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CHALLENGES AND IMPROVEMENTS IN IMPLEMENTING INDUSTRIALISED BUILDING SYSTEM (IBS) OF RAILWAY CONSTRUCTION IN MALAYSIA

Dissertation submitted in partial fulfilment
of the requirement for the award of
Bachelor of Quantity Surveying (Honours)

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DECLARATION

"I declare that this dissertation is the result of my own research and that all sources are acknowledged in the references"

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Date : 24 JUNE 2024 .....

ABSTRACT

Industrialized Building System (IBS) is a method of construction that consists of processes, products, and a network of interconnected elements that work together to achieve objectives. The Malaysian infrastructure industry is one of the contributors for the country's growth. The purpose of this research is to study about the challenges and improvement in implementing IBS of Malaysian railway construction. The research objectives are to identify the level of IBS acceptance and awareness among contractors in railway construction, to determine the challenges of implementing IBS in railway construction in Malaysia and to recommend the improvements of implementing IBS in railway construction in Malaysia. In order to achieve this objective, a quantitative method of this research is used and questionnaires as the tools for data collection. The sampling method used for this research is purposive sampling. The questionnaires were distributed to all of 30 G7 Contractor involved in MRT and LRT projects in Klang Valley and these contractors are the ones who construct the platforms, viaducts, depots and multi-storey carparks. A total of 15 contractors completed the survey, resulting in a response rate of 50%. All data has been analysed using Statistical Package for Social Science (SPSS) software. Findings indicate the Contractor was aware of and familiar with all of the issues associated with IBS implementation. The majority of the challenges were identified as critical to IBS implementation in railway construction in Malaysia. The data analysis showed that the main challenges in implementation IBS in railway construction were the use of heavy machineries for safety and health concerns and there are still lacking of skilled workforce to face the challenges of implementation of IBS in railway construction. The best practices to improve the adoption of IBS possible were government should provide grants or low-interest loans for companies investing in IBS technology and utilization of Building Information Modelling (BIM) could enhance the implementation of IBS in railway construction. Overall, enhancing the training and development of the workforce is crucial.

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