

I. IDENTIFICATION DATA

Thesis title:	Didactic tasks in the GRAFCET language for the virtual PLC (Programmable Logic Controller) in the FluidSIM® software.
Author's name:	Elbirlik Aydin
Type of thesis :	master
Faculty/Institute:	Faculty of Mechanical Engineering (FME)
Department:	Instrumentation and Control Engineering
Thesis reviewer:	Ing. Filip Škeřík
Reviewer's department:	Festo spol. s r. o.

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment <i>How demanding was the assigned project?</i>	ordinarily challenging
The project given seems easy to do, but it needs deep understanding of many topics from the area of the Industrial Automation to solve it properly.	
Fulfilment of assignment <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>	fulfilled with minor objections
The Master thesis meets all points given in the description of the task. Some of them could be done in higher quality when more time would be at disposal for the solution.	
Activity and independence when creating final thesis <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>	B - very good.
Student had a positive approach, time limits were met. Student has been working individually upon the topic given, he has solved nearly all the problems alone, consultations have been used only at the end prior the delivery.	
Technical level <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>	B - very good.
Student has employed expertise in his field of study, he has been able to merge knowledge gained from many Courses and designed the solution of the particular examples well. He explained shortly but clearly what he has done.	
Formal level and language level, scope of thesis <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>	B - very good.
Formalisms and notations are used nearly properly. Thesis is organized in a logical way and the scope corresponds to the complexity of the task. The formal and language level corresponds to the master thesis at the CTU - FME.	
Selection of sources, citation correctness <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>	A - excellent.
All citations are in accordance with the valid standards. The student has used available sources well and software at disposal also very well.	

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.

The work covers very interesting topic and is prepared on a high technical level. This Master thesis can be very useful for students in the future Courses related to the Industrial Automation. Examples solved there actually create the bridge between old and new ways of solutions in the basic and advanced level of the Electropneumatics. There is here demonstrated very well the way from the algorithms created by the structure of the hardware components in the electrical circuit to the algorithms written as a software in the modern programming language used in today s Programmable Logic Controllers (PLCs).

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.

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

Date: **22.6.2021**

Signature: *Ing. Marie Martinásková, Ph.D.*