CTU
CZECH TECHNICAL UNIVERSITY IN PRAGUE

THESIS REVIEWER'S REPORT

I. IDENTIFICATION DATA

Thesis title:	**Race car monocoque development**
Author's name:	**Antoine LEYGUES**
Type of thesis :	master
Faculty/Institute:	Faculty of Mechanical Engineering (FME)
Department:	Department of Automotive, Combustion Engine and Railway Engineering
Thesis reviewer:	Ing. Filip Tomasch
Reviewer's department:	SICK spol. s r.o.

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment — **challenging**

How demanding was the assigned project?

To correctly design a race car's monocoque is quite challenging, mostly to gather all requirements into one design and to model composite structures so that all of those are fulfilled. Especially since the process of manufacture is usually very cost and labor demanding, one is not allowed any mistakes.

Fulfilment of assignment — **fulfilled with minor objections**

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.

All the proposed goals for this thesis were fulfilled, although the validation of sandwich structures was not completely successful. That is something left to be desired when we are to trust the FEA model.

Methodology — **correct**

Comment on the correctness of the approach and/or the solution methods.

The approach was chosen correctly. Already mentioned testing of real specimen probably should have been tended to with greater care than leftover cuts from a sandwich plate (presumably one of the bulkheads?).

Technical level — **B - very good.**

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?

Technical aspects of this thesis are generally at very good level; however, I would like to see a more solid reasoning for why the CFI results over 1 were all deemed as passing. Towards the end of thesis, author mentions that the previous monocoques were FEM analyzed by an external company and that this one was done in-house to expand team's expertise.

Formal and language level, scope of thesis — **C - good.**

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?

Thesis was quite well organized. There are a several images that are incorrectly annotated and some links missing. It is on a good level for anyone with English as a second language.

Selection of sources, citation correctness — **B - very good.**

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?

Citation standards were maintained. Some of the sources should have been cited more extensively.

Additional commentary and evaluation (optional)

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.

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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.

All assigned goals were successfully met, and apart from some minor mistakes, I believe this thesis was quite well done.

I would like to ask the author for more information:

1. What were the findings from homologation tests?
2. What was the target torsional stiffness for the monocoque? Was this goal achieved?

The grade that I award for the thesis is **B - very good.**

Date: **28.8.2024**

Signature: