

UNIVERSITI TEKNOLOGI MARA

**DESIGN, ANALYSIS AND
FABRICATION OF AUTOMATIC
PORTABLE HAMMERING
MACHINE**

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ABSTRACT

Mechanical Engineering students of semester 4 were given a task to manufacture a product to help or ease people. From the data obtained, people are having a problem to store hardware in small workspace. The objective of this project is to design and fabricate a hammering machine that are small and portable to help ease users to store and move it easily. This concept will be generated by referring to existing products in the market based on the characteristic and criteria. Some manufacturing steps will be included in this proposal like research and literature review. There will be several manufacturing process to fabricate this project like measuring, cutting, grinding, drilling, and finishing.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Hammer is a very useful tools that is used very often while doing projects whether at home or workshop. This tool can effectively reduce the burden humans carry in their daily lives. However, there is also disadvantageous and deficiency in hammering by hand. Hammering is a very common process used in our daily live. In this era of globalization with the development of technology, the use of automatic machine becoming more necessary from time to time. Hammering process done manually will result in different results every time that led to inconsistent result. So, in this project, an automated hammering machine will be developed that enable users to experience fully automatic hammering process.

The idea of the product is to reduce the effort when hammering material. The automatic part of the project will be in help when hammering for a long time. This project also will help those who are injured and disabled people when doing heavy work. Reliable and efficient hammering process will make the process more dependable. The portable design of this project made it moving the project from place to place easier and will fit in more place with it compact size. With this project, manual effort will no longer needed to do hammering process.

With this machine, users just need to insert workpiece in the machine and start the hammering process with ease. This machine consists of motor that connected to pulley that connected to a rod that hold the sledgehammer. The motion of the motor will make the sledgehammer moving by itself thus making the automatic hammering machine possible.