



UNIVERSITI
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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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COMPILATION OF PROJECT INNOVATION IDEAS
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Organised by
Department of Built Environment Studies and Technology
College of Built Environment
Universiti Teknologi MARA Perak Branch
Malaysia

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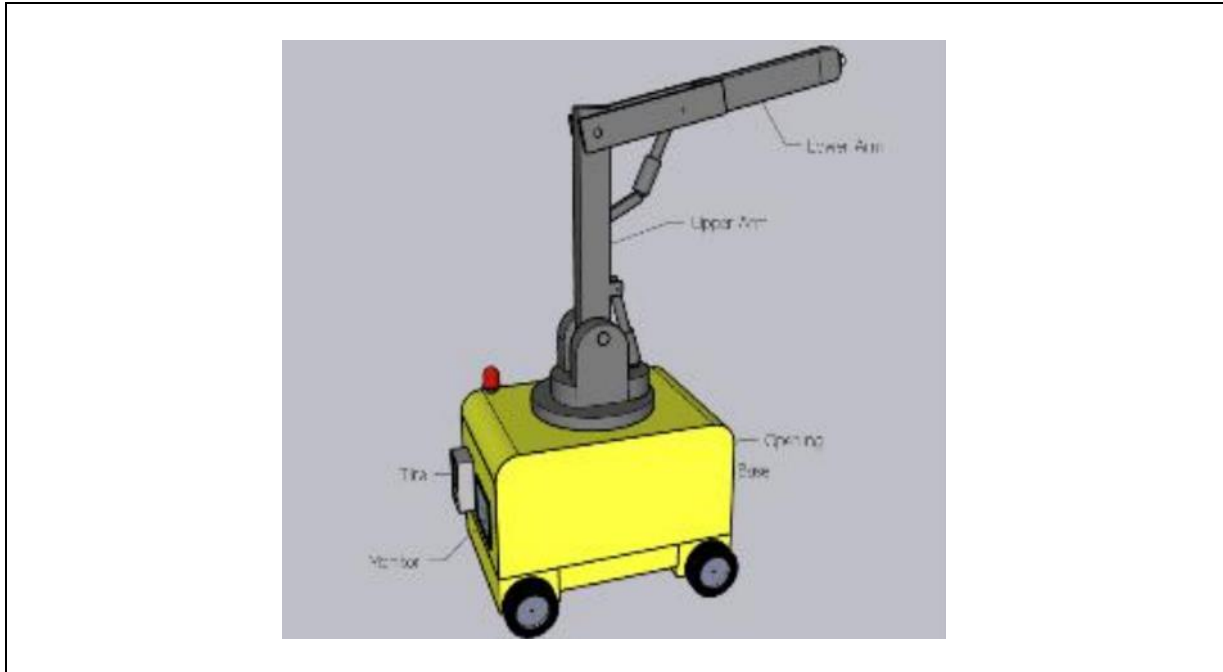
AUTOMATIC SPRAYING ROBOT FOR WALL PAINTING

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Automatic Spraying Robot For Wall Painting

Innovation Idea:

In the construction industry, painting is a crucial task. The major problems addressed in this study include different amounts of paint, impractical procedures, and safety and health concerns that can pose hazards for labourers. The aim of this study is to develop an automatic spraying robot for wall painting that can perform the task of painting building walls using the spray technique. The objectives of this study are to develop a design of an automatic spraying robot for wall painting, establish an assembly process of the prototype, evaluate the performance of the innovation, and study what are the marketability prospects of this innovation. The methodology selected for this study is qualitative approach, which encompasses desk study, design thinking, and 3D modelling using SketchUp 2022 software. These approaches were employed to collect and gather all data related to the design of this innovation project. To achieve the objectives of this study, the design for this innovation project has been developed based on the identified issues. The assembly of the components for this innovation project is carried out step by step using suitable and high-quality materials. The operational process of this innovation project is divided into three phases: before, during, and after. In addition, the product's performance and strength are characterised by precision, consistency, and a safe working environment. The target market for this innovation project is construction industry players including developers and contractor companies that work on residential or single-storey building construction projects. The implications of this study include enhancing the efficiency and quality in painting works via precise and consistent procedures, and also reducing time and effort while ensuring a high-quality finish to painting works.

Surat kami : 700-KPK (PRP.UP.1/20/1)

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim
Rektor
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Sekian, terima kasih.

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Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
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27.1.2023

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