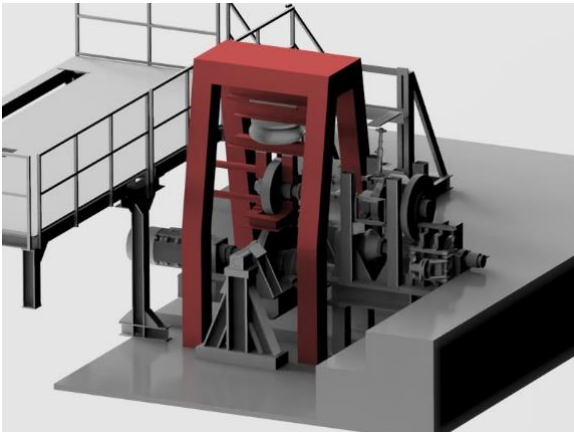


Bachelor-/Master-Thesis

Development and design of a modular wheel suspension for an independent wheel chassis dynamometer



Current situation

A repair process for rail vehicle wheels is being developed at the IFS as part of a research project. To ensure the quality of the repaired wheels, they are tested for functionality under laboratory conditions on the institute's single wheel rolling test rig.

As railroad wheels with different diameters are to be tested, the current design is to be modular to allow the wheels to be changed quickly and to accommodate different wheel diameters at the same time. The aim of the work is to develop various concepts for implementation and then to design a promising concept using CAD software.

Your tasks

- Familiarization with the current design of the independent wheel chassis dynamometer
- Development of various concepts for enlarging the wheel suspension
- Methodical design according to VDI 2221
- Creation of CAD models
- Documentation of the work

Your profile

- Degree course in mechanical engineering/mechanical engineering with a specialization in design engineering/vehicle technology, or similar
- Interest in design and test bench construction
- Independent and reliable way of working

The subject area can be adapted in consultation. If you are interested, please contact us by e-mail with a brief introduction and a grade transcript.

Head of Institute

Univ.-Prof. Dr.-Ing. Christian Schindler

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Date: 03.04.2024

About us

The Institute for Rail Vehicles and Transport Systems (IFS) at RWTH Aachen University specializes in research and teaching on rail vehicles and their components. It deals with issues in the areas of lightweight construction and structural integrity, driving dynamics and vibration comfort, wheel/rail interaction, assisted and driverless driving and condition monitoring. The IFS carries out studies, computer-aided simulations and practical tests on the above-mentioned topics. To carry out the practical tests, the IFS has its own track system with a connection to the public Deutsche Bahn network.