GTSP

High temperature pump gas seal

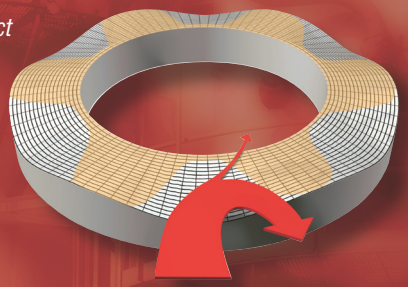
GTSP seals are dual pressurized, high temperature metal bellows gas seals for the hottest process pumps found in refinery and hydrocarbon services. Utilizing Flowserve's exclusive bi-directional wavy face topography, GTSP seals pressurized with dry steam or nitrogen are specially engineered to drive exceptional, long-term equipment reliability and lower energy consumption.

Features Precision Face Topography

Wavy face technology separates the seal faces so there is no seal face wear

Recirculation effect minimizes fouling for high reliability

Low gas consumption and low speed lift-off



Features and Benefits

- Dual pressurized gas seal design eliminates process leakage and coking problems in a compelling economic design that avoids liquid barrier-related seal issues.
- Laser-applied wavy face technology creates a gas film barrier between the seal faces to provide non-contacting, low drag, low energy consumption performance.
- Sinusoidal waves allow bi-directional operation to simplify installation on double-ended pumps and the smooth wave texture is self-cleaning to resist contamination or fouling.
- Alloy 718 welded metal bellows assembly construction offers the highest resistance to stress corrosion cracking in high temperature, sulfuric-laden services.
- Designed to operate without cooling and at full process temperature, the cartridge seal tolerates high axial overtravel during pump warm-up or thermal transients.
- Patented spring-energized graphite (SEG) seals absorb differential thermal expansion to maintain flat seal faces and low steam leakage rates.
- Qualification tested per API 682 Type C requirements for 3NC-FF designs, GTSP seals are suited for hot hydrocarbons such as hot oils, gas oils, asphalt and heat transfer fluids.