

Aerodynamic optimisation of the rear wing of a Formula Student race car



We are looking for motivated master students Engineering Technology

Project description:

Formula Electric Belgium (**FEB**) is a team of highly motivated engineering students that build an electric formula student race car. Just like Formula 1 the team builds a brand-new car each year to compete in multiple international competitions during the race season. Formula Student is the largest international engineering and design competition in the world. The competition is characterized by combustion vehicles, electric vehicles and since recently also autonomous vehicles. Formula Electric Belgium strives towards innovations and the raw performance of technologies. It is for this reason that the team will focus on the autonomous/electric race cars. Research and development applications will be made by postgraduate students in collaboration with thesis students from the KU Leuven and bachelor students from Thomas More.

Thesis description:

Each year the aerodynamic department strives to improve the aerodynamic efficiency of the car. Increasing the downforce improves the cornering speed of the car and thus improving the lap time. However, it is important that this increased downforce does not disproportionately increase the drag of the car.

At the moment the rear wing is made up of 3 stages. This concept has been in use for several years and has been optimized several times. The team is now looking for a completely new rear wing concept that will further improve the total downforce of the car.

Thesis objective:

The aim of this thesis is to compare and analyse different concepts of a Rear wing of a Formula Student race car. In the end a design should be obtained with better aerodynamic efficiency than the current design. This will help the team in determining which direction to take with the Rear wing for the years to come.

Profile:

- Interested in CFD
- Interested in aerodynamics
- Creative
- Teamplayer

What do you gain?

- A unique engineering- and team experience where hard work and team atmosphere are central.
- Work with innovative technologies in a realistic environment/application.
- Create added value for your curriculum and the team

Are you interested? Please send your resume with accompanying motivation to:

recruitment@formulaelectric.be

Diestsesteenweg 692, 3010 Kessel-Lo