**THESIS EVALUATION:** OPPONENT EVALUATION

**Author name:** Md Tanzir Hasan, B.Sc.

**Thesis title:** Increase Retention Properties of Aquadesk Materials

**Opponent:** MSc. Fatma Yalcinkaya, PhD.

**Opponent workplace:** Faculty of Mechatronics, Informatics and Interdisciplinary Studies, Technical University of Liberec

**Overall assessment:**

This thesis is about creating an aquadesk board that can be used as a base or vegetation board in a green roof without using any chemicals. The method is environmentally friendly. Moreover, it is sustainable. During the thesis, the water retention properties of the materials are improved.

The content was prepared carefully, and literature research was done very well. The thesis brings some novelties to the research field. The theoretical part, as well as the tests and analyses, are sufficient to achieve the study's goal

There are some remark needs to be considered:

Some of the literature was mentioned as full name of article and journal. It could be better to show them as reference with the Authors' names.

In-Page 30, it mentioned Fig. 2. However, Fig.2 is not valid in the thesis. Probably, the author would like to mention about Figure 3.7.3.

Similarly, on page number 34, the Figure number was not given. Instead of writing Fig., it could be better to write numbers together.

However, all these remarks are not significant compared to Author's objective and achievements. This work is appropriate for a master's thesis.

**Questions for the defense:**

This thesis aims to use recycling material. What about the recycling of prepared aquadesk boards? The boards are prepared in a hybrid structure, PET, flax, absorbent and bicomponent. How to recycling these boards?

What is the material of absorbent?

In Fig. 5.2. there is a graph of samples compared to the company's samples. What are the differences between company samples and samples in this thesis? It seems like there are 8 samples from the company. Was the company's sample prepared the same ratio as in this thesis? If yes, what is the reason for different % WR?

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**Overall classification and recommendation:**

I suggest classifying this work by grade: Excellent (1)

By signing, I certify that I am not in any personal relationship with the author of the thesis.

In Liberec 6th September 2021

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