VORTEX™ Gasket-NM is a spiral wound gasket using NM material. NM material is developed by NICHIAS to overcome the chronical problem of vermiculite and graphite.

Vermiculite and graphite are known to have a problem in sealability and weakness in oxidant resistance, respectively. Due to its unique structure, NM material solves these issues by extending its sealing life-time and resisting to oxidization.

Exclusively to NICHIAS, VORTEX™ Gasket-NM is a sealing solution for critical operation - high temperature and high pressure with flammable or toxic water/oil/gas medium for long useful time.

What’s special about VORTEX™ Gasket-NM?

◊ Serviceable high temperature up to 1000 °C higher than customary spiral wound gaskets
◊ Outstanding longer durability of superb sealing performance at high temperature than others
◊ Strong resistance to oxidizing substance
◊ Successful test result for API 6FB, Third Edition

Application

◊ Suitable for flange coupling, valve bonnet and equipment at high temperature and high pressure.
◊ Applicable for water type fluids, oil type fluid, oxidizing acid/salts
◊ Recommended for oil refinery, petrochemical and power generations.

Heating Cycle Seal Test

VORTEX™ Gasket-NM shows stable sealability at high temperature and exhibits excellent sealing performance. It maintains the leakage near zero level for 400 hours at 1000 °C as shown in the graph.

(tested by NICHIAS Corp.)

Design Criteria

<table>
<thead>
<tr>
<th>Gasket coefficient, m [—]</th>
<th>Minimum design seating stress, y [N/mm²]</th>
<th>Minimum seating stress σθ [N/mm²]</th>
<th>Allowable seating stress [N/mm²]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Water-type Fluid</td>
<td>Oil-type fluid</td>
<td>Gas-type fluid</td>
</tr>
<tr>
<td></td>
<td>3.00</td>
<td>68.9</td>
<td>24.3</td>
</tr>
</tbody>
</table>

Service Range

<table>
<thead>
<tr>
<th>Water-type Fluid</th>
<th>Maximum Operating Temperature</th>
<th>1000 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil-type, Gas-type Fluid</td>
<td>Maximum Operating Temperature</td>
<td>1000 °C</td>
</tr>
</tbody>
</table>

Hoop Material

◊ 312 Stainless Steel (J)
◊ Alloy 600 (Y)

For more information, visit www.nichias.eu/

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