

virtual vehicle

VIRTUAL VEHICLE is a leading international R&D center for the automotive and rail industries. The center focuses on advanced virtualization of vehicle development. This linking of numerical simulations and hardware testing leads to a powerful HW-SW system design. About 300 people are now employed at our site in Graz - their expertise enables the efficient development of affordable, safe and environmentally friendly vehicles.

Master Thesis

“Mechanical FEM Simulation of electrode calendaring process”

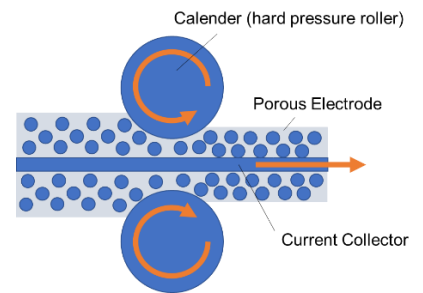
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Master Thesis

The goal of the thesis is to understand the calendaring process that battery electrodes go through during production. This should be realised by setting up a continuum mechanics-based FEM simulation of the process. A proper material model choice will be key to model the porous composite structure and its interplay with the current collector.

Your Tasks

- Set up a geometrical description of the process and its boundary conditions in a suitable simulation framework (i.e., LS Dyna).
- Research different material models capable of describing porous structures.
- Simulate the electrode compression and possible bending of the current collector foil.



What we expect from you

- Student of mechanical engineering or similar.
- Interest in Mathematics and Modelling.
- Experience in Continuum Mechanics Simulations and Finite Element Method

What we offer

- Collaboration and contribution in an engaged, dynamic team
- Interesting work in an international research center
- **Paid** Thesis
- Mentoring program for new employees'
- Diverse sports and health activities regularly
- Corporate Events

For technical questions please contact:

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If you consent that your submitted data is also stored in our talent pool for up to 1 year after the last contact with you, please let us know by E-mail. You may withdraw your consent at any time.

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