

I. IDENTIFICATION DATA

Thesis title:	Exhaust emissions from in-use motorcycles
Author's name:	Antonín Voldřich
Type of thesis :	Master's thesis
Faculty/Institute:	Faculty of Mechanical Engineering
Department:	Department of Automotive, Combustion Engine and Railway Engineering
Thesis reviewer:	Martin Pechout
Reviewer's department:	Department of Vehicles and Ground Transport, Czech University of Life Sciences

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	A
<i>How demanding was the assigned project?</i>	
The assignment is up to data concerning an actual topic both regulated and unregulated pollutants form less technically advanced engines.	

Fulfilment of assignment	A
<i>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>	
Student fulfilled the assignment fully. All the main goals were achieved, while there are virtually no incomplete or omitted tasks and no overextended topics included in the thesis.	

Methodology	A
<i>Comment on the correctness of the approach and/or the solution methods.</i>	
The approach of the student is correct. The initial summary of possible methods, resulting in evaluation of the road loads using deceleration as a function of speed, and then various ways to obtaining emission factors in order to address the accuracy and repeatability are followed as required in the assignment.	

Technical level	A
<i>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>	
The technical level is also very good. The results obtained using different setups and instruments are compared and obtained values are briefly interpreted in terms of their impact on air quality.	

Formal and language level, scope of thesis	B
<i>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?</i>	
Some minor improvements of the formal thesis aspects would be beneficiary. For instance the abbreviation "OA" is not explained as it first appears, term "slide of" instead of "slide off" on page 62 and there is a sentence fragment at the end of page 71. The scale axis on some graphs contains negative values as it does not make sense for pollutants concentrations.	

Selection of sources, citation correctness	A
<i>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?</i>	
As the topic of regulated pollutants and especially unregulated pollutants is not very frequent, the student managed to find and process numerous references which are related to the topic. These references are also well used in the text.	

Additional commentary and evaluation (optional)
<i>Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility</i>

of the solution that is presented, the theoretical/formal level, the student's skilfulness, etc.

In general, there are only little questions which can be placed as the approach and results are well described and depicted. One of these possible deeper descriptions is why during engine idle the ambient fresh air is more affecting the measurement than in other engine operating regimes. There is also no detailed description of which parameters are reflected in the Pitot tube correction factor (k in eq. on page 71) function.

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

Summarize your opinion on the thesis and explain your final grading. Pose questions that should be answered during the presentation and defense of the student's work.

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

Date: **February 1, 2021**

Signature: