THESIS REVIEWER'S REPORT

I. IDENTIFICATION DATA

Thesis title:	**Beam steering assembly**
Author's name:	**Selvam Jeeva Paneer**
Type of thesis :	master
Faculty/Institute:	Faculty of Mechanical Engineering (FME)
Department:	Department of Instrumentation and Control Engineering
Thesis reviewer:	Ing. Karolina Macúchová, Ph.D.
Reviewer's department:	Institute of Physics of the Czech Academy of Sciences

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment **challenging**

How demanding was the assigned project?

The assignment was based on at that time relevant topic which was challenging due to design requirements and limitations (vacuum, space limitation, size of optics, etc.).

Fulfilment of assignment **fulfilled**

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.

The thesis fulfils the assigned task. All goals were achieved to a certain level.

Methodology **correct**

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

The supervisor did a good job leading the student to a proper design methodology.

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?

The student tried his best to fulfill the tasks given in the assigned project. From the practical point of view, the design described in the thesis does not reach expectations for a viable and manufacturable mirror mount that might be used in the HiLase Center.

Formal and language level, scope of thesis **E - sufficient.**

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?

The thesis is organized in a logical way yet seems to be a bit uncollated and not convenient to read. There are many typos, in the text, as well as in notations.

Selection of sources, citation correctness **F - failed.**

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?

Student`s original work is not clearly distinguished. A lot of figures are copied from earlier work in the field with no referred citation. The bibliographic citations do not meet the standards and are sometimes misspelled.

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.

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Although at the beginning the student has been given the offer that his proposed design prototype could be manufactured and tested, he did not take advantage of this offer. He already submitted the thesis twice. When considering the amount of time that the student spent on this topic I would hope for a better design result.

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

The thesis was aimed at designing a steering mirror mount for use under vacuum in a limited space. It was a reasonably challenging practical design task which required various knowledge. The student got acquainted with different types of mirror mounts, methods of adjustment and control. I believe it was a great learning experience for him.

I would like the student to answer these questions:

1. *Explain how is the laser beam reflected from the flat mirror in Figure 20? What are the dimensions of the laser beam when it is reflected under 45°?*
2. *Which type of adjustment elements are capable of a remote control? Which would you choose and why?*

The grade that I award for the thesis is **E - sufficient.**

Date: **26.8.2022** Signature:

Ing. Karolina Macúchová, Ph.D.