

I. IDENTIFICATION DATA

Thesis title:	A basic comparism of the hygrosopic cycle with the classical and organic Rankine cycle
Author's name:	Mahrougi Abduljalil Hashim
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Mechanical Engineering (FME)
Department:	Energy engineering
Thesis Supervisor:	Ing. Ondřej Bartoš, PhD.
Supervisors's department:	Energy engineering

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	challenging
<i>How demanding was the assigned project?</i>	
The presented work was very challenging from the two reasons. The hygrosopic cycle is not well-known cycle and the number of references is limited and second reason is that the cycle works out of the common range of the LiBr water mixture properties which is mostly used for the cooling.	

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>	
All the tasks were satisfied. The student answers all the questions, of course in the view of the requirements of the Bachelor's thesis.	

Activity and independence when creating final thesis	A - excellent.
<i>Assess whether the student had a positive approach, whether the time limits were met, whether the conception was regularly consulted and whether the student was well prepared for the consultations. Assess the student's ability to work independently.</i>	
Student has worked independently, he's studied alone the theory of the cycles and he was able to prepare Matlab script for LiBr mixture properties.	

Technical level	A - excellent.
<i>Is the thesis technically sound? How well did the student employ expertise in his/her field of study? Does the student explain clearly what he/she has done?</i>	
The technical level of the work is good and fully satisfied the needs of the Bachelor thesis. The topic is difficult because the Hygrosopic cycle exists only in one unit and the there are only few references. The work is more or less qualitative study and the description of the particular devices (boiler, absorber) is necessary study beyond this work. The compare of 4 cycles is done.	

Formal level 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>	
The work is written in English. The language level I good. Only small mistakes are in the work for example degree of Celsius is written without circle.	

Selection of sources, citation correctness	A - excellent.
<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>	
In the work 23 references are used. The references are used in the text of the thesis.	

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.

Please insert your comments here.

III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

The Student's Bachelor thesis has a good standard. The topic of the work is difficult and the student had to learn many new information about energy cycles, thermodynamics and fluid properties. He's worked independently, but he's regularly discussed the progress. The qualitative analysis shows that the hygroscopic cycle is competitive with other types of the energy cycles with the reduction of the cooling water usage. The further study is necessary for all parts of the cycle especially boiler and absorber together with the optimization of the cycle. After the judging all the circumstances I assessed the work with the mark A.

The grade that I award for the thesis is **A - excellent**.

Date: **14.6.2022**

Signature: