

I. IDENTIFICATION DATA

Thesis name:	Crank Angle resolved piston temperature measurement
Author's name:	Prathik.S.Neelavara
Type of thesis :	master
Faculty/Institute:	Faculty of Mechanical Engineering (FME)
Department:	Dept. of Automotive, Combustion Engine and Railway
Thesis reviewer:	Ing. Luboš Tomiška
Reviewer's department:	Eaton EEIC, Engine Air Management

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment <i>Evaluation of thesis difficulty of assignment.</i> Assignment is clearly defined	challenging
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Satisfaction of assignment <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> All tasks from assignment were fulfilled	fulfilled
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Method of conception <i>Assess that student has chosen correct approach or solution methods.</i> Selected approach correspond to student's skills, possibilities at host industrial partner and state of the art	correct
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Technical level <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> Thesis clearly describes the trends in the industry and the importance of the piston temperature measurement for development of modern internal combustion engines. Especially the importance of robust piston temperature measurement for engines with high BMEP and high demand on precise emission control. The part of the thesis which describes the piston temperature measurement on research single cylinder engine is well arranged and clear. The results, even though the experiment due to technical issue wasn't finished are clear and also well arranged.	Choose an item.
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Formal and language level, scope of thesis <i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i> Thesis is written clearly. Also the student demonstrates very good English language knowledge.	A - excellent.
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Selection of sources, citation correctness <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> Sources and citations are marked correctly and the overview is well prepared and clear	A - excellent.
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Additional commentary and evaluation <i>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.</i> Very interesting thesis, nice and practical overview of the existing piston temperature measurement methods.	
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III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

The thesis fulfills all criteria needed for final master's thesis. Student clearly presents his technical skill set and very good engineering background needed to achieve Master Degree in mechanical engineering.

I evaluate handed thesis with classification grade A - excellent.

I am proposing for the master's thesis defense presentation following question

1. Do you know another use of „thermal softening method“ for determination of thermal load of another engine components with high thermal load?
2. Is there any trend (ultimate method), which is considered to be used for instance beyond 2025?

Date: 1.9.2018

Signature:



Ing. Luboš Tomiška