UNIVERSITI TEKNOLOGI MARA PERAK

BRANCH

HYDROCERAMIC WALL INSULATION

IZDEEAN AIMAN BIN SIKH MOHAMAD

Innovation project report submitted in partial fulfilment of the

requirements for the degree of

Bachelor of Science (Hons.) Construction Technology

Faculty of Architecture, Planning & Surveying

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AUTHOR'S DECLARATION

I declare that the work in this innovation project was carried out in accordance with theregulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This topic has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

In the event that my innovation project report, be found to violate the conditions mentioned above, I voluntary waive the right of conferment of my degree and agree be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

Name of Student	:	Izdeean Aiman Bin Sikh Mohamad
Student I.D. No.	:	2020816364
Programme	:	Bachelor of Science (Hons) ConstructionTechnology
Faculty	:	Architecture, Planning & Surveying
Innovation Project Title	:	Hydroceramic Wall Insulation
Signature of Student	:	……..
Date	:	July 2022

ABSTRACT

Seri Iskandar is known to have extremely hot weather throughout the year. On a hot day in Seri Iskandar, the brick walls absorb and hold more heat, increasing the temperature inside. To identify the issues related to brick wall to overcome the heat issues, the concept of auto-cooling system for the wall is proposed for implementation on campus. The concept of Hydroceramic Wall Insulation comes from the combination of hydrogel, ceramic, and stretching fabric. The term "hydrogel" refers to a crosslinked three-dimensional polymeric network structure that can absorb and hold large volumes of water. Since hydrogel has the potential to cool an area, it is used as an insulation for wall panels. The versatility of Hydroceramic Wall Insulation is wonderful as it could deal with all the stated issues and problems. The wall could cool itself when it is affected by heat by evaporating the hydrogels that has absorbed water from the pump system. High heat and humidity can cause heat-related sickness, such as heat cramps, heat exhaustion, and heat stroke. Heat illness can arise when the body"s ability to cool itself is compromised, or when there are insufficient quantities of fluid or salt in the body because of sweating or dehydration. Heat-related illnesses become more common as the combination of temperature and relative humidity rises.

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