

**UNIVERSITI TEKNOLOGI MARA PERAK
BRANCH**

**SMART MAGNETIC JOINTING SYSTEM
FOR INTERNAL WALL PARTITION**

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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 report was carried out in accordance with the regulations 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 voluntarily waive the right of conferment of my degree and agree be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

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ABSTRACT

The Smart Magnetic Jointing System for Internal Wall Partition is a new innovative product that will be produced to overcome the issues of internal wall partition in the construction industry, such as connections issues of wall. The issues have an effect of vibration. The bolted joint having high effect of vibration. Under the vibrational load the strength of the joint is decreases. The accuracy of bolted joint is totally depending upon the tightening of the joint. Also depend on the friction between nut and bolt. Manpower is required to handle and construct the wall partition, but this demand can cause a lot of maintenance and cost. The aim of the study is to develop an innovative jointing system for wall partition in order to address the problem of connection issue of walls while help to increase wall efficiency, reduce time and cost. Referring to the previous research, the jointing issue of wall has resulted in numerous concerns. All the concerns have affected the quality of the internal wall partition. The method of analysis is done qualitatively which are by desktop studies, literature review and simulation. Observation and data analysis, which is data thinking, were used to collect the data. By making observations on wall partition and analysis the issues, the key findings in the context of the whole study have been identified to demonstrate the performance of the new innovation idea. The SketchUp application is also used to give a clear description of the process in making new innovative products. Where the desktop study and literature review are focuses on the observation on the performance of common wall types that been used mainly for residential, office, or commercial building. Overall, the implications of this study will make the construction industry more advances with technology and the performance of innovation product so that the potential of this sustainable wall partition idea for green building concept can be delivered clearer.

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