

**I. IDENTIFICATION DATA**

<b>Thesis name:</b>	<b>Future body structure concept for Hess busses</b>
<b>Author's name:</b>	<b>Gregoire Bis</b>
<b>Type of thesis :</b>	master
<b>Faculty/Institute:</b>	Faculty of Mechanical Engineering (FME)
<b>Department:</b>	Automotive+Railway engineering
<b>Thesis reviewer:</b>	Jan Wunderlich.
<b>Reviewer's department:</b>	Engineering director / Hess

**II. EVALUATION OF INDIVIDUAL CRITERIA**

<b>Assignment</b>	<b>challenging</b>
<i>Evaluation of thesis difficulty of assignment.</i>	
Wide range of aspects needs consideration – strength/assembly/DFMA/production methods. Expected outcome: CAD concept	

<b>Satisfaction of assignment</b>	<b>fulfilled</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>	
Good overview about basic and general topics as a background. It would be better if this part would be a bit shorter and more focus for the specific project aims and production/supplier inputs. Good structure, expected concept phase complete	

<b>Method of conception</b>	<b>outstanding</b>
<i>Assess that student has chosen correct approach or solution methods.</i>	
V-process and other methods like decision matrix and poka yoke mentioned and used with success. Chapter 1-3 a bit too long, chapter 4+5 should have more content for a Master thesis, project aim should be clearer addressed in chapter 4.1, very good use and explanation of used simplification, good and logic arguments, chapter 5 gives a good overview about project requirements and results	

<b>Technical level</b>	<b>C - good.</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>	
Good basic knowledge quoted, very focused to specific technologies therefor too less literature and research at other not obvious technical field having the same/similar challenges	

<b>Formal and language level, scope of thesis</b>	<b>A - excellent.</b>
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
Clear, correct, easy to understand	

<b>Selection of sources, citation correctness</b>	<b>B - very good.</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>	
Good summary of existing/new concept. Breakdown to weight and cost is a base for further investigation. References and appendix complete, good structured work	

<b>Additional commentary and evaluation</b>
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*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.*

Gregoire was very interested, we had good discussions, he had no problems to integrate himself in production and engineering. He has shown that he is able to use the engineering methods needed to come to decision. Long story short: I would hire him as an design engineer straight away.

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

*Summarize thesis aspects that swayed your final evaluation. Please present apt questions which student should answer during defense.*

Why was the simplified FEA used and what is the benefit? → good for a 1:1 comparison at concept phase

I evaluate handed thesis with classification grade **B - very good.** → **B+**

Date: **23.8.2023**

Signature:

