

I. IDENTIFICATION DATA

Thesis title:	Hybridization of a battle tank
Author's name:	Elisa Tanguy
Type of thesis :	master
Faculty/Institute:	Faculty of Mechanical Engineering (FME)
Department:	Department of Automotive, Combustion Engine and Railway Engineering
Thesis reviewer:	François Deloumeau
Reviewer's department:	Arquus

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	extraordinarily challenging
<i>How demanding was the assigned project?</i>	
The project deals with a classic area for this kind of thesis but was applied in a very specific field which required adaptation, methodology and a lot of work to achieve. This made the work very challenging.	
The student has to update of the High Voltage Model and the global vehicle energy management	

Fulfilment of assignment	fulfilled
<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>	
The primary goal was to identify the possible upgrade of the previous model. Then the student must decide the necessary sufficient level for the battery model and the energy management philosophy (rule base or model base). For that the student must decide model and determine battery sizing, analyze the state of art, and develop the energy management strategy, create a Matlab/Simulink model for the simulation and finally to compare the results with a non-hybrid model. All these tasks were achieved.	

Methodology	correct
<i>Comment on the correctness of the approach and/or the solution methods.</i>	
For the model, ARQUUS Company fixed the level to avoid to important development. The student built its own analysis of the state of the art, proposed to ARQUUS the energy management strategy, and implement this global vehicle model.	

Technical level	B - very good.
<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>	
The Energy Control System Management run correctly, and the first results are encouraging	

Formal and language level, scope of thesis	B - very good.
<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>	
Better than its thesis reviewer!!	

Selection of sources, citation correctness	B - very good.
<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>	
Good and exhaustive work	

Additional commentary and evaluation (optional)
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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.

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

Date: **24.8.2023**

Signature:

