

I. IDENTIFICATION DATA

Thesis name:	Conservation of 20 th Century Concrete Buildings – The Case of the Strahov Stadium in Prague
Author's name:	Bruno Favoretto Silva
Type of thesis :	Master thesis
Faculty/Institute:	Czech Technical University in Prague
Department:	Department of Mechanics
Thesis supervisor:	Cristiana Lara Nunes
Supervisor's department:	Institute of Theoretical and Applied Mechanics of the Czech Academy of Sciences

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	Difficult
<i>Evaluation of thesis difficulty of assignment.</i>	
<p>The thesis work was very challenging because the conservation of 20th century concrete structures is an emerging field of research with many complex interdisciplinary aspects. Although there are increasing numbers of publications on early concrete, information on the various types of concrete used during the 20th century is scattered and has not yet reached a level of maturity where patterns of deterioration and durability have been identified and related to specific concrete system types.</p> <p>Bruno Favoretto Silva selected a case study with a high level of difficulty (the Strahov stadium in Prague), but has been well devoted in its assessment. Important references on the historical and social background of the case study were in Czech, which posed an extra difficulty in the assessment.</p>	

Satisfaction of assignment	Satisfied
<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>	
<p>The main aim of the thesis, which was evaluating the condition of 20th century concrete buildings, focusing on a case study in Prague (the Strahov stadium) was overall achieved.</p> <p>Two of the five thesis' assignments could have been be more developed:</p> <ol style="list-style-type: none"> 1) More detailed steps in the proposal for conservation and maintenance, particularly in relation with the assessment performed. Further analysis required to gain better understanding about the condition of the structure could have also been proposed. 2) A more detailed appreciation of the recently developed tool for the visual inspection of early concrete structures - the MDCS (Monument Diagnosis Conservation System) - used in the assessment of the case study; and <p>The thesis workplan did not include the analysis of samples from the case study, but Bruno Favoretto Silva showed a deep interest in including this experimental part in the assessment. Given the difficulty in interpreting results from analytical measurements in such complex materials without background experience, the results are satisfactory and should be evaluated as an extra effort.</p>	

Activity and independence when creating final thesis	B
<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>	
<p>Bruno F. Silva showed a very positive engagement on the thesis work from the very beginning, was very organized, though could have been more focused during consultations. I believe Bruno is on a good path to work independently.</p>	

Technical level	B
<i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by</i>	

experience.

Bruno F. Silva demonstrated he has acquired fundamental knowledge on how to assess conservation of historic concrete structures. This is well reflected in the thorough state-of-the-art and inspection of the case study. The knowledge gained could have been further highlighted in the proposal and conclusive section.

Formal and language level, scope of thesis

B

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

The thesis is well structured. Given that the student is not a native English speaker, I consider the language level as good. The main language problems are related to the sectioning of the text in too many paragraphs. Additionally, there are some minor issues with missing articles and use of verbs.

Selection of sources, citation correctness

C

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.

In general, the student cited key references on 20th century concrete research, the most relevant sources available about the Strahov stadium, and made a good synthesis of the literature consulted. Unfortunately, there are a few gaps in the referencing of some paragraphs (section 4.1.1-Social and Political Context, 1st, 3rd, and 6th paragraphs of section 4.1.2-Construction History) and figures throughout the State-of-the-Art (Figures 2, 4-9, 11-27) and Case Study chapters (29-34, 36, 39-41, 48).

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.

Please insert your commentary (voluntary evaluation).

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

Summarize thesis aspects that swayed your final evaluation.

The thesis was performed within the scope of the ongoing international research project CONSECH20 (CONSErvation of 20th century concrete Cultural Heritage in urban changing environments) and concerns the assessment of the condition of a case study (the Strahov stadium) that the student selected from the list of buildings considered in the project. The work was based on a sound review of existing literature and visual inspection of the case study to propose recommendations for the conservation and maintenance of the case study, though the recommendations could have more comprehensive.

I evaluate handed thesis with classification grade **B**

Date: **18.7.2019**

Signature: