

**I. IDENTIFICATION DATA**

<b>Thesis name:</b>	Piston Temperature Measurement for a Spark Ignition Engine
<b>Author's name:</b>	<b>Sugesh Balasubramanian</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 supervisor:</b>	Jindřich Hořenín.
<b>Supervisor's department:</b>	Department of Automotive, Combustion Engine and Railway Engineering.

**II. EVALUATION OF INDIVIDUAL CRITERIA**

<b>Assignment</b>	<b>easy</b>
<i>Evaluation of thesis difficulty of assignment.</i>	
The assignment contains all the components of the engineering work: construction, calculations and testing.	

<b>Satisfaction of assignment</b>	<b>fulfilled with major 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 assignment was met without own extensions.	

<b>Activity and independence when creating final thesis</b>	<b>E - sufficient.</b>
<i>Assess that student had positive approach, time limits were met, conception was regularly consulted and was well prepared for consultations. Assess student's ability to work independently.</i>	
The student fulfilled the assignment with minimal self-activity.	

<b>Technical level</b>	<b>D - satisfactory.</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 work includes basic design work, basic calculations and creation of a program for data collection.	

<b>Formal and language level, scope of thesis</b>	<b>E - sufficient.</b>
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
<p>The variable units is missing in the nomenclature list.</p> <p>page 8 no summary of advantages and disadvantages of individual methods is made</p> <p>page 12 chart 3-1 missing variable units of Heat Transfer Coefficient</p> <p>page 20 chart 3-4 is N/mm<sup>2</sup> instead of Mpa it is continue</p> <p>page 39 Central computer should be called as data acquisition computer</p> <p>page 51 Figure 4-14 is mirrored, why?</p> <p>page 53 Figure 4-16 is mirrored, why?</p> <p>page 56 A numeric indicator displays the running average value of the 6 channels.</p> <p>page. 53 a 57 averaging time is not specified.</p>	

<b>Selection of sources, citation correctness</b>	<b>D - satisfactory.</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 list of literature is extensive, but the names of the authors are missing.	

### 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.*

- 1) Figure 4-20 displays numeric indicator called "Running Average [°C]". Description to this indicator is : "A numeric indicator displays the running average value of the 6 channels." The purpose or usage of this value is not explained . Averaging time is not specified .
- 2) Output txt file (Figure 4-22) do not contain column with time of measurement of each data set (row). There is no guarantee time step between values in two rows due to serial communication. Due to this fact, usage of this software as independent solution is limited.

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

*Summarize thesis aspects that swayed your final evaluation.*

**The work includes basic design work, basic calculations and creation of a program for data collection.**

**The student fulfilled the assignment with minimal self-activity.**

I evaluate handed thesis with classification grade **E - sufficient**.

Date: **29.1.2019**

Signature: Ing. Jindřich Hořenín