# THESIS REVIEWER'S REPORT

## I. IDENTIFICATION DATA

| | |
|---|---|
| **Thesis title:** | **Control and visualization of one axis drive** |
| **Author's name:** | **Khajanchi Niken Rajeshkumar** |
| **Type of thesis :** | master |
| **Faculty/Institute:** | Faculty of Electrical Engineering (FEE) |
| **Department:** | Department of Electrical Power Engeneering |
| **Thesis reviewer:** | Ing. Martin Kozák |
| **Reviewer's department:** | Siemens, s.r.o. |

## II. EVALUATION OF INDIVIDUAL CRITERIA

| **Assignment** | **ordinarily challenging** |
|---|---|

*How demanding was the assigned project?*

The difficulty of the assignment is reasonable for the diploma thesis.

| **Fulfilment of assignment** | **fulfilled with minor objections** |
|---|---|

*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.*

Unfortunately, the assignment was not fulfilled in all points. The student had to start communication between servo drive and PLC and control it too. In the thesis is not properly described where the problem was.

| **Methodology** | **correct** |
|---|---|

*Comment on the correctness of the approach and/or the solution methods.*

The solution procedure was correctly based on its assignment.

| **Technical level** | **E - sufficient.** |
|---|---|

*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?*

The theoretical part of the thesis relatively well describes the issues needed for the practical part. There is only a minimum of discrepancies. In the practical part, unfortunately, the assignment was changed from a more demanding control of the servo drive to a primitive start and reversal of the drive. This greatly degraded this final work and student does not describe where he had a problem and how he tried to solve it. By losing the servo drive from the practical part, it is relatively brief.

| **Formal and language level, scope of thesis** | **C - good.** |
|---|---|

*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?*

However, sometimes the words are repeated several times in sentences and on pages 55 and 56 a different font appears than elsewhere. The work uses a special numbering of the introductory pages - it should have been deleted.

| **Selection of sources, citation correctness** | **A - excellent.** |
|---|---|

*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?*

A total of 25 sources were used in the work, which are enough. The sources were duly cited in the work.

| **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 aim of this thesis was to create a complex sample task consisting of a servo drive, PLC and HMI panel. Unfortunately, the student failed to put the servo drive into operation and replaced this part with a simple contactor start-up and reversing of the drive using bit logic from PLC. Specific drive problems have not been described here. The other parts of this work are not bad, so it is a pity that the student did not pay more attention to the issue of servo drive, although there are sample videos and specific instructions for V90.*

*The reviewer has the following questions:*

*1) Can you explain to the committee where was a problem with the servo drive configuration? How did you plan to control it? Centrally or decentrally?*

*2) What are the advantages and disadvantages of direct connection of an asynchronous motor to the power supply compared to using a frequency converter?*

The grade that I award for the thesis is **D - satisfactory.**

Date: **23.8.2020**                                  Signature: