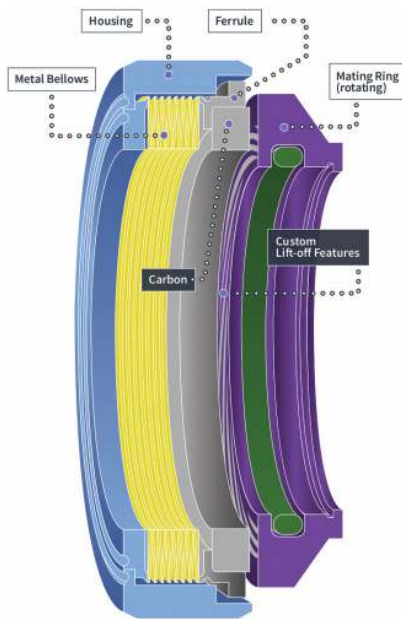

MECHANICAL SEALS

GET IT RIGHT THE FIRST TIME

At Technetics Group, we believe no challenge is too daunting and no strategy is unachievable. Because when maximum performance is mandatory, and failure is unacceptable, you need the utmost confidence that only Technetics Group can deliver.

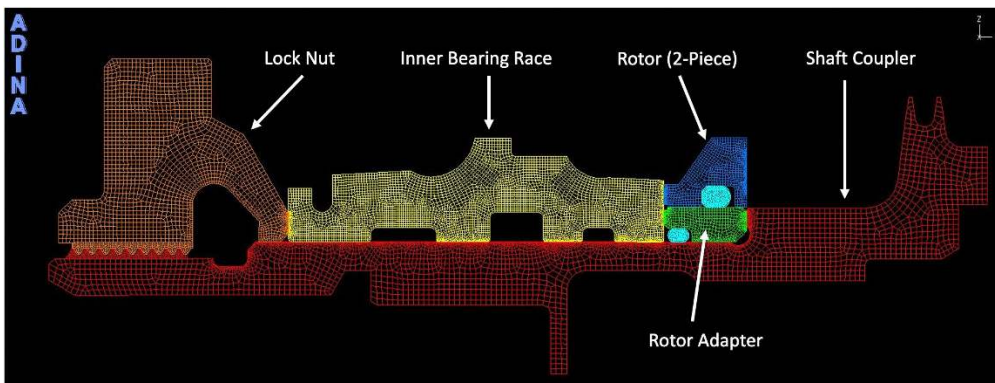
AGENDA

NON-CONTACTING LIFT-OFF SEAL



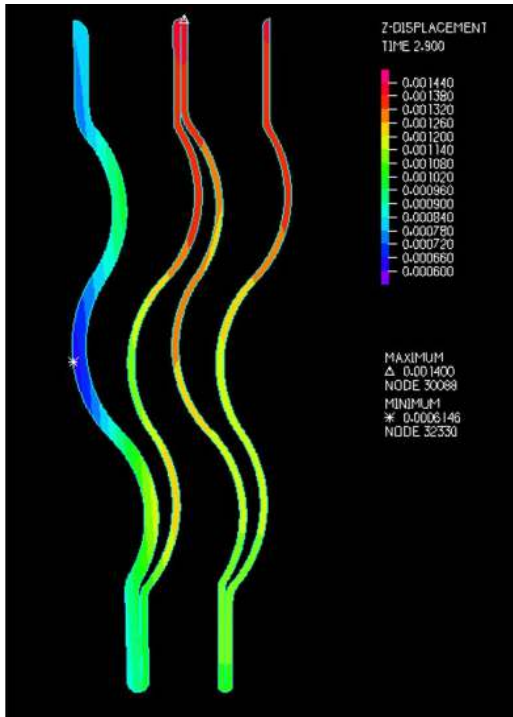
DESIGN AND ANALYSIS

- Thermal analysis using FEA
- Vibration effects
- Fatigue analysis
- Clamping interface
- Seal face load



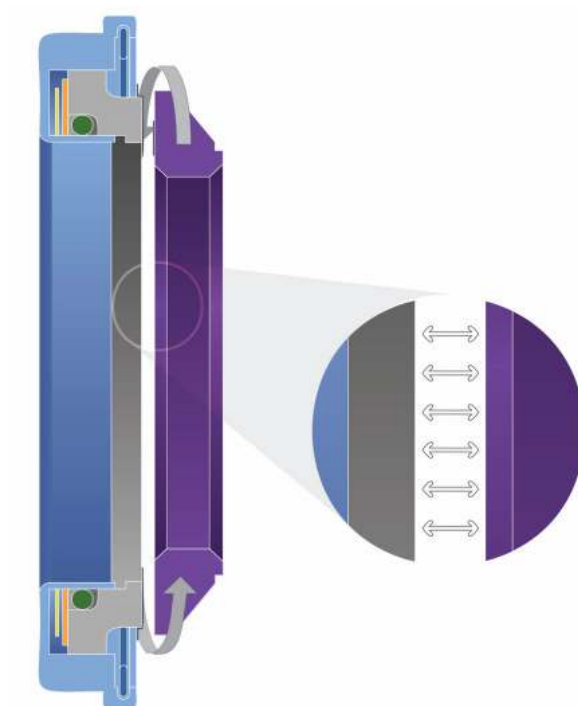
DESIGN AND ANALYSIS

- Stress analysis on the seal components
- MED shift via analysis and test
- Bellows spring rate via analysis and test
- Unique rotor design to control coning due to thermal and clamping loads
- Modal and resonance analysis



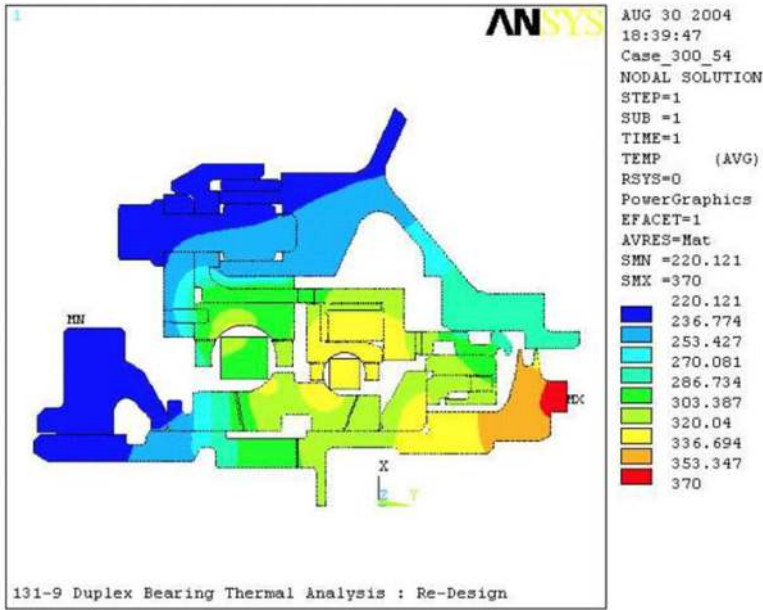
DESIGN AND ANALYSIS

- Rotor tracking
- Seal rotor coning analysis (critical)
- Seal face temperature analysis
- Hydrodynamic performance
- Film thickness
- Film stiffness
- Lift off speed at sea level and altitude



DESIGN AND ANALYSIS

- Seal leakage
- Seal heat generation
- Predicted seal life

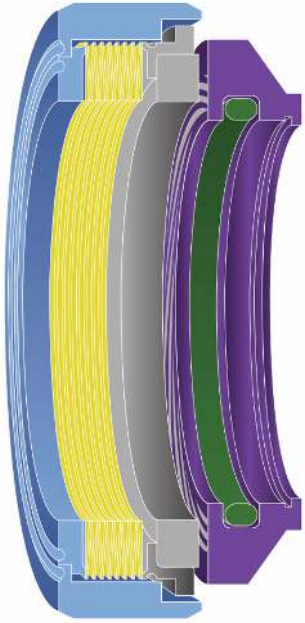


TESTING CAPABILITIES



SEALING TECHNOLOGY WITH A DIFFERENCE

- In-house design tools



SEALING TECHNOLOGY WITH A DIFFERENCE

- Proprietary manufacturing process



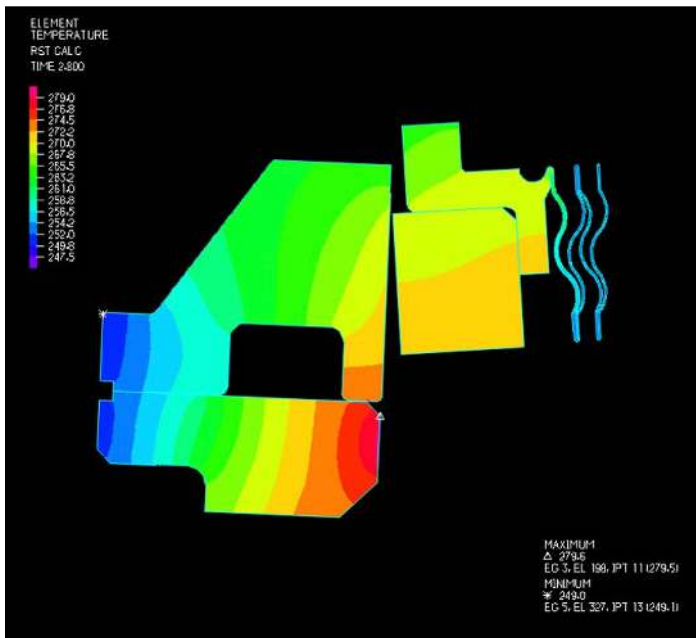
SEALING TECHNOLOGY WITH A DIFFERENCE

- Pedigree in bellows design



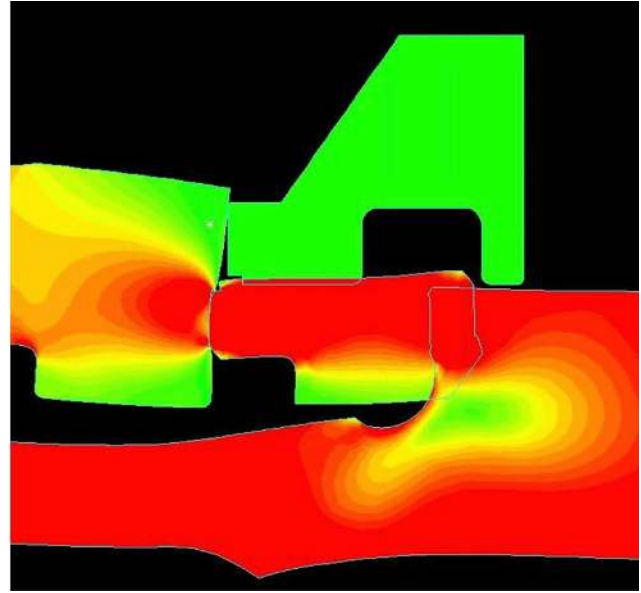
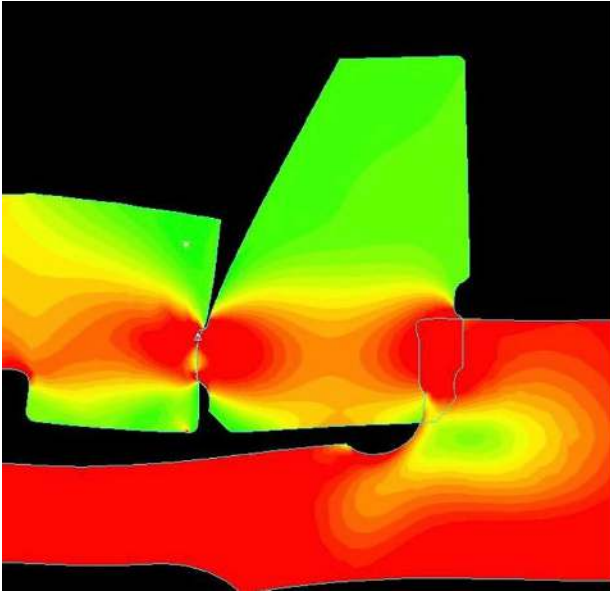
SEALING TECHNOLOGY WITH A DIFFERENCE

- FEA Thermal Analysis



SEALING TECHNOLOGY WITH A DIFFERENCE

- Coning Analysis



WE SOLVE THE PROBLEM THE FIRST TIME, EVERY TIME

