PROJECT

AIRSEAL

Airflow characterization through rotating labyrinth seal

Funding: European (Horizon 2020)

Duration: Mar 2019 - May 2021

Status: Complete

Total project cost: €547,500

EU contribution: €547,500

Call for proposal: H2020-CS2-CFP08-2018-01

CORDIS RCN : 221312

Objectives:

The main objective of this project is to test different labyrinth seal configurations (15 geometries of the labyrinth and 5 axial position between the rotor and stator) to determine the pressure loss characteristics for different rotor speeds, radial clearances and at different temperature and pressure ratios.

The test rig, specifically developed in this project, will be able to test a seal configuration in a simplified environment. The tests will be divided in two campaigns, the complexity of the second campaign being dependent on the results and conclusions of the first.

The results of the tests will be compared with the prediction of a numerical model in order to perform a gap analysis. The final expected result is that the experimental measurement to match the numerical results. If the experimental data does not match with the numerical results, then improvements will be made to the numerical model.

Parent Programmes:

H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Other programmes: JTI-CS2-2018-CfP08-ENG-01-34 Airflow characterization through rotating labyrinth seal

Lead Organisation:

Institutul National De Cercetare-Dezvoltare Aerospatiala "elie Carafoli"- Incas Bucuresti

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Organisation Website:
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EU Contribution: €462,500

Partner Organisations:

Sc Straero Sa

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Organisation Website:
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EU Contribution: €85,000

Technologies:

Unclassified
Non-technology

Development phase: Research/Invention

STRIA Roadmaps: Vehicle design and manufacturing

Transport mode: Multimodal transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Other specified

Geo-spatial type: Other