

Investigations of a fuel cell system on a tilting test bench

Short Description

Fuel cell systems are increasingly used in mobile and stationary applications, where they are exposed to varying operating and environmental conditions. In particular, tilting and inclined positions can have a significant impact on water management and thus on the electrochemical behavior of the systems, thereby affecting performance and operational safety. To ensure reliable system operation, it is therefore necessary to systematically investigate these effects.

The aim of this master's thesis is to develop and carry out structured test programs on a tilt test bench in order to systematically analyze and evaluate the behavior of fuel cell systems under different operating conditions.

Content / Time table

- Familiarization with the design and functioning of fuel cell systems
- Analysis of potential influences of tilt positions on performance, stability, and operational safety
- Creation of a test plan for investigations on the tilting test bench
- Conducting systematic tests on the tilting test bench
- Collection, evaluation, and interpretation of measurement data

Start: as of now
Duration: approx. 6 months
Compensation: paid master thesis
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