

KOKKUVÕTE

Bakalaureusetöö sihiks oli Tánassilma Jahiseltsis kasutuses oleva suuruluki töötlemise pingile vastupidavama lahenduse otsimine. Leitud lahenduse tingimuseks oli veel ka see, et üles saaks tõmmata rohkem kui 1 rümba ning tööpinna ruumipuuduse probleemile tuli ka lahendus leida. Töö eeskujuks võttis autor õppeaine probleemilahendus, mis oli esimese õppeaasta teisel semestril. Probleemilahendus analüüsis probleemi, millele järgnes erinevate ideede väljapakumine. Väljapakutud ideede seast valitakse üks hindamise teel ning tegeletakse edasi valitud lahendusega põhjalikumalt. Käesoleva töö probleemiks oli vana ja logisev suuruluki töötlemise pink, millega tutvuti Tánassilma Jahiseltsi jahimaja juures. Enne kolme erineva idee genereerimist tehti turust ülevaade, et mitte jõuda lahenduseni, mis tegelikult on juba olemas. Eestis ei ole ühtegi planeeritud tootel tootjat ega ka mitte maaletoojat. Peale turuuuringut pakuti välja eelnevalt mainitud 3 lahendust. Järgnevalt hinnati genereeritud ideid hindamismaatriksiga, mille tulemusena valiti üks lahendus, millega detailsemalt tegeleda. Hindamismaatriksi järgi sai parima tulemuse lahendus 1. Lahendusele number 1 pandi paika mõõddud ning tehti temast CAD-mudel ning kõige viimasena sai tehtud kontrollarvutused teoreetilisele lahendusele, kus pakuti veel ka alternatiivsed mõõddud materjalikulu vähendamiseks. Arvutati horisontaalse tala vastupidavust paindele, jala vastupidavust nõtketele ning rullikute kinnitusarvutused. Rullik kinnitatakse tala külge meeterkeermega M10 DIN931(osakeermega). Arvutustest tuli välja, et talade ristlõigete küljepikkuseks pakutud 150mm on sobilik ning peavad detailid peavad rakenduvatele koormustele vastu. Lahenduse mudelile tehtud toetalad on mittevajalikud, mis selgus tugevusarvutusi tehes.

SUMMARY

The aim of the bachelor's thesis was to find a more durable solution for the big game processing station used in Tännasilma Jahiselts. Another condition of the solution was that more than 1 carcass could be pulled up and a solution had to be found to the problem of lack of space on the work surface. The author took problem solving as an example (a subject in the second semester of the first academic year). Problem solving analyzed the problem, followed by proposing different ideas. One of the proposed ideas is selected through evaluation and the chosen solution is further discussed in more detail. The problem of the present work was an old and frail big game processing station, which was inspected at Tännasilma Jahiselts' hunting lodge. Before generating the three different ideas, the market was reviewed so as not to arrive at a solution that actually already existed. There are no manufacturers or importers of the planned product in Estonia. After the market research, the 3 solutions, as mentioned above, were proposed. Subsequently, the generated ideas were evaluated with an evaluation matrix, as a result of which one solution was chosen to deal with in more detail. According to the evaluation matrix, the best result was solution 1. Solution number 1 was given dimensions and made into a CAD model, and last of all, control calculations were performed for the theoretical solution, while also offering alternative dimensions to reduce material consumption. The flexural strength of the horizontal beam, the flexural strength of the foot and the roll fixing calculations were calculated. The roller is attached to the beam with a metric thread M10 DIN931 (partial thread). The calculations showed that the proposed 150 mm side length of the cross-sections of the beams is suitable and the parts will withstand the applied force. The support beams made for the solution model are unnecessary, which became clear during the strength calculations.