

UNIVERSITI TEKNOLOGI MARA

**DESIGN AND FABRICATION
OF CAN CRUSHER
FOR SMALL-SCALE RECYCLE**

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ABSTRACT

Millions of aluminium cans are wasted yearly, stressing the environment and landfills. A user-friendly can crusher is needed to simplify recycling by efficiently compressing cans, enhancing convenience and sustainability. The objective is to design and fabricate an auto can crusher with a motor that efficiently compresses aluminium cans, making recycling more accessible and convenient. The methodology used such as survey, house of quality, product design specification, physical decomposition, morphological table, pugh table, product architecture, configuration design, parametric design and drawing. The design process commenced with preliminary sketches leading to detailed 3D models in SolidWorks. During fabrication, components like shafts and bearings were meticulously installed, ensuring both effective crushing and electrical safety, followed by rigorous testing to validate motor performance and overall functionality. The design and fabrication of an automatic can crusher for small-scale recycling were successfully completed using SolidWorks software and welding techniques, achieving the project's objectives.

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