THESIS REVIEWER'S REPORT

I. IDENTIFICATION DATA

Thesis title:	**Design modification of extruder of filament for 3D printing**
Author's name:	**Volodymyr Dudavskyi**
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Mechanical Engineering (FME)
Department:	12113
Thesis reviewer:	František Lopot
Reviewer's department:	12113

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment — **ordinarily challenging**

How demanding was the assigned project?

I do not consider the project to be extra-ordinally challenging because there is huge amount of information at disposal in this topic.

Fulfilment of assignment — **fulfilled with minor objections**

How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.

I have found quite fine and complete review about 3D printing technologies and materials. It is true on the other hand, that information like this can be found in many other papers, books and theses. It is worse with own original engineering work. It is quite logically based on the use of existing principles and components, but the author does not bring any own invention in fields where not only me but probably also Mubea Company would expected it. The space for the presentation of author´s own abilities in solving technical problems, I see in relation of the variable tangent speed of the filament winded on the spool with other parts of the complete process. This space remained in the work practically unused, I think. This is why, I cannot consider the thesis to be fulfilled without some resting reservations.

Methodology — **correct**

Comment on the correctness of the approach and/or the solution methods.

The method of collecting important information both in the review and the designing part, I consider to be correct. Mainly in the designing part, I am not convinced that it was used effectively and in expected range.

Technical level — **E - sufficient.**

Is the thesis technically sound? How well did the student employ expertise in the field of his/her field of study? Does the student explain clearly what he/she has done?

I credit the author with the potential to work as an engineer designer. On the other hand, I would definitely expect much more extensive design activity leading to a real solution of the assigned problem in such that task as part of a bachelor's thesis.

Formal and language level, scope of thesis — **A - excellent.**

Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?

Better English than mine is…

Selection of sources, citation correctness — **B - very good.**

Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?

No important reservations…

Additional commentary and evaluation (optional)
Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.

III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

In order to fulfill expectations and demands on a bachelor form FME of CTU, let me ask the author to add following details to his work:

- create and introduce an usable idea about a mechanism solving the velocity differences problem,
- explain clearly your idea from above.

The grade that I award for the thesis is **D - satisfactory.**

Date: **29.1.2024** Signature: