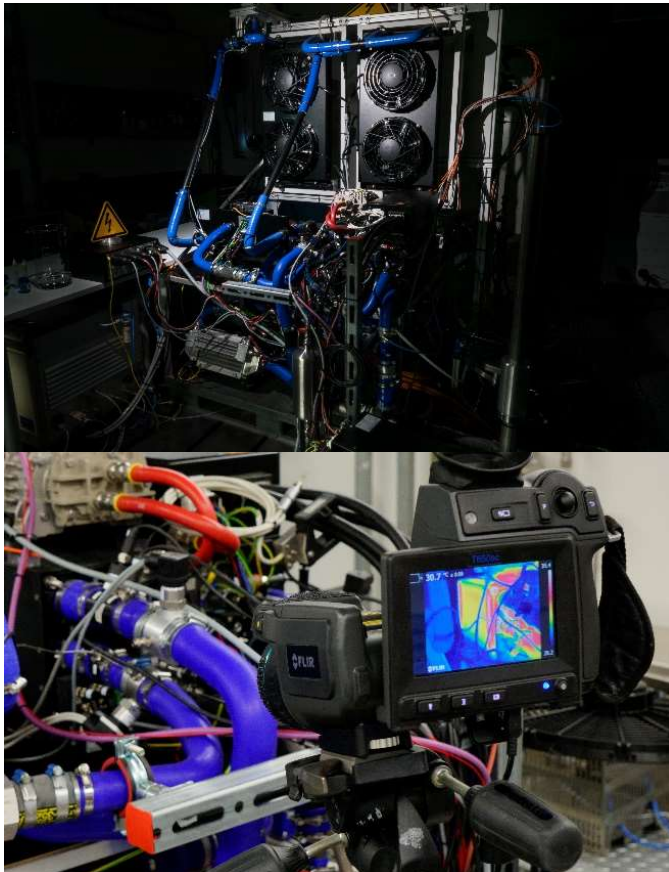


Degradation Analysis of PEM Fuel Cell Systems



Description

Fuel Cell are inevitable when transforming the current energy system to a carbon neutral energy system. Increasing the lifetime, performance and therefore costs of fuel cell systems are essential tasks for the decarbonization of the mobility sector.

The project HyLife focuses on degradation analysis of fuel cells from single cell to stack to fuel cell system level. Within the project a fuel cell system will be tested, evaluated and the data will be analysed to detect relevant degradational effects such as membrane degradation. Highly accurate and extensive measurement equipment and new sensor systems (e.g. gas measurement) will be used and evaluated for their usage on behalf of degradation detection.

The master thesis includes the set-up of the fuel cell system on the test bed, the equipment with additional sensor systems, the integration in the automation system (AVL PUMA Fuel Cell), the testing phase of the fuel cell system and the evaluation / analysis of the data (with AVL Concerto). The focus of the degradational effects will be the membrane by means of gas measurement.

Content

- Literature research and training of software tools / automation system
- Set-up / integration of UUT, testing of UUT, data analysis
- Creation of written master thesis in English

Start from now on / as soon as possible

Duration ca. 6 months

Compensation 2.600 €

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