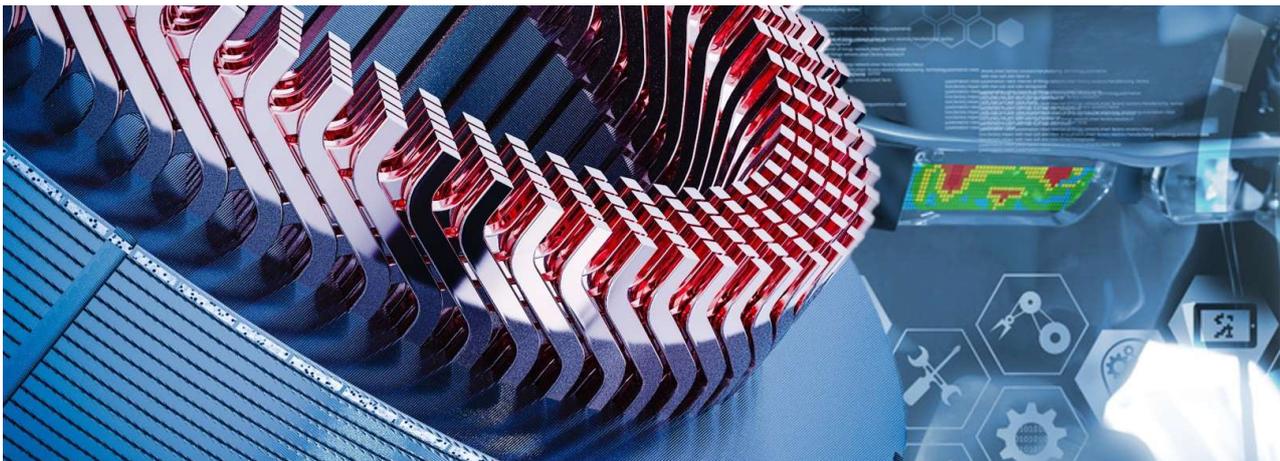


Master thesis / Bachelor thesis

Sustainability in electric drive production - An analysis of current and future measures, (Data-) tools and approaches such as AI, Digitalization and intelligent material sourcing.



Bildquelle: PEM der RWTH Aachen

Initial Situation:

Due to the continuing global warming and increasing scarcity of natural resources, sustainable and resource-efficient management is essential to reduce CO₂-emissions and other relevant environmental impacts to a minimum in order to enable future generations to live on this planet. A central element for achieving this goal is the electrification of the mobility sector. However, it is also necessary to consider and further optimize the components and processes for the production of the electric drive train with regard to their sustainability in order to achieve an actual improvement and not just a shifting of the problem. While comprehensive concepts and tools already exist for the battery, the topic of sustainability in connection with the electric motor is still in its beginnings. Therefore the aim of this work is to present the current status in this context and to identify potential for the future.

Your Task:

Your task is to analyze measures, tools and approaches to increase sustainability in the electric drive production. The current state of the art is to be described and future developments identified, analyzed and evaluated regarding to their influence and potential for increasing the sustainability.

- Research the state of art and identifying current measures, tools and approaches in engineering, materials and in production processes to increase sustainability for the process and product level.
- Identify future trends, developments and chances
- Conducting a sustainability potential analysis of the electric motor on the product and process level.

Prerequisites:

- Study in Engineering, Mechanical Engineering, Informatics (or comparable)
- Solid skills in using MS Office

Our offer:

- Fast processing
- Defined tasks and flexible working
- Professional mentoring and insight into the industry and work practice
- Self-responsible execution with regular Teams- or personal meetings

Interested?

Please send me a transcript of your grades and your resume to the address below.

Your Contact at the PEM

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