THESIS SUPERVISOR'S REPORT

I. IDENTIFICATION DATA

Thesis title:	**Automation of Adjustment of the Sparial Filter.**
Author's name:	**Gilberto Ramos Venegas**
Type of thesis :	master
Faculty/Institute:	Faculty of Mechanical Engineering (FME)
Department:	Instrumentation and Control Engineering
Thesis reviewer:	Doc. Ing. Jan Hošek, Ph.D.
Reviewer's department:	Fine Mechanics and Optics

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	**challenging**

How demanding was the assigned project?

The aim of this master thesis was to propose a system allowing automation adjustment of the optical spatial filter for cleaning up of the laser beam. The topic expected knowledge of physical optics, and get new experience with fine adjustment systems as piezo actuators. It acquires broad knowledge in fine mechanics and optics, automation control, and data processing. Due to this the thesis assignment seems to be pretty challenging.

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 student focused to the thesis problem and successfully fulfilled all assignment points. He was learned the principles and application of the Fourier transform in optical systems, he proposed an algorithm for automatic adjustment of the spatial filter and he performed experiments confirming the system functionality. In this point of view the student overcomes expectation of the thesis assignment.

Activity and independence when creating final thesis	**B - very good.**

Assess whether the student had a positive approach, whether the time limits were met, whether the conception was regularly consulted and whether the student was well prepared for the consultations. Assess the student's ability to work independently.

The student worked very independent what was affected by the restriction due to the coronavirus pandemy. I would prefer more consultation of the student´s work, what leads to lot of work concentrated to the end of the thesis span. Due to this the work do not contain some my recommendations but the work was fulfilled all requirements and the theses was delivered on time.

Technical level	**A - excellent.**

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

The thesis has very good quality and sounds technically. What is even worth is that the algorithm work was experimentally confirmed. Unfortunately, the results are not well summarized and the capture Results do not correspond to the content expected from the Thesis conclusions. In this point of view the most important result of the work is that proposed system is working and it fulfills desired function.

Formal level and language level, scope of thesis	**B - very good.**

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?

Formal level of the thesis is very good. I have to have comments to the work summarizing, what is missing in the thesis text and deteriorates the impression of such a quality work.

Selection of sources, citation correctness	**A - excellent.**

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?

The thesis work refers to 16 referenced sources. They are mainly related to used products and just four of them are related to theoretical backgrounds. They are worth and correctly cited.

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

The student fulfilled assignment of the master thesis and showed he is able to propose, realize and control a complex opto-mechanical system. Unfortunately, text presentation could be better mainly in point of view showing quality of archived result. It can be caused by thesis solution in time of restriction due to the coronavirus pandemy what limited regular consultation and stacked the work on the thesis text to the late term. Despite of not the best level of text presentation I want to highlight that the thesis assignment was completely fulfilled and the proposed system is successfully working what shows the excellent quality of the thesis work.

The grade that I award for the thesis is **A - excellent.**

Date: **24.8.2020**   Signature: