KOKKUVÕTE

Bakalaureusetöö käigus on saavutatud püstitatud eesmärgid: on arendatud inseneri oskusi, on lihvitud 3D modelleerimisoskusi SolidWorks tarkvaraga, on disainitud vanast manuaalsest lahendusest efektiivsem, on leitud rakendus vanale õunapurustile uues mahlapressi lahenduses, mis on näha **Error! Reference source not found.**, on tehtud turu uuring optimaalse mahlapressi lahenduse leidmiseks, on loodud kontseptsioonid erinevatele sõlmedele süsteemis, on loodud joonised ning välja otsitud ostutoodete spetsifikatsioonid mahlapressi tootmiseks.
Tööl on 3 osa:

- Turu uuring – on osa, kus vaadeldakse juba olemasolevaid võimalusi. Võrreldi kuut erinevat varianti, ning otsustati edasi minna kruvipressi lahendusega.
- Kontseptsioonide loomine – Juhendajaga koostöös valiti välja kogu süsteemist 3 sõlme, millest kõigile modelleeriti võrdlemise eesmärgil paar erinevat lahendust.
- Põhiosa - Projekteerimise osas on loodud mahlapressi detailide, koostude 3D mudelid ja joonised. Tugevusarvutuste osas on võrreldud pressimisprotsessi käigus avalduvaid jõude ning surveid, mida detailid peavad taluma.

Kokkuvõtteks võib öelda, et töö kirjutamine andis väga hea võimaluse insenerioskuste arendamiseks. Õpetas paremini aega planeerima ning tähtaegadest kinni pidama. Enne omahinna arvutust oli plaanis projekteeritud mahlapressi lahendus tulevikus valmis ehitada. On selge, et tänaste materjalihindade juures on selle tegevuse kuluefektiivsus olematu.

SUMMARY

Goals set in this thesis work have been achieved. Engineering skills have improved. More knowledge has been aquired in the field of 3D modelling using the software SolidWorks. Old solution has been improved into a new more productive and effective solution. Part of the old solution has been reused and applied to serve as input for the new. Market analysis has been conducted in search for the most optimal solution for an Apple juicer. Different concepts have been created for different points in the system. Drawings have been created and specifications for purchase items have been found in order to fully produce the new apple juicer solution.

Thesis has three parts:

- Market analysis – In this part six of the existing solutions were analysed. After the analysis concluded the decision was made to proceed with dewatering screw press solution.

- Concept creation – In collaboration with the thesis instructor three key points in the system were chosen. At least two concept solutions were created for each one of those three points.

- Main part – In the modelling part 3D models of different parts were created and assembled. Also drawings were created for each part and assembly. In the calculations part forces that affect different parts in the system were calculated and analysed to make sure everything can withstand those forces.

In conclusion it can be said that thesis work gave an excellent opportunity to improve and develop engineering skills. It also allowed to improve on time management skills and demanded keeping up with the deadlines. Before the price calculations the plan was to actually build the solution. After figuring out the potential cost it quickly became clear that with the current price of materials it wouldn’t be cost effective.