MITSUBISHI CHEMICAL ADVANCED MATERIALS

Chemical / Oil & Gas Processing

Fixed Tooth Polymer Labyrinth Seals

Advanced Engineering Plastics for Turbo Compressors

Challenge

Do you want to improve or at least maintain compressor seal efficiency?

Mitsubishi Chemical Advanced Materials' family of Duratron® and Ketron® PEEK Materials can tighten compressor seal clearances. The rub tolerant design can prevent tooth profile deformation increasing performance and Mean Time Between Repairs. Our materials also have excellent chemical corrosion properties over common industry standard aluminum seals.

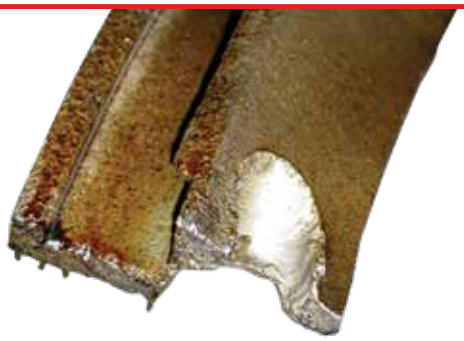
Common Applications

- Fixed Tooth Polymer Labyrinth Seals

Customer Benefits

- Increased compressor efficiency
- Increased design capabilities
- Reduced downtime
- Lower cost in service

Bent Aluminum Teeth



Chemical Corrosion on Aluminum Seal

Ketron® PEEK Polymer Labyrinth Seals

Trends In Turbo Compressor Market

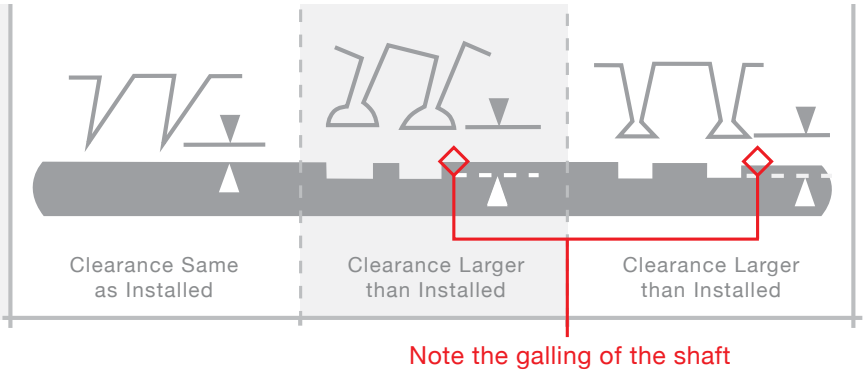
- Higher temperature with increased loads
- Improved efficiency and reliability in compressor seals
- Reduced chemical corrosion
- Increased service life of seals
- Cost effective solutions
- Ease to manufacture

Mitsubishi Chemical Advanced Materials Added Value

- Duratron® with continuous service temperatures up to 500˚F / 260˚C
- Ketron® PEEK with continuous service temperatures up to 480˚F / 248˚C
- Self lubricated materials for rub tolerant seals
- Materials that flex not bend
- High resistance to fuels, lubricants, and chemicals
- Better physical properties than conventional aluminum seals
- Near net shapes, machining and molded parts

Typical Labyrinth Tooth Designs After Critical Speeds

After exposure to critical speed, the thermoplastic tooth will return to its original shape due to the plastic "memory" of the thermoplastic, while the aluminum tooth remains damaged.



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