DEPARTMENT OF BUILDING

UNIVERSITI TEKNOLOGI MARA

(PERAK)

IBS: WALL PANEL CONCEPT

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ABSTRACT

IBS or the meaning of the short form Industrialized Building System is a construction technique that have been used widely in the construction world. A new construction approach where the components such as slab, wall, column, beam, and staircase are created in a controlled environment either on or off site. IBS can be clarified into 5 classes which is pre-cast concrete framing systems, steel formwork systems, steel framing system, prefabricated timber framing system and lastly blockwork system. The advantage of the IBS is the reason IBS is well known. The advantages is reduction of unskilled worker, decrease the construction period and also it increase the quality of the houses. The purpose of this study is to know the steps of Industrialized Building System specifically wall panels installation. Besides that, in this case study, it also exposed the equipment and machineries used during the construction. Lastly, as for the conclusion the implementation of Industrialized Building System, can develop a construction world that are fast in developing and efficient in waste and cost terms.

CONTENT

CHAPTER 1.0

INTRODUCTION

1.1 Background of Study

IBS or the meaning of the short form Industrialized Building System is a construction technique that have been use widely in the construction world. Industrialized Building System (IBS) is a new construction approach where the components such as slab, wall, column, beam, and staircase are created in a controlled environment either on or off site and then the component are brought to the site only to just put and combined into construction works. IBS progresses to a system that uses manufactured output to reduce resource waste and increase value for end users.

This building system can be clarified into 5 different classes. Firstly, the pre-cast concrete framing. This class system is one of the most typical prefabricated pieces accessible both locally and internationally. Next, we have the steel formwork. It is manufactured at the facility and then installed on. The installation of this formwork is simple due to the use of a basic bracing system. Move on to the next type we have, the steel framing styles which is where the elements are created by cutting, drilling, shot blasting, welding, and painting after being rolled to appropriate sizes. Then we have the prefabricated timber framing system. This type is famous in the timber category system. It offers unique design and high aesthetical values. Lastly, the blockwork system. It is the creation and use of interlocking concrete masonry units and lightweight concrete blocks has changed the use of traditional bricks.

IBS are important to Malaysian as it is critical for the Malaysian construction industry to change and prepare for the globalization age, in which increased productivity, quality, and safety are required, as well as cost and project schedule reductions. There are a few advantages of using Industrialized Building system which is to reduce the number of unskilled worker. Implementing IBS can lower the number of unskilled employees reducing the amount of money syphoned off by workers and benefiting the local economy. Other than that, by using this system it can save significant time while also lowering the danger of project delays and potential monetary losses. While the construction site is being surveyed or earth worked, the design and manufacture of pieces can begin.