FURTHER DEVELOPMENT OF A RADIO-CONTROLLED MODEL CAR

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Abstract

At the University of Szeged Faculty of Engineering, my project for the CAD-CAM Applications curse was the CAD model of my own radio-controlled model car with Autodesk Inventor. I chose this project for my thesis, too. I've been interested in model cars since my childhood and I am motivated to find the way to improve the driving properties of my racing car, so the topic of my thesis is the further development of it. Analyzing the car I found more opportunities for this.

First possible development is the design of a new cooler. The performance of the electric engine decreases when the temperature of the engine is too high. To avoid this I redesign the heatsink and change the cooling fan to a more powerful one.

The drive system has a regular problem. Because of the lack of an effective power distribution between the front and rear drive, the wheels often spin, reducing the efficiency of the drive. To solve this problem I design a central differential mechanism between the front and rear one, hoping to keep the drive running more smoothly, even extending the longevity.

I analyze the aerodynamic properties of the car body with Autodesk Flow Design and according to the results, I will design a new, better one and a bottom chassis cover.

Key words: CAD, Autodesk Inventor, RC car, Autodesk Flow Design