THESIS SUPERVISOR'S REPORT

I. IDENTIFICATION DATA

Thesis title:	**Desing of breaking resistor for methan enviroment**
Author's name:	**Ilya Davidov**
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Mechanical Engineering (FME)
Department:	Department of Instrumentation and Control Engineering
Thesis reviewer:	Lubomír Musálek
Reviewer's department:	Department of Instrumentation and Control Engineering

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	**ordinarily challenging**
How demanding was the assigned project?	
Please insert your comments here.	

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.	
The student fulfilled the 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.	
Student worked independently. He needed help with possibility of desing the resistor	

Technical level	**C - good.**
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?	
This thesis has not praxis because during the construction has been change of resistor. Theory combines electrical and thermal field.	

Formal level 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?	
The work contains a minimum of grammatical errors. The work is readable and well divided into chapters and paragraphs.	

Selection of sources, citation correctness	**Choose an item.**
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 student used 20 citations. The citation are according to the ISO 690: 2011 standard	

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.
Please insert your comments here.

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

The student fulfilled the assignment.
The first part deals with the terotical basis for the calculation of thermal, electric and field flow and the types of sensors that can be used to measure the temperature inside the proposed resistor.
In the second part, the student, based on theory and using the software Agros2D, calculates the individual fields using the finite element method and finds a suitable resistor shape.

In the last part of the bachelor thesis he designs the sensors and uses them to control the transistor controlling the current to the resistor.

Student worked independently. Before submitting the work, the input parameters of the resistor for the locomotive were changed and therefore the resistor was not implemented.

I recommend the thesis for defense.

The grade that I award for the thesis is **B - very good.**

Date: **21.6.2022**   Signature: