

Industrialization of a power cycling test bench for power electronic components

"Industrialization of a power cycling test bench for power electronics components"
at Chemnitz Power Labs GmbH.

Power electronics components play an important role in modern energy technology, especially in applications such as electromobility or renewable energies. To ensure the reliability and lifetime of these components, comprehensive testing is required, including power cycling.

This project is about the industrialization of an existing power cycling test concept for power electronics components, including the development of a mechanism that meets CE requirements.

1. Analysis of the existing concept: The first step is to analyze the existing load alternation test concept in order to identify the requirements for industrialization.

2. Mechanical design: Based on the requirements, a mechanical design for the load cycling test bench is to be developed to meet the CE requirements.

3. Hardware development: the power cycling test bench will be built on the basis of the existing concept and mechanical design. Both the hardware and software components have to be considered.

4. Validation: To ensure that the industrialized power cycling test bench delivers reliable results, various validation measures have to be carried out. These include, for example, comparative measurements with other test methods or verification of the test results by simulations.

The industrialization of an existing power cycling test concept for power electronics components is of great importance for energy technology, especially for electromobility and renewable energies. The industrialized concept can help to improve the reliability and lifetime of power electronics components and thus make an important contribution to sustainable energy supply.

Chemnitz Power Labs GmbH is a young and dynamic company founded in November 2021 as a spin-off of the Chair of Power Electronics at Chemnitz University of Technology. We offer specialized test services for power semiconductors and also develop our own products. With our experienced team and extensive knowledge in this field, we have a lot of potential to grow further, to advance modern technologies such as electromobility and renewable energies, and to contribute to CO2 reduction.

Please send your application to jobs@cpowerlabs.com

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Student Employee

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