

## ES5006 Compressor labyrinth seal upgrade

Improved material increases operational performance and corrosion resistance



### Engineered solution purpose

This engineered solution improves corrosion resistance and increases the ability to withstand upset conditions without permanent damage to the labyrinth seal.

### Applicability

All Rolls-Royce compressors originally supplied with aluminium labyrinth seals.

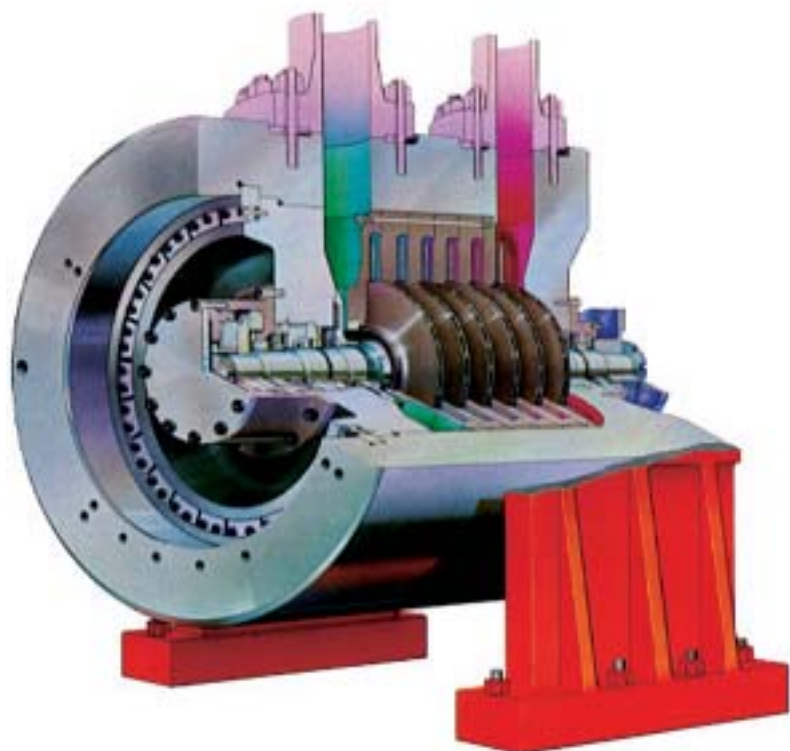
### Technical description

Labyrinth seals utilise carbon filled peek material as opposed to aluminium. The forgiving nature of the peek material allows for tighter clearances between shaft and seal

### Benefits

Carbon filled peek labyrinth seals provide the following benefits:

- Increased resistance to corrosion
- Increased ability to withstand upset conditions without permanent damage to the labyrinth seal
- Reduced gas leakage across the seal
- Increased compressor efficiency do to reduced re-circulation
- Allows for higher temperature operation.



### Experience

This engineered solution forms part of the current build standard.

### Scope of work

Replace all existing aluminum gas seal labyrinths (shaft and eye seals) with carbon filled peek labyrinths.

### Bill of materials

Labyrinth seals

### Undertaken

At site