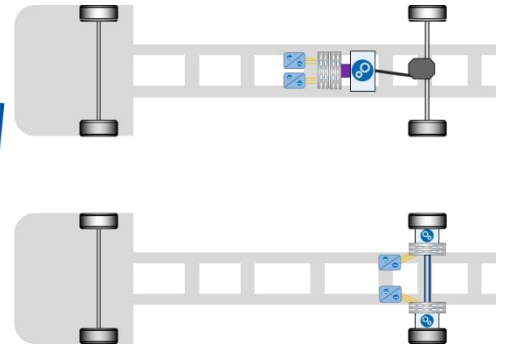
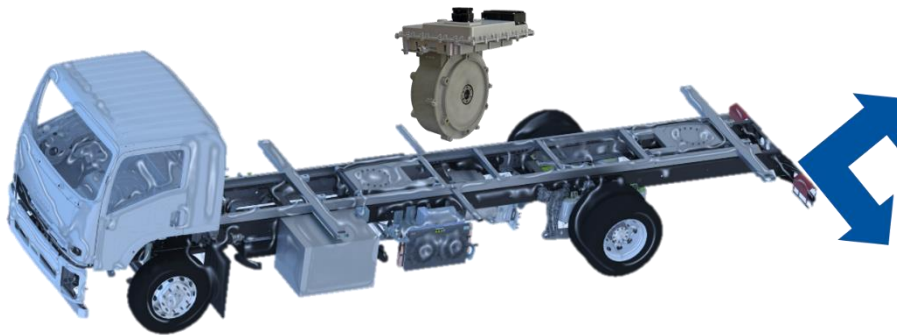




Bachelor-/Master Thesis

Integration concept for axial flux motor in electrified heavy-duty vehicle



Source: Isuzu, Compact Dynamics

Initial Situation:

In the framework of the LiVe research project of the PEM chair of the RWTH Aachen, different heavy-duty vehicles are being electrified with various electric powertrain concepts. One of the proposed configurations utilizes an axial flux electric motor (AFM) as the traction element.

Axial motors offer better performance characteristics than radial motors, such as higher power density, reduced volume and higher surface area for cooling. However, their application in electric vehicles is still relatively unexplored, so an integration concept is needed for the LiVe project.

Your task:

An AFM has been identified by the LiVe team. Your task is, based on the integration concepts of previously converted vehicles, to analyze the system constraints and develop a

concept for the mechanical, electric and electronic integration of the AFM as drive unit.

The concrete tasks include, for example:

- Verify available space in chassis and plan the general position of components, e.g. central or in-wheel configuration for motor
- Identify requirements for mechanical interfaces, e.g. to chassis, to gear reduction.
- Generate a list of required sourced components for the concept.

Your profile:

- Studies in mechanical engineering, automotive engineering or comparable course of studies.
- Safe handling of CAD Software.
- Independent structured work.
- Core knowledge of finite element method is an advantage.

Our offer:

- Comprehensive support.
- Delimited tasks.
- Close cooperation with an industrial company.
- Collaboration in a young, dynamic project team.

Are you interested?

Please send a current transcript of grades, curriculum vitae and certificates to the email address below.

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