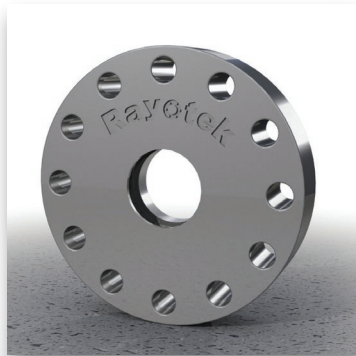
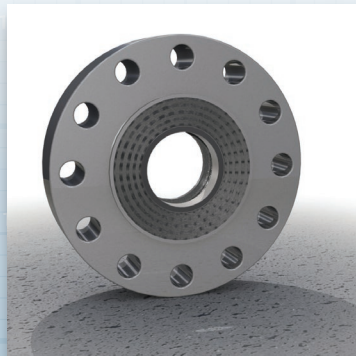


CASE STUDIES

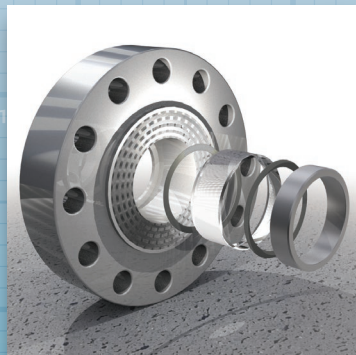
HPHT Hydrocarbon Process Observation



Front Face



Gasket Side



Exploded Assembly View

Customer Challenge

A university workgroup required a large aperture ASME flange equipped window for analysis prior to project commercialization. In addition, Canada has some of the most stringent pressure vessel regulations in the world and approval for a CRN (Canadian Registration #) is awarded after technical submissions are reviewed a provincial reviewing body. This unique challenge presented a complex mix of regulatory and engineering hurdles needed to satisfy a demanding petrochemical application

Rayotek Solution

The knowledge of specialty glass to metal sealing was the key component of this successful project delivery. A modified, ASME B31.2 compliant Rayotek flange configuration sealed to a custom designed window allowed for the combination of large clear aperture, high temperature and high pressure (relative to aperture size) to meet client requirements.

Finished Product

HPHT Process Observation Flange Window ~ Specifications Achieved:

- **Interface** - ASME 6" flange (900# modified)
- **Housing Material** - 316 stainless
- **Window Material** - Optical grade fused quartz (4.25" clear aperture)
- **Mounting** - Redundant gasket seal assembly
- **Operating Pressure** - 0 to 1100 psi (cycling)
- **Operating Temperature** - 5°C to 510°C
- **Environmental Exposure** - Hydrocarbon emulsion (proprietary)
- **Additional Notes** - CRN registration required a 10x pressure validation pressure test and subsequent calculations to certify window material.