

I. IDENTIFICATION DATA

Thesis name:	Robotics in Construction of Concrete and Masonry Structures
Author's name:	Anudari Nyamsuren
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Civil Engineering (FCE)
Department:	Department of Concrete and Masonry Structures
Thesis supervisor:	Ing. Petr Bílý, Ph.D.
Supervisor's department:	Department of Concrete and Masonry Structures

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	challenging
<i>Evaluation of thesis difficulty of assignment.</i>	
The thesis was focused on the review of the use of robotics in construction with focus on the area of concrete and masonry structures. The student could not rely on her knowledge gained in the basic courses of her study. Therefore the assignment should be classified as challenging.	

Satisfaction of assignment	fulfilled
<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>	
All the objectives of the thesis defined in the assignment were fulfilled successfully.	

Activity and independence when creating final thesis	A - excellent.
<i>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.</i>	
The student worked on her thesis independently in the course of the semester. The conception of the thesis was consulted sufficiently. In the beginning, the student spent a lot of time and effort doing an extensive literature survey which was crucial for the thesis. Then she continued writing the thesis without any problems.	

Technical level	C - good.
<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>	
The thesis has a good technical level. After providing the necessary background on robotics in general, it summarizes current applications of robotics in the construction industry and it specifically aims at its exploitation in the area of concrete and masonry structures. Two types of bricklaying robots are described in detail. An evaluation of advantages, challenges and possible further developments of robotics in construction industry are discussed.	
The only weakness (but quite a substantial one) is that the thesis is basically just a state-of-the-art report, without a contribution of the author to the development of the subject area. Own proposals of new ways of exploitation of robotics in construction industry would be appreciated.	

Formal and language level, scope of thesis	A - excellent.
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
The language level is excellent as well as typographical arrangement of the thesis. Any reader will enjoy reading the thesis as it is very well written.	

Selection of sources, citation correctness

A - excellent.

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.

The student performed an extensive literature survey on the given topic. The bibliography contains more than 100 items which is an extraordinary high number for a bachelor diploma thesis. This clearly shows the dedication of the student to the topic. The information gathered from the literature was skillfully processed and organized.

Student used relevant sources. Citation ethics has not been breached and all bibliographic citations are complete and in accordance with citation convention and standards. However, the Chicago style of citations that was used is not very common and another style should be preferred in further works of the author.

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.

I have no more comments.

III. OVERALL EVALUATION, CLASSIFICATION SUGGESTION

The thesis is a valuable source of information for anyone who would like to begin his studies in the area of the use of robots in the construction industry. The student dedicated a lot of time and effort to an extensive literature survey and prepared a comprehensive report on the subject, evaluating also its advantages and challenges. The thesis is very well written. However, a stronger contribution of the author to the development of the subject area would be appreciated.

I evaluate handed thesis with classification grade **B - very good**.

Date: **31.5.2019**

Signature: *Petr Bílý*