

## I. IDENTIFICATION DATA

<b>Thesis title:</b>	GASEOUS FUEL INJECTION FOR ENGINE WITH A SCAVENGED PRE-CHAMBER
<b>Author's name:</b>	Akshay Kamane
<b>Type of thesis :</b>	master
<b>Faculty/Institute:</b>	Faculty of Mechanical Engineering (FME)
<b>Department:</b>	12120
<b>Thesis reviewer:</b>	Ing. Marcel Škarohlíd Ph.D.
<b>Reviewer's department:</b>	12201

## II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b> <i>How demanding was the assigned project?</i>	<b>ordinarily challenging</b>
Due to lack of time the reviewer obtained a pdf version of the thesis only. Unfortunately, the official thesis assignment was not included there. Hence the reviewer cannot evaluate this aspect correctly.	

<b>Fulfilment of assignment</b> <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>	<b>fulfilled with major objections</b>
The work hardly fulfilled the assigned tasks	

<b>Methodology</b> <i>Comment on the correctness of the approach and/or the solution methods.</i>	<b>partially applicable</b>
The student choose the simplest model of a ball check valve available from the template library in the GT-Suite. He did not include any parameters describing a contact between the ball and the valve seat and a jet-force effect.	

<b>Technical level</b> <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>	<b>E - sufficient.</b>
Non-return valve model sensitivity analysis was performed only for a small number of parameters. The processed sensitivity analysis is therefore very rough and incomplete and can be misleading.	

<b>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>	<b>E - sufficient.</b>
The structure of the thesis and the text flow in the sections are not clear and fully logical. The reading and understanding of the thesis for a non-expert in the field is extremely difficult.	

<b>Selection of sources, citation correctness</b> <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>	<b>E - sufficient.</b>
There are wrong citations and missing references.	

<b>Additional commentary and evaluation (optional)</b> <i>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.</i>
Please insert your comments here.



### 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 thesis seems to be not complete due to missing parameters. The students does not sufficiently comment the results of his findings and the reader needs to make conclusions on his own. This is visible especially in the chapter 5.3.

Questions:

Can Mr. Kamane comment and describe contact between the ball and the seat and expected impact of the contact parameters on a model results?

Section 5.3. How is it possible to maintain a constant fuel flow rate to the pre-chamber at a constant fuel pressure in different engine speed?

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

Date: **30.8.2019**

Signature: