

I. IDENTIFICATION DATA

Thesis name:	<b>Design of Experimental Unit Based on Absorption PowerCycle with LiBr Solution Working Fluid</b>
Author's name:	DÁVID JURAJ SZÜCS
Type of thesis :	master
Faculty/Institute:	Faculty of Mechanical Engineering (FME)
Department:	Click here to enter text.
Thesis reviewer:	Olivier Dumont
Reviewer's department:	University of Liege belgium

II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b> <i>Evaluation of thesis difficulty of assignment.</i>	<b>challenging</b>
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<b>Satisfaction of assignment</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>	<b>fulfilled with minor objections</b>
<p>In the introduction 2020 objectives seems very short term for the absorption technology, 2030 and 2050 objectives would be more relevant I think</p> <p>Some graphs could have been provided showing the range of temperature and power were ORC performs better than RC a perspectives section would have been nice with possible improvement of models, etc</p> <p>it would have been interesting to study part load performance with the model</p> <p>more parametric studies evaluating the performance in function of all inputs and parameters would have been interesting</p> <p>A chart with outputs, inputs and parameters would have been nice to deeply understand the model</p>	

<b>Method of conception</b> <i>Assess that student has chosen correct approach or solution methods.</i>	<b>correct</b>
The method of conception is clearly presented and allows to reproduce the results	

<b>Technical level</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>	<b>C - good.</b>
<p>ORC are better than RC not only because of density, more advantages could have been explained</p> <p>Is it more interesting to use an orc with low condensation temperature or increase the condensation temperature with a bottoming cycle? It would be very interesting to compare both case based on simulations</p> <p>Why using a 0.4kW turbine is the nominal sizing power is 3.1kW?</p> <p>Is a turbine suited for such a low scale application? What about vomometric machines?</p> <p>Why choose 10K for TTD? Why not 5K? did you do any parametric study to see the influence on performance?</p> <p>Is there any proof that 30 elements is sufficient to provide accurate calculation of the HX?</p> <p>The negligible thermal resistance of the wall should be proven</p> <p>Fig 4.6 8.8m of diameter for a tube sounds large</p>	

<b>Formal and language level, scope of thesis</b> <i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	<b>E - sufficient.</b>
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The scope of the thesis is clearly presented but many mistakes are found in the text. Some examples below:  
 the character of the fluid  
 significantly less research  
 enormous range  
 naturally occurring heat sources  
 Besides this most dominant use  
 this work is concentrating  
 however, are not advantageous in lower temperature applications.  
 This is mainly because, steam, in low-temperature applications and thus is low-pressure state, result in very low density.  
 It is also expected of  
 in all of the  
 Literature  
 for heat source of the temperature of 150 °C  
 in knowledge of this perspective  
 but most of it goes the building's space heating.  
 mixture that are is  
 might be of a more significant issue  
 An APC unit presented here  
 in a one set

**Selection of sources, citation correctness**

**B - very good.**

*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.*

Clear in the report

**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.*

**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.*

*Globally a good work! The English level could be improved but it would be exiting to see the experimental results.*

*Questions:*

Is it more interesting to use an orc with low condensation temperature or increase the condensation temperature with a bottoming cycle?

Why using a 0.4kW turbine is the nominal sizing power is 3.1kW?

Is a turbine suited for such a low scale application? What about vomometric machines?

Why choose 10K for TTD? Why not 5K? did you do any parametric study to see the influence on performance?  
Is there any proof that 30 elements is sufficient to provide accurate calculation of the HX?

I evaluate handed thesis with classification grade **C - good**.

Date: **12.6.2019**

Signature:

