Isolation Valves

Double clapet isolation valve

Engineering GREAT Solutions
Double clapet isolation valve

IMI Remosa’s double clapet isolation valve is a new patented design to guarantee a tight shut-off under the most extreme operating conditions, including temperature and pressure. Installed in the Fluidised Catalytic Cracker (FCC) power recovery unit, it allows the maintenance of the Expander while avoiding the shut-down of the FCC.

Key features

> Tight shut-off
> Innovative metal to metal seal design
> Operates in extreme process conditions
> Negligible energy losses
> Hot or cold wall design
> Full metal construction

Benefits

When the valve is installed in the FCC’s power recovery unit its innovative, patented design isolates the line so that maintenance can be carried out on the Expander without shutting down the FCC.

> Unique disc and seat design
  - Stellite hardfacing on contact areas
  - Disc floating to accommodate thermal expansion
  - Erosion prevention by sealing recessed design of sealing
  - Class V leakage certified

> Double clapet
  - Isolation achieved with two discs
  - Nitrogen valve body pressurization
  - No risk for operators to be exposed to hot gas

> Optimized flow dynamic design
  - Undisturbed process flow
  - Negligible power losses
  - No erosion on sealing surfaces

> Operated by IMI Remosa Hydraulic Power Unit
  - Open/Close sequence implemented in the control unit

Typical applications

Specifically designed for a power recovery unit of the refinery’s Fluid Catalytic Cracking, can be used in any extreme temperature, pressure and erosive process.
Product specification and dimensions

**Materials**
Nickel alloys
Stainless Steel
Carbon Steel
Stellite hardfacing

**Body design**
Hot wall
Cold wall

**Production range**
ND 40” - 150”

**Temperature limits**
Up to 850°C (1560°F) cold wall design
up to 950°C (1740°F) hot wall design

**Pressure limits**
Up to 4 bar (58 psi)

<table>
<thead>
<tr>
<th>Hot shell design</th>
<th>Expander Inlet</th>
<th>Expander Outlet</th>
<th>Expander Outlet</th>
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</thead>
<tbody>
<tr>
<td><strong>Temperature</strong></td>
<td>up to 982°C (1800°F)</td>
<td>up to 650°C (1200°F)</td>
<td>up to 982°C (1800°F)</td>
</tr>
<tr>
<td><strong>Material handled</strong></td>
<td>Flue gas</td>
<td>Flue gas</td>
<td>Flue gas</td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>from 40” to 150”</td>
<td>from 40” to 150”</td>
<td>from 40” to 150”</td>
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<tr>
<td><strong>Body</strong></td>
<td>SA-240 304H</td>
<td>SA-387 Gr11</td>
<td>SA-240 304H</td>
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<tr>
<td><strong>Disc</strong></td>
<td>SA-240 304H seat hardfaced by stellite #1 or #6</td>
<td>SA-387 Gr11 seat hardfaced by stellite #6</td>
<td>SA-240 304H seat hardfaced by stellite #1 or #6</td>
</tr>
<tr>
<td><strong>Shaft</strong></td>
<td>Alloy X-750</td>
<td>Alloy X-750</td>
<td>Alloy X-750</td>
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<tr>
<td><strong>Actuating system</strong></td>
<td>Electrohydraulic</td>
<td>Electrohydraulic</td>
<td>Electrohydraulic</td>
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</tbody>
</table>

Negligible energy loses

Full metal construction

Tight shut-off