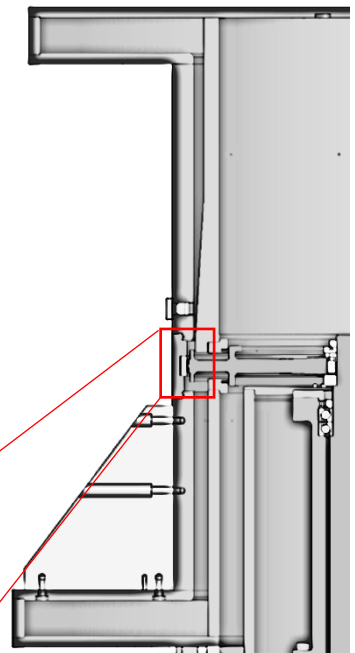
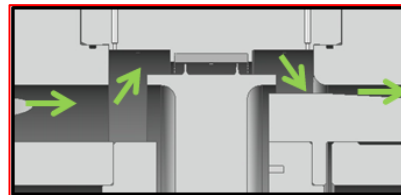
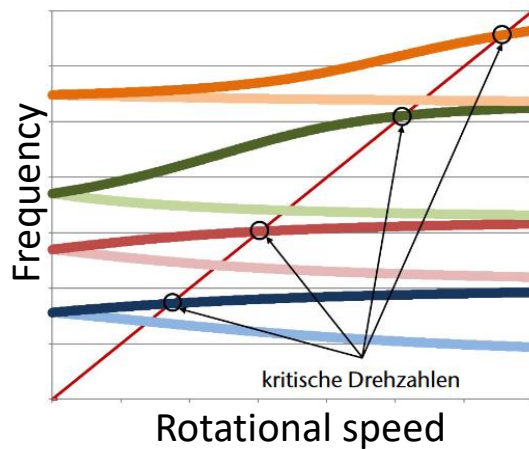
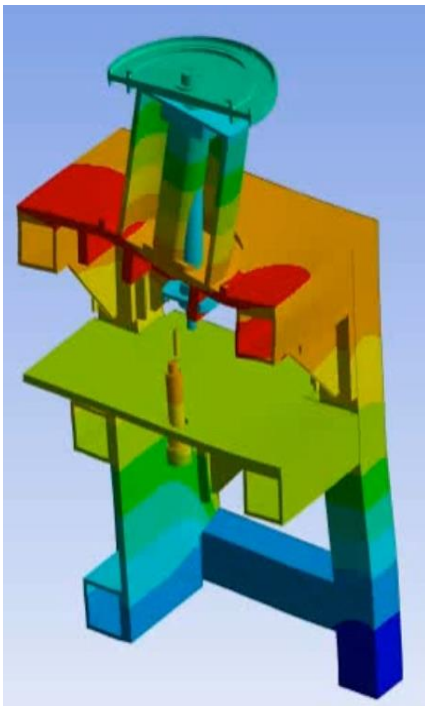


Studien-/Masterarbeit

# Rotor Dynamics of a Labyrinth Seal Test Rig



## Background

In low pressure turbines of modern aircraft engines, the rotor stages are provided with a shroud for aerodynamic and structural reasons. The shroud creates a cavity between the rotor and the stationary casing. The innovative design of cavities is a key aspect of increasing efficiency and reducing fuel consumption in modern engines.

TFD operates the rotating labyrinth test rig (RLP) to investigate such cavities. The RLP serves to aero engine companies and shapes the future of the shroud cavity design.

Rotor dynamics is important because experiments can be performed with a rotating machine whose rotor dynamics are well designed.

Rotor dynamics is a branch of applied mechanics that studies the behaviour of rotating structures.

Your task is to create a rotor dynamics model, perform and post-process the simulations including sensitivity studies.

## Your Profile

- Eager to learn or have knowledge of rotor dynamics branch and Ansys Mechanical software
- Enjoy working on numerical studies
- Good command of English

## Your tasks

- Literature study,
- Familiarisation with the methods,
- Setup of rotor dynamics model,
- Execution of simulations of the model,
- Post-process and evaluate the results,
- Documentation

## Contact

Are you interested?

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