I. IDENTIFICATION DATA

Thesis name:	Optimizing of the sequential line
Author's name:	Yuvaprabhu Manoharan
Type of thesis :	master
Faculty/Institute:	Faculty of Mechanical Engineering (FME)
Department:	Department of Process Engineering
Thesis supervisor:	Ing. Michal Netušil Ph.D.
Supervisor's department:	Department of Process Engineering

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment   **challenging**

Evaluation of thesis difficulty of assignment.

Find solutions for minimizing the consumption of chemicals, waste and energy for the sequential coating lines. The main aim is identification of the places, which limit the production capacity and find a solution for the capacity increase. For that an industrial data will be provided.

Satisfaction of assignment   **fulfilled with minor objections**

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.

The minor objections are:

not clear explanation of the calculations used,

not fully explained the bottle neck identification.

Activity and independence when creating final thesis   **C - good.**

Assess that student had positive approach, time limits were met, conception was regularly consulted and was well prepared for consultations. Assess student's ability to work independently.

Student had positive approach.

The time limits set during the regular appointments were met.

Conception was regularly consulted and student was well prepared for consultations.

Student's ability to work independently was limited and leadership was time to time required.

Technical level   **B - very good.**

Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.

The thesis is focused on a specific topic requiring understanding of principles behind knowledge gained during the basic study.

Technical data taken from industrial environment were processed correctly.

The main software tools used are AutoCad and MS Excel.

Formal and language level, scope of thesis   **D - satisfactory.**

Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.

Language level was poor.

The arrangement of thesis was logical and according to the standards.

Selection of sources, citation correctness   **C - 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.

SUPERVISOR'S OPINION OF
FINAL THESIS

Student was active in obtaining and using study materials e.g. he absolved an excursion in the industrial process.
Sources were partly given by the thesis leader and the selection of missing information was from relevant sources.
Literature research is correctly distinguished from own results and thoughts.
Citation ethics has not been breached.
Bibliographic citations are complete but not in full accordance with citation standards.

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.
The primary goals of thesis were achieved.
The level of theoretical results is satisfactory.
The level and functionality of technical conception is very good.
The main handicap of the thesis is bad language level and incomplete explanation of the calculation procedure.

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION
Summarize thesis aspects that swayed your final evaluation.
The student was very active and responded fast. However, some remarks were not reflected during the revisions of the thesis. The technical level is high (P&IDs, layout, equipment sizes etc.). Conceptual design of the sequential coating line is done correctly and reflects the aims of the thesis. I appreciate the use of AutoCad and MS Excel software during the elaboration. The main handicap of the thesis is bad language level and incomplete explanation of the calculation procedure.

Questions for defense:

p.47 – Figure 15: please explain the benefits/drawbacks of the selected line disposition.

p.56 - Painting process calculation formulas: Why for Water price per unit, Price of wastewater disposal, Maintenance cost per unit etc. you use Energy loss factor. Does the definition of the Energy loss factor differ in each case?

p.67 – Figure 18: please explain/show the source of pie chart values.

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

Date: **29.8.2017**   Signature: