Solutions for Oil & Gas

On the outside & needing to look in?

Rayotek industrial sight glass windows give direct, real-time views into high and ultra-high pressure vessels and other hazardous environments. The Energy industry no longer needs to depend solely on instrumentation to gather data within sealed and inaccessible environments.

Reduce Risk & Lower Costs

The O&G industry has been dependent on expensive, redundant systems to improve safety. Rayotek products allow for direct visual observation of fluids, hydrate plugs, obstructions and other processes within dangerous environments. Industrial sight windows give technicians the ability to visually confirm instrumentation readouts without the risk of entering confined spaces. Material costs for gaskets, seals, bolts, studs, etc. are virtually eliminated and labor costs are reduced by extending inspection intervals.

Applications (Onshore & Offshore)

- Gas Processing
- Oil Processing
- Igniter Systems
- ROVs
- Flowlines
- Offloading
- Subsea Riser Assemblies
- Downhole Tools
- Robotics Systems
- Orifice Plates
- Support Vessels
- Subsea Processing
- Inspection Systems
- Downhole Systems (Burst Disk)
- Tanks & Manways
- Oilsands Applications
- Metering Products
- Measuring Systems
- Pipeline, Pigging & Risers
- Secondary Containment
- Combustion Control & Analysis

Features & Benefits

Pressure Ratings - highest in the industry (custom applications up to 50 KPSI)

Material Combinations - multiple, including: NACE compliant & super alloy metals with borosilicate, sapphire, fused quartz & soda lime

Configurations - Tek-Glass Fused Glass is mechanically pre-stressed & used to eliminate cracking-based failures & unexpected ruptures

Interfaces - a variety of threaded & flanged options, plus custom connection designs

Engineered & Manufactured In-House - 100% at Rayotek’s San Diego, USA facility

Configurations

<table>
<thead>
<tr>
<th>TYPE</th>
<th>INTERFACE</th>
<th>SIZES</th>
<th>MAX PRESS. RATING</th>
<th>TEMP. RANGE (°C)</th>
<th>ASSEMBLIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPT</td>
<td>Threaded</td>
<td>0.25 - 4”</td>
<td>Vacuum - 20 KPSI</td>
<td>Cryo - 900</td>
<td>Fused, Bonded, Backside Seal</td>
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<tr>
<td>SAE</td>
<td>Threaded</td>
<td>0.25 - 2”</td>
<td>Vacuum - 20 KPSI</td>
<td>Cryo - 900</td>
<td>Fused, Bonded, Backside Seal</td>
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<tr>
<td>ASME/ANSI</td>
<td>Flange</td>
<td>2.0 - 12”</td>
<td>Vacuum - 20 KPSI</td>
<td>-100 - 900</td>
<td>Fused, Bonded, Backside Seal</td>
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<tr>
<td>API</td>
<td>Flange</td>
<td>1.625 - 11”</td>
<td>Vacuum - 30 KPSI</td>
<td>Cryo - 900</td>
<td>Fused, Bonded, Backside Seal</td>
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<tr>
<td>Conflat (CF)</td>
<td>Clamp</td>
<td>1.3 - 10”</td>
<td>Vacuum - 45 PSI</td>
<td>Cryo - 400</td>
<td>Fused, Bonded, Backside Seal</td>
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<tr>
<td>ISO (K &amp; F)</td>
<td>Flange</td>
<td>DN63 - 320</td>
<td>Vacuum - 45 PSI</td>
<td>Cryo - 400</td>
<td>Fused, Bonded, Backside Seal</td>
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<tr>
<td>Downhole</td>
<td>Annular</td>
<td>1.1 - 2.38”</td>
<td>Vacuum - 30 KPSI</td>
<td>Cryo - 400</td>
<td>Fused, Bonded, Backside Seal</td>
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<tr>
<td>Custom</td>
<td>TBD</td>
<td>0.04 - 48”</td>
<td>Vacuum - 100 KPSI</td>
<td>Cryo - 1850</td>
<td>Fused, Bonded, Backside Seal</td>
</tr>
</tbody>
</table>

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INDUSTRIES SERVED: AEROSPACE, PULP & PAPER, MINING, CHEMICAL INDUSTRIAL, SUBSEA EXPLORATION AND MORE!