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**DESIGN AND FABRICATION OF MOVEABLE
STORAGE TOOLBOX**

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DIPLOMA

JUNE 2022

ABSTRACT

This project is for facilitate the workers in the industry who do a light work. A toolbox can refer to a variety of storage options for tools. It could be a small portable box for transporting a few tools to a job site or a massive storage system on wheels. The majority of modern toolboxes are made of metal or plastic. Beginning in the early 19th century, wood was the preferred material for toolboxes. This project also can facilitate the workers because they do not have to lift but they must to push. So, it can easily to move. The objective of this project is to design and to fabricate Moveable Storage Toolbox and the problem for this project are the workers must use a lot of energy to lift the items. The scope for this project is for the workers which is Engineer Assistant and will use the available material in lab or workshop.

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CHAPTER ONE

INTRODUCTION

1. INTRODUCTION

For the final year project (FYP), this project is to design and fabricate a Moveable Storage Toolbox which is it not the same with the carrying toolbox but it very easy to move because this project will put the wheel or roller under the toolbox. This project can use for facilitate workers in the industry who do light work like Engineer Assistant/Pembantu Jurutera (PJ). The problem for this project are the workers must use a lot of energy to lift the items, the workers lift few items at the same time and the items not arranged neatly. The first reason for this project because it does not burden the workers to do work and they can use less energy. Besides, this project also facilitate the worker to move the items quickly at the same time. The objective is to design and fabricate moveable storage toolbox and the methodology are design 3 ideas, engineering drawing, material selection, cost estimation, fabrication and testing. The scope is for the worker and available material in lab or workshop. This project can help all the workers do something work quickly and easily.

1.1. BACKGROUND OF STUDY

No one really know when the toolbox was invented. Kennedy Manufacturing is a very serious maker of toolboxes. In fact, its founders- brother Charles and Howard Kennedy invented metal toolboxes. One hundred and seven years ago. The first ever metal toolbox is still considered one of the best ever. The Kennedy brothers' metal toolboxes and storage equipment have gained appeal among machinists and shop managers for their use of strong 20-gauge steel and attention to details such as tool cushioning, the elimination of sharp edges, and adjustable section dividers since their conception. The Kennedy Toolboxes are also guaranteed for life, just as they were when they were initially sold. This is an absolutely badass toolkit. "This Toolbox is a work of art," as one Amazon reviewer put it. Now, the toolbox has upgrade with the many types of the human art which is Cantilever Toolbox and Portable chest with a carrying handle. I choose to make a "Moveable Storage Toolbox" that have a wheel. So, this project very easy to use.

1.2. PROBLEM STATEMENT

Every project that make will have any problems. For the first problem from this project is the workers must use a lot of energy to lift the items. So, it will make the workers quickly tired. Second, the problem is the workers lift a few items at the same time. It will be effect the time to lift an item and it will slow down the work process. It can also cause the work to be delayed. Lastly, the items not arranged neatly. This problem will show an area of the item to be disorganized and look not neat.

1.3. OBJECTIVE OF THIS PROJECT

In this paper, the objective to focus are :

- i. To design a Moveable Storage Toolbox.
- ii. To fabricate a Moveable Storage Toolbox to store items that have at the workshop or lab.

1.4. SCOPE OF WORK

- Find the compatible material for the product.
- Available material in lab or workshop as example metal, aluminium and stainless steel.
- For the Bahagian Pengurusan Fasiliti (BPF).
- The product made from metal or aluminum.

1.5. EXPECTED RESULT

- To make a design and fabrication of the Moveable Storage Toolbox using Solidwork software and to fulfil the first main objective which is can help the workers do a work more fast and not to use more energy to lift items.