APPLICATION: The Elgard Discrete Mesh Anode compliments the existing line of Elgard anodes for Cathodic protection of reinforced concrete structures. The anode is composed of a precious metal oxide catalyst on an expanded titanium mesh substrate. The anodes are available in 100mm, 150mm, 200mm, 250mm, 300mm and 350mm lengths and can be combined to meet specific requirements.

MATERIAL SPECIFICATIONS

DIMENSIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anode Diameter</td>
<td>25.4mm (1 in)</td>
</tr>
<tr>
<td>Installation Hole Diameter</td>
<td>31.75mm (1-1/4 in)</td>
</tr>
<tr>
<td>Lengths</td>
<td>Variable – See Table Below</td>
</tr>
<tr>
<td>Expanded Mesh Thickness</td>
<td>1.30mm (0.051 in)</td>
</tr>
<tr>
<td>Diamond Dimensions</td>
<td>2.5mm x 4.6mm (0.1 in x 0.18 in)</td>
</tr>
<tr>
<td>Strand Thickness</td>
<td>0.6mm (0.025 in)</td>
</tr>
</tbody>
</table>

SUBSTRATE

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition</td>
<td>Titanium, Grade 1 per ASTM B265</td>
</tr>
<tr>
<td>Coefficient of thermal expansion</td>
<td>8.7 x 10^-6/K (0.0000048/in/in/K)</td>
</tr>
<tr>
<td>Thermal conductivity @ 20°C</td>
<td>15.6W/m²·K (9.0BTU/hr·ft²/°F/ft)</td>
</tr>
<tr>
<td>Electrical resistivity</td>
<td>0.000056Ohm·cm (0.000022Ohm·in)</td>
</tr>
<tr>
<td>Modulus of elasticity</td>
<td>105 GPa (14,900,000 PSI) minimum</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>245 MPa (35,000 PSI) minimum</td>
</tr>
<tr>
<td>Yield strength</td>
<td>175 MPa (25,000 PSI) minimum</td>
</tr>
<tr>
<td>Elongation</td>
<td>24% minimum</td>
</tr>
</tbody>
</table>

CURRENT DISTRIBUTOR

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>6.35mm (1/4 in)</td>
</tr>
<tr>
<td>Thickness</td>
<td>0.63mm (0.025 in)</td>
</tr>
</tbody>
</table>

ANODE PERFORMANCE

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Current Density (CD) @ Anode</td>
<td>216mA/m² (20mA/ft²)</td>
</tr>
<tr>
<td>Mesh Length, “L”, mm (ft)</td>
<td>100 (.325) 150 (.492) 200 (.658) 250 (.817) 300 (.983) 350 (1.125)</td>
</tr>
<tr>
<td>Anode Surface Area, m² (ft²)</td>
<td>.020 (.215) .030 (.325) .040 (.430) .050 (.545) .061 (.660) .071 (.770)</td>
</tr>
<tr>
<td>Current Rating @ Max CD, mA</td>
<td>4.6 6.8 9.1 11.4 13.7 15.9</td>
</tr>
<tr>
<td>Expected Life</td>
<td>50 Years</td>
</tr>
<tr>
<td>Anode Coating</td>
<td>Iridium Oxide, Mixed Metal Oxide</td>
</tr>
</tbody>
</table>
## Anode Weldment

<table>
<thead>
<tr>
<th>ELTECH PART NO</th>
<th>DIM. &quot;L1&quot;</th>
<th>DIM. &quot;L2&quot;</th>
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<tbody>
<tr>
<td>D670EA03-1</td>
<td>100</td>
<td>400</td>
</tr>
<tr>
<td>D670EA03-2</td>
<td>150</td>
<td>450</td>
</tr>
<tr>
<td>D670EA03-3</td>
<td>200</td>
<td>500</td>
</tr>
<tr>
<td>D670EA03-4</td>
<td>250</td>
<td>550</td>
</tr>
<tr>
<td>D670EA03-5</td>
<td>300</td>
<td>600</td>
</tr>
<tr>
<td>D670EA03-6</td>
<td>350</td>
<td>650</td>
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</tbody>
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