

Drop simulation of Automower in paperboard box

30 credits Thesis proposal Husqvarna AB

Structural analysis department

Background

Husqvarna develops professional forest and garden equipment. This raises demands for reliable products throughout their service life.

This thesis proposal targets the issue with products' drop test performance during transportation, which is a common risk during shipment to customer.

Assignment

Paperboard is used to wrap the products during transportation. If the product is dropped during shipment, the paperboard packaging should protect the product. This is an important part of the customer satisfaction, which is not appreciated until it fails.

Injection molding of plastic components may cause weak areas depending on the flow directions and temperature of the melt during cavity filling. This demands for a more comprehensive evaluation of the components to accurately predict stresses and detect weak spots, not possible with an isotropic material model.

The aim of the thesis is to evaluate a paperboard material model, and use this in a drop-test analysis of injection molded products, wrapped in paperboard.

The student will have a supervisor from Husqvarna, and we want you who are driven and target oriented. Together we will develop technical and personal skills.

Education

Master of science or similar with knowledge in one or more of the following areas; mechanics, material

Number of students: 1-2

Start date: To be discussed.

Estimated time needed: 10-20 weeks

Application:

Enclose CV and personal letter

Applications will be reviewed regularly and contract may be written before last application date.

Contact persons and supervisors:

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