**CLASSIFICATION:** IS : 5206-83 : E 23.12 R26  
AWS/A 5.4 : E 309 - 16

**APPROVALS:** PDIL EIL TCE  
TOYO NPC DESEIN

**CHARACTERISTICS:** A rutile type stainless steel electrode suitable for welding of AISI 309 grade in cast or wrought form. The weld-metal has excellent resistance to corrosion and temperatures upto 1100°C. Operates equally well on AC and DC (+) in all conventional positions. Performance and properties are excellent and consistent.

**APPLICATIONS:**
- Welding of similar and dissimilar steels, eg. stainless steels to mild steels  
- Clad side of stainless clad steels etc.

**RECOMMENDATIONS:** To obtain best results redry the electrodes at 200°C. Use short arc, lower currents and stringer bead technique. Maintain proper interpass temperature in case of dissimilar welding.

**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></td>
<td>0.10 max</td>
<td>0.5-2.5</td>
<td>1.0 max</td>
<td>22-25</td>
<td>12-14</td>
<td>0.75 max</td>
<td>0.03 max</td>
<td>0.04 max</td>
<td>0.75 max</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></td>
<td>550 min</td>
<td>30 min</td>
<td>70 min</td>
</tr>
</tbody>
</table>

**CURRENT CONDITIONS: USE AC OR DC (+):**

- Size (mm)  
  - 2.5x350  
  - 3.15x350  
  - 4.0x350  
  - 5.0x350  
- Amps  
  - 60-80  
  - 80-110  
  - 110-140  
  - 150-180

**SPECIAL CHARACTERISTICS:**

- DELTA FERRITE : 5 FN min

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

IS : 5206-83 : E 23.12L R26
AWS/A 5.4 : E 309L - 16

APPROVALS:

NPC, DNV, PDIL

CHARACTERISTICS:

A rutile type stainless steel electrode suitable for welding of AISI 309 grade in cast or wrought form. The weld-metal has excellent resistance to corrosion and temperatures up to 1100°C. Operates equally well on AC and DC (+) in all conventional positions. Performance and properties are excellent and consistent.

APPLICATIONS:

- Welding of similar and dissimilar steels, e.g., Stainless Steel to mild steel.
- Clad side of stainless clad steels etc.

RECOMMENDATIONS:

To obtain best results redry the electrodes at 200°C for one hour. Use short arc, lower currents and stringer bead technique. Maintain proper interpass temperature in case of dissimilar welding.

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></td>
<td>0.04 max</td>
<td>0.5-2.5</td>
<td>0.90 max</td>
<td>22-25</td>
<td>12-14</td>
<td>0.75 max</td>
<td>0.03 max</td>
<td>0.04 max</td>
<td>0.75 max</td>
</tr>
</tbody>
</table>

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

- Ultimate Tensile Strength N/mm²:
  - 520 min
- Elongation (GL=4d) (%):
  - 30 min
- CVN Impact Value at 27°C Joules:
  - 70 min

CURRENT CONDITIONS: USE AC OR DC (+)

- Size (mm):
  - 2.5x350
  - 3.15x350
  - 4.0x350
  - 5.0x350
- Amps:
  - 60-80
  - 80-110
  - 110-140
  - 150-180

SPECIAL CHARACTERISTICS:

DELTA FERRITE:

5 FN min
CLASSIFICATION:

<table>
<thead>
<tr>
<th>Standard</th>
<th>Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS : 5206-83</td>
<td>E 23.12 B-20</td>
</tr>
<tr>
<td>AWS/A 5.4</td>
<td>E 309-15</td>
</tr>
</tbody>
</table>

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

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

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

CHEMICAL ANALYSIS OF WELD-METAL (%):

<table>
<thead>
<tr>
<th>Element</th>
<th>C  max</th>
<th>Mn  max</th>
<th>Si   max</th>
<th>Cr  max</th>
<th>Ni  max</th>
<th>Mo  max</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>0.75</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):

| Property      | Ultimate Tensile Strength N/mm² | Elongation (GL=4d) (%) | CVN Impact Value at 27°C C
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>550 min</td>
<td>30 min</td>
<td>120 min</td>
</tr>
</tbody>
</table>

CURRENT CONDITIONS: USE DC (+) ONLY

<table>
<thead>
<tr>
<th>Size (mm)</th>
<th>Amps</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5x350</td>
<td>50-80</td>
</tr>
<tr>
<td>3.15x350</td>
<td>80-110</td>
</tr>
<tr>
<td>4.0x350</td>
<td>110-150</td>
</tr>
<tr>
<td>5.0x350</td>
<td>160-200</td>
</tr>
</tbody>
</table>

SPECIAL CHARACTERISTICS:
DELTA FERRITE: 5 FN min