

New Tertiary Seals

Halar[®] ECTFE semi-crystalline polymer for high reliability and performance

Benefits

- Increased production
- Higher efficiency
- Reduced operating costs**
- Availability and Reliability
- Life extension**

Customer benefits include:

- Two thirds the N₂ buffer consumption of standard labyrinth seals
- Lower cost than non-contact carbon seals with comparable N₂ buffer consumption
- Full retrofit capability for existing labyrinth seals

*Compression train
MCL and BCL centrifugal compressors*



What it is

The new seal system is based on ECTFE abradable technology developed by GE Oil & Gas and GE Global Research. This system has been proven in harsh and challenging environments, and can be applied in very dry nitrogen conditions including LNG applications. The applicable units are:

- Those that employ carbon bushing tertiary contact carbon rings type seals that are purged with N₂ from a cryogenic plant or evaporated from a liquid N₂ vessel or
- Those equipped with tertiary contact carbon rings that are purged with N₂ produced with an osmotic membrane cabinet using instrument air.



BCL 305C centrifugal compressor

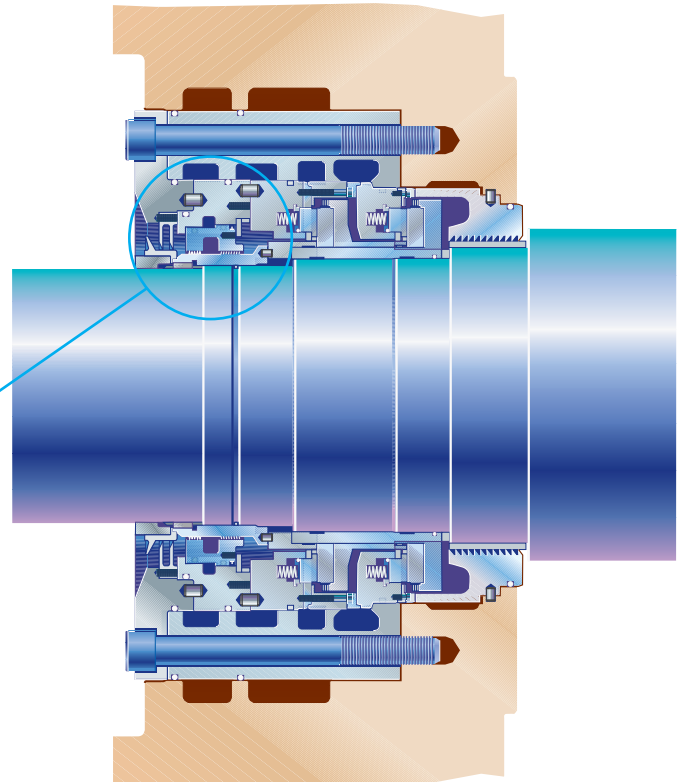
How it works

The basic design of the new seal incorporates a stationary component that is abraded by a corresponding rotating part, which creates the tighter clearances required for reducing gas leakage.

The abradable labyrinth solution is retrofittable with no modification to existing compressor parts. The tertiary contact carbon rings sleeve and housing will be replaced by a toothed sleeve and abradable stator components.



Abradable tertiary seals scheme and stator part



GE imagination at work