



CZECH TECHNICAL UNIVERSITY IN PRAGUE

Faculty of Civil Engineering

Thákurova 7, 166 29 Prague 6, Czech Republic

MASTER'S THESIS PROPOSAL

study programme: Civil Engineering
study branch: Advanced Masters in Structural Analysis of Monuments and Historical Constructions
academic year: 2018/2019

Student's name and surname: Bruno Favoretto Silva
Department: Department of Mechanics
Thesis supervisor: Cristiana Lara Nuñez
Thesis title: Conservation of 20th Century Concrete Buildings - The Case of the Strahov Stadium in Prague
Thesis title in English: see above

Framework content: Concrete is one of the most relevant construction materials of the 20th century, but both its tangible and intangible values are deteriorating.

This work aims to understand the materials, building techniques, and deterioration mechanisms of 20th century concrete buildings, focusing on the Strahov stadium, a landmark building in Prague, Czech Republic. Relevant architectural, historic information, social relevance, and assessment of the current state of conservation was performed for recommending a proposal for further analysis in view of its preservation for future use.

The Strahov stadium constitutes a representative atlas of the most important concrete damages. The structure is severely damaged by different kinds of anomalies and needs urgent intervention. The two sections of the stadium, which are in a derelict condition (the North and South tribunes) were addressed in this thesis.

The main deterioration mechanisms observed in the stadium are related to lack of usage and maintenance. A recent glossary available for the identification of concrete damage types (Monument Diagnosis and Conservation System) was used for the diagnosis and a few recommendations for its improvement were done.

A few samples of concrete were collected and analyzed to identify the composition and condition of the materials. Based on the assessment performed, recommendations for further analysis and general preservation and maintenance proposals were made.

Assignment date: 28/06/2019

Submission date: 8/08/2019

If the student fails to submit the Master's thesis on time, they are obliged to justify this fact in advance in writing, if this request (submitted through the Student Registrar) is granted by the Dean, the Dean will assign the student a substitute date for holding the final graduation examination (2 attempts for FGE remain). If this fact is not appropriately excused or if the request is not granted by the Dean, the Dean will assign the student a date for retaking the final graduation examination, FGE can be retaken only once. (Study and Examination Code, Art 22, Par 3, 4.)

The student takes notice of the obligation of working out the Master's thesis on their own, without any outside help, except for consultation. The list of references, other sources and names of consultants must be included in the Master's thesis.

Lara Paulos K.
Master's thesis supervisor

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Head of department

Date of Master's thesis proposal take over: July 2019

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Bruno Silva
Student

This form must be completed in 3 copies – 1x department, 1x student, 1x Student Registrar (sent by department)

No later than by the end of the 2nd week of instruction in the semester, the department shall send one copy of BT Proposal to the Student Registrar and enter data into the faculty information system KOS. (Dean's Instruction for Implementation of Study Programmes and FGE at FCE CTU Art. 5, Par. 7)