SS - 309 Mo
STAINLESS STEEL ELECTRODE

CLASSIFICATION:
IS : 5206-83 : E 23.12.2.R26
AWS/A 5.4 : E 309 Mo - 16

APPROVALS:
NPC, KAVERNER POWERGAS

CHARACTERISTICS:
A rutile type stainless steel electrode which yields a nominal composition of 25 Cr-12 Ni-2.5 Mo. Operates equally well on DC(+) and AC. Low spatter smooth bead and stable arc. Suitable for all conventional welding positions.

APPLICATIONS:
* Joining of similar composition stainless steels.
* Joining of dissimilar steels such as stainless steel to mild steel.
* Welding of clad side of AISI 309 - Mo grade stainless steels.

RECOMMENDATIONS:
Re-dry the electrodes at 200°C for 1 hour. Keep short arc length to ensure proper alloy transfer. Use minimum possible current to reduce dilution effect. Maintain interpass temperature 150°C max.

CHEMICAL ANALYSIS OF WELD-METAL(%) :
<table>
<thead>
<tr>
<th>Element</th>
<th>C</th>
<th>Mn</th>
<th>Si</th>
<th>Cr</th>
<th>Ni</th>
<th>Mo</th>
<th>S</th>
<th>P</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>max</td>
<td>0.12</td>
<td>0.5-2.5</td>
<td>1.0</td>
<td>22-25</td>
<td>12-14</td>
<td>2-3</td>
<td>0.03</td>
<td>0.04</td>
<td>0.75</td>
</tr>
<tr>
<td>max</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MECHANICAL PROPERTIES OF ALL WELD-METAL (AS PER AWS/A 5.4) :
<table>
<thead>
<tr>
<th>Property</th>
<th>Ultimate Tensile Strength (N/mm²)</th>
<th>Elongation (GL=4d) (%)</th>
<th>CVN Impact Value at 27°C Joules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value at 550 min</td>
<td>550</td>
<td>30 min</td>
<td>70 min</td>
</tr>
</tbody>
</table>

CURRENT CONDITIONS:
USE AC (70V) OR DC (+)

Size (mm) | 2.5x350 | 3.15x350 | 4.0x350 | 5.0x350
Amps     | 70-90   | 90-110   | 120-140 | 150-170

SPECIAL CHARACTERISTICS:

DELTA FERRITE: 5 FN min
STAINLESS STEEL ELECTRODE

MODI-309 Mo-15
STAINLESS STEEL ELECTRODE

CLASSIFICATION:
IS : 5206-83 : E 23.12.2 B20
AWS/A 5.4 : E 309 Mo-15

CHARACTERISTICS:
A basic coated electrode for joining stainless steels to mild steels. High strength and corrosion resistance at elevated temperature are special feature. Can be used in all conventional positions.

APPLICATIONS:
- AISI 309 Grade steel
- Dissimilar steels
- Cold steels (specially root run)
- Austenitic-martensitic steels etc.

RECOMMENDATIONS:
Use electrode at lower currents of the range. Maintain proper interpass temperature. Clean the weld beads properly. If necessary grind off the top surface. Redry the electrodes at 250°C for one hour before use.

CHEMICAL ANALYSIS OF WELD-METAL(%):

<table>
<thead>
<tr>
<th>Element</th>
<th>C max</th>
<th>Mn max</th>
<th>Si</th>
<th>Cr</th>
<th>Ni</th>
<th>Mo</th>
<th>S max</th>
<th>P max</th>
<th>Cu max</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.10</td>
<td>0.5-2.5</td>
<td>1.0</td>
<td>22-25</td>
<td>12-14</td>
<td>2-3</td>
<td>0.03</td>
<td>0.04</td>
<td>0.75</td>
</tr>
</tbody>
</table>

MECHANICAL PROPERTIES OF ALL WELD-METAL (AS PER AWS/A 5.4):

<table>
<thead>
<tr>
<th>Property</th>
<th>Ultimate Tensile Strength N/mm²</th>
<th>Elongation (GL=4d) (%)</th>
<th>CVN Impact Values at 27°C Joules</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>550 min</td>
<td>30 min</td>
<td>70 min</td>
</tr>
</tbody>
</table>

CURRENT CONDITIONS: USE DC (+) ONLY

<table>
<thead>
<tr>
<th>Size (mm)</th>
<th>2.5x350</th>
<th>3.15x350</th>
<th>4.0x350</th>
<th>5.0x350</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amps</td>
<td>60-80</td>
<td>80-110</td>
<td>110-140</td>
<td>150-180</td>
</tr>
</tbody>
</table>

SPECIAL CHARACTERISTICS:
DELTA FERRITE: 5 FN min

MODI ARC ELECTRODES CO.
Modinagar - 201 204 (U.P.)
Fax : 01232 - 242147
Phone : (01232) 325700, 325925, 243912
E-mail : modiarc@ndb.vsnl.net.in
Web Site : www.modielectrodes.com