

UNIVERSITI TEKNOLOGI MARA

**DESIGN AND FABRICATION OF
MECHANICAL CAN CRUSHER**

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ABSTRACT

Manufacturing knowledge was essential for completing this project and ensuring that students understood what they needed to complete. This project involves developing and building a Can Crusher to make it easier for individuals to crush aluminium, tin, and soda cans. This project entails the process of constructing a crusher while taking into account forces and ergonomic factors. After the design was finished, it was turned into a genuine product, with the design serving as a guideline. These projects also include maintaining the security of publishing. In this project, methods and processes like as bending, welding, drilling, and cutting are utilise. This project is primarily focused on developing a new concept for a can crusher that is easier to transport and crush tin. After all of the processes have been completed, this crusher may assist us in better understanding the manufacture and design processes involved in this project.

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Finally, this dissertation is dedicated to my father and mother for the vision and determination to educate me. This piece of victory is dedicated to both of you. Alhamdulillah.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The main goal of this project is to learn basic design and mechanism concepts by using a gear system and a simple mechanism characteristic. The design and manufacture of a can crusher machine are included in this project. There are numerous distinctions between this can crusher and the present market design. This project aims to enhance and improve its performance such that the design and concept are unmistakable. This concept used very little energy to crush the aluminium cans, and it could crush one can at a time. This project necessitates a wide range of skills, information, and knowledge, including the use of computer-aided design software, Solidworks software, shearing machines, bending machines, vertical bend saws, bench work, and the welding process. This design would undoubtedly benefit the user. So, before it enters the prototype phase, this design will go through a number of steps in order to meet the goals and, of course, the needs of the customer.

A mechanical tin can crusher is one of the most useful machines available. It contributes to the world's less polluted environment. As a result, a better living environment is created. Aside from that, this crusher might be the future of recycling, replacing recycle bins. By using a smaller can crusher, it may be installed everywhere, including parks, houses, and even cars.

As a result, this project piques my curiosity and provides me with exposure to the field of mechanism and design engineering. To create the mechanical part of a can crusher and to build the system's mechanical part.