

**REVIEWER'S FORM
for thesis evaluation**



1. Identification of the student

Student:	Yasser Sidaoui
Thesis:	Proposal of Measures for Preserving the Historical Fresco of the Assumption of the Virgin Mary by V.V.Reiner
1 st Institution:	UPC Barcelona/UNIPD Padova
2 nd Institution:	Czech Technical University in Prague
Academic year:	2016/2017

2. Identification of the reviewer

Name:	Jiří Hirš
Institution:	Brno University of Technology, Faculty of Civil Engineering, Institute of Building Services
Position:	Associated professor, Head of Institute of Building Services

3. Fulfillment of thesis goals

excellent <input type="checkbox"/>	above aver. <input type="checkbox"/>	average <input checked="" type="checkbox"/>	below aver. <input type="checkbox"/>	weak <input type="checkbox"/>
Comments:				
<p>Goal of the thesis was assessing the current condition of the fresco pavilion and the extent of condensation. The detail steps were the proposals for the use of pavilion with fresco, determining the appropriate temperature and humidity parameters of the indoor environment with regard to the current condition and the newly designed function and in particular the preservation of historical fresco, comparison of the energy demand between the current condition & the newly designed function and comparison of the energy cost between different energy sources.</p> <p>The student has designed a simple way to use a pavilion with a fresco. Based on the literature, he determined the appropriate conditions of an internal microclimate to preserve the artistic value of the fresco. He performed the simulation of each variants and evaluated it using the performance index. He calculated the energy demand of the proposed variants, valued the operating costs and compared them.</p> <p>The goal and all the partial steps have been fulfilled to a sufficient extent.</p>				

4. Academic/scientific/technical quality

excellent <input type="checkbox"/>	above aver. <input type="checkbox"/>	average <input checked="" type="checkbox"/>	below aver. <input type="checkbox"/>	weak <input type="checkbox"/>
Comments:				
<p>The diploma thesis include only simple theoretical part of the issue, not include detailed description of boundary conditions (annual occupancy plan, type of activity, ventilation), description of model simplification and thermal and technical characteristics of the pavilion building.</p>				

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The student has developed a building model in Design Builder software and has simulated selected variants to evaluate condensation frequency on fresco. The contribution of the work I see in the creation of the building model, the design of the variant solution of the operational states and the evaluation of the simulation results, including the economical evaluation.

5. Formal arrangement of the thesis and level of language

excellent above aver. average below aver. weak

Comments:

There are several inaccuracies in the text, some graphs have very thick lines of the monitored variables, tables are suitably added. The structure is logical and the description is brief.

6. Further comments

The diploma thesis meets the requirements of this type of final university work. The student has demonstrated the necessary knowledge to solve the assigned task. The thesis I recommend for the defense.

Questions for discussion:

1. How do the structural details and properties of the pavilion correlate with the model?
2. What is the effect of ventilation of the pavilion building on the solution of the given topic? Was the ventilation mode considered in the simulation?

7. Grade: C (good)

Use the following scale

A (excellent)	B (very good)	C (good)	D (satisfactory)	E (sufficient)	F (fail)
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Brno

July 17, 2017

The Reviewer,

Assoc. prof. Jiří Hirš