

## I. IDENTIFICATION DATA

<b>Thesis name:</b>	<b>Test stand design and automated sequences implementation</b>
<b>Author's name:</b>	<b>Maxime Wach</b>
<b>Type of thesis :</b>	master
<b>Faculty/Institute:</b>	Faculty of Mechanical Engineering (FME)
<b>Department:</b>	Department of Automotive, Combustion Engine and Railway Engineering
<b>Thesis reviewer:</b>	Ing. Martin Biák, Ph.D.
<b>Reviewer's department:</b>	Department of Advanced Powertrains at TU Chemnitz, Germany

## II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b>	<b>ordinarily challenging</b>
<i>Evaluation of thesis difficulty of assignment.</i>	
The assignment is standard: literature survey, design of a test stand and its construction, simulations, validation through tests.	

<b>Satisfaction of assignment</b>	<b>fulfilled with minor objections</b>
<i>Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.</i>	
The presented thesis shows many results. Author even added an additional assignment to compute the energy consumed by the RC vehicle according a real driving cycle based on data measured during a racing event. It seems however as if the documentation of author's work was done just before the thesis submitting. The language level is low compared with the level of the thesis itself. A list of the physical quantities used in the work is missing. Its inclusion (with units) would help understanding the equations immensely. Moreover, the conclusion of the thesis has only half a page, which is unsatisfactory.	

<b>Method of conception</b>	<b>correct</b>
<i>Assess that student has chosen correct approach or solution methods.</i>	
The student approached the given assignment in a proper way. The thesis has a correct structure and information flows naturally.	

<b>Technical level</b>	<b>B - very good.</b>
<i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.</i>	
The author performed a satisfactory literature and market survey and documented the selection of test-stand components from the market survey. The simulations were performed, and the results were presented in a satisfactory amount. Its clear that the work is never finished. The thesis could be followed up with the work of another student. There are errors in some formulas, which will be hopefully corrected during the defense.	

<b>Formal and language level, scope of thesis</b>	<b>D - satisfactory.</b>
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
As mentioned above, the language level of the thesis is low. There are mistakes in grammar, sentences with bad syntax and leftovers from the LaTeX code. The text is however understandable and therefore satisfactory.	

<b>Selection of sources, citation correctness</b>	<b>A - excellent.</b>
<i>Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and in accordance with citation convention and standards.</i>	

The sources are chosen well and they are cited properly.

**Additional commentary and evaluation**

*Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.*

The author needs to understand that the documentation of the work is as important as the work itself. Otherwise, this thesis would receive a better grade.

**III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION**

*Summarize thesis aspects that swayed your final evaluation. Please present apt questions which student should answer during defense.*

The presented master thesis fulfilled the given assignment. The results are interesting and could be a base for another work. The documentation is however behind (language level and the insufficient result discussion).

I evaluate handed thesis with classification grade **C - good**.

In the defense, I would like student to answer the following questions:

1. Please provide a quick overview or diagram of the data flow starting with sensors in the RC car.
2. The coast down method is mentioned several times. Please explain the method briefly.
3. Provide an overview of the major results of your work.
4. On the page 45 you are mentioning different sources of the resistance (electrodes, connections, membrane). Which one is dominating?

Date: **29.8.2019**

Signature: