l/min

Procedure for Gas Tungsten Arc (TIG) Welding
1. Thoroughly clean all areas to be joined.
2. For the butt welding of thick plates, bevel edges to 60° - 70° included angle.
3. Use a Thoriated or Ceriated tungsten electrode, ground to a sharp needle point making sure the grinding lines run with length (longitudinally) of the electrode's axis. The length of the needle point should be about 2 - 3 times the diameter of the tungsten electrode.
4. Use Direct Current Electrode Negative (DC-) and Welding Grade Argon.
5. Preheat thick sections
6. It is recommended that a pickling paste be applied after welding for cleaning and finishing.
Available Sizes
2.5, 3.25 and 4.0mm Diameter

Disclaimer
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