



OPPONENT'S ASSESSMENT ON DIPLOMA THESIS

Student's name and surname: Lakshmanraj R Ramesh

Name of the diploma thesis: Process optimization by proper selection of batch sizes

Supervisor of the thesis: Ing. František Koblasa, Ph.D.

Opponent: *Ing. Bc. Tadeáš Umlauf, M.Sc.*

1. Diploma thesis evaluation

Evaluation	excellent	excellent minus	very good	very good minus	good	failed
Meeting the goal and fulfilling task of the thesis	X					
Quality of conducted survey	X					
Methodology of solutions	X					
Expert level of the thesis		X				
Merit of the thesis and its potential applicability of results		X				
Formal and graphic level of the thesis	X					
Student's personal approach	X					

Mark x in the corresponding box.

Supervisor's final evaluation is based on his/her overall subjective evaluation.

Grading is stated literally in the article no. 5, neither by a number, nor by a letter.

2. Comments and remarks on diploma thesis:

Presented diploma thesis provides broad theoretical overview summarized in the chapter of literature review accompanied by case study made for typical products and production system of company KAMAX s.r.o.

Theoretical chapter presents different analytical tools for manufacturing processes, production planning aiming to problem of ideal lot sizing in sufficient manner.

In case study I appreciate the way how the model is explained in a very comprehensive way with a lot of tables showing different calculations and KPIs which are important for processes. Outcomes of the case study depend on the input data quality and broadness of the whole picture which brings limits to analytical approaches in similar cases and direct usage of the outcomes can be easily decreased by some other point of view. To explain it on example the author recommends to use cold heading batch size of 4 million pieces for part number 1 which means 22 working days of production in a row. As there are also other parts produced on the machine this long campaign would significantly decrease the flexibility of the company to supply other parts especially in case of demand increase. I do not consider this effect as a mistake nevertheless it decreases the direct usability of the model.

I found formal and graphic level of thesis excellent meeting all requirements just with small amount of typo errors like the one in headline of subchapter 3.2.

3. Questions about diploma thesis:

My question to the author is: how the issue with the company's flexibility mentioned in previous chapter could be handled in the model in order to mitigate risk of late deliveries?

4. Opponent's statement whether the diploma thesis meets the academic title requirements and whether it is recommended for defense:

As far as I am concerned meets the presented diploma thesis the academic title requirements and I recommend it for defense.

5. Opponent's grading:

According to scaling grade my grading of this thesis is: excellent.

Date 11th June 2021, in Liberec

Opponent's signature

