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BUILDCON2023

COMPILATION OF PROJECT INNOVATION IDEAS
SEMESTER MARCH – AUGUST 2023

EMBRACING SMART CONSTRUCTION TRANSFORMATION

BUILDERS' CONVENTION DAY 2023

Department of Built Environment Studies and Technology
College of Built Environment
Universiti Teknologi MARA Perak Branch

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Organised by
Department of Built Environment Studies and Technology
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SAFETY SYSTEM FOR RAILINGS

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Safety System For Railings

Innovation Idea:

Building safety has been established as a requirement to lower the likelihood of accidents occurring onsite. One of the crucial components in building safety are railings that can prevent falls or accidents from elevated positions. There have been numerous incidents documented throughout the years of railings collapsing because people leaning on them and overloading them, resulting in the loss of many lives. People must be conscious of their surroundings and understand that not all architectural structures are as sturdy as they appear to be. The aim of the study is to improve people's safety at high-rise buildings through an innovative safety system for railings. This study compiles the approaches employed in previous studies in the effort to create a new safety system for railings in high-rise buildings in Malaysia. Simple components such as steel plates, springs, an alarm, and electric circuit are in the creation of this safety system. The system is mostly beneficial for buildings occupied by a large number of people at a time like schools or malls. Using innovation framework as a methodology, the research process workability could be determined. the framework is a composition of four main elements: ideation, selection, development, and commercialisation. A mini size prototype with the same function was developed to evaluate the function ability of the product and reduce cost involved through the study. With the safety system for railings, unpredicted railings incidents can be avoided, as people will be alerted when they are in a dangerous situation, such as leaning towards railings.

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