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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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SURFACE DEFECT DETECTION

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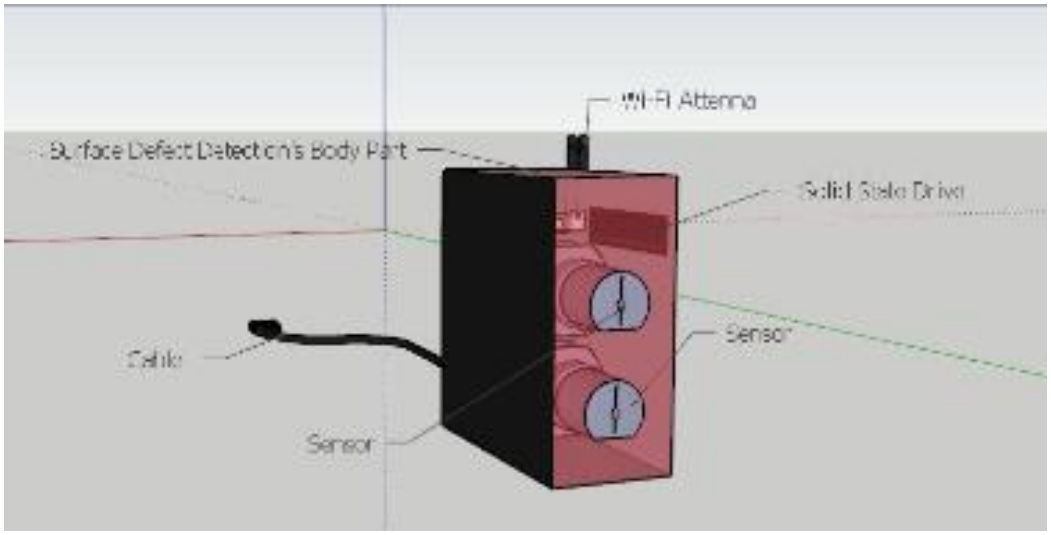

Surface Defect Detection

Innovation Idea:

The study highlights the importance of prioritising consistency and quality in precast concrete construction using surface defect detection. Precast concrete offers numerous advantages in construction projects, with standardised components produced in a centralised plant using factory prefabrication. The aim of this research is to use surface defect detection to monitor the quality and consistency of precast concrete material. The objective of this study is to specifically focus on surface defect detection in order to enhance the consistency and quality of precast concrete components. By implementing a monitoring system that utilises advanced technologies, such as computer vision and image processing, defects in precast concrete elements can be detected and addressed at an early stage. This proactive approach mitigates the risk of compromised structural integrity, delays, and increased costs. The study emphasises the need for continuous monitoring throughout the production process to identify and rectify surface defects, including cracks, scratches, and irregularities. By integrating surface defect detection into the precast concrete manufacturing workflow, manufacturers can improve product quality, optimise production efficiency, and meet the highest standards of construction. In conclusion, the application of surface defect detection in precast concrete construction plays a vital role in prioritising consistency and quality. By utilising advanced monitoring systems, manufacturers can enhance the structural integrity of precast components, reduce risks associated with defects, and ensure successful project outcomes. The study hopes to shed light on the benefits and implementation strategies of surface defect detection, thereby contributing to the advancement of the precast concrete industry.

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