CTU CZECH TECHNICAL UNIVERSITY IN PRAGUE

THESIS REVIEWER'S REPORT

I. IDENTIFICATION DATA

Thesis title: Structural Analysis of a Historic Reinforced Concrete Building - Fuchs' Cafe in Prague

Author's name: Bradley John Scheuer

Type of thesis: master

Faculty/Institute: Faculty of Civil Engineering (FCE) **Department:** Department of Mechanics

Thesis reviewer: Prof. Ing. Petr Štemberk, Ph.D., D.Eng.

Reviewer's department: Department of Concrete and Masonry Structures

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment challenging

How demanding was the assigned project?

The assignment focused on structural analysis of a historical mainly reinforced concrete building and on assessment of its health. For that, it was necessary to review the available documentation and possibly obtain in-situ information.

Fulfilment of assignment fulfilled

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.

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Methodology correct

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

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Technical level A - excellent.

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 review and description of the current state of the structure are quite deep and insightful. Good command of numerical analysis and engineering insight.

Formal and language level, scope of thesis

A - excellent.

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?

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?

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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.

The second chapter, History, is very well conceived and evidences that the student understands the difference between designing and constructing a new building and reconstructing an aged monument. The depth of the research into the historical context and mindset of the era, which, in the end, affects the quality of the structure, and what is expected to come from the reconstruction, are spectacular. The students also shows, throughout the thesis, a skill in explaining his

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ideas related to assessment of structural behavior alterations and material performance under given conditions, and how to reflect these in the recommended remedial interventions.

III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

Summarize your opinion on the thesis and explain your final grading. Pose questions that should be answered during the presentation and defense of the student's work.

Thru this thesis, the student showed that he understands the specifics of rehabilitation of historical monuments and the related level of mental and skill demand.

Questions:

The grade that I award for the thesis is A - excellent.

- 1. Let us for now disregard the insurance and legal issues and their relation to application of building standards. What does the student think about adherence to the latest building standards when a centuries old building is reconstructed from the engineering perspective? Does it help or hurt the reconstructed building? Offer some examples, both positive and negative.
- 2. Imagine a monument, a nationally precious building, which is about to collapse and you are asked to decide about its demolition, or rehabilitation. Choose an example monument close to yourself and explain the flow of your decision-making, what criteria to consider, how to approach the involved parties, etc. Try to explain these for situations with both the bitter ending and happy ending. Where the major difference comes from?

Date: 21.7.2020	Signature:	