



اَوْنَبُوْرَسِيْتِيْ بِاَتِيْكَوْلُوْكَى مِيْاْرَا
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MEC332: MECHANICAL ENGINEERING DESIGN

FINAL YEAR PROJECT REPORT

TITLE:

TOOLBOX TROLLEY

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ABSTRACT

Malaysia plans to be a fully developed country by year 2020. Malaysia has achieved a good progress in the industrial sector. Nowadays, workers are working efficiently with the help of modern technology especially in industrial sector. Many types of trolley used for industrial activity such as trolley to carry heavy loads and trolley for tools placement.

Trolley are widely used in industrial section, workshop, kitchen and many other production areas to help worker lifting or carry heavy objects and carry more loads to be moved from one location to another location. As we experienced working in industrial factory, most of equipment, parts, or any other personal belongings are place on the trolley. The main function of trolley used in factory is for easier to move or change of workstation arrangement at work. This trolley divided to many functions according to its purpose such as trolley with lifting mechanism to lift heavy or big parts to higher height, grill trolley for hanging fittings cases, trolley toolbox store small and big tools which be brought around production area, short trolley and longer trolley to carry long items. Some of workers are having a problem with time as they need to walk around production area to find tools or compatible parts to be used. They also have to face a problem of misplacing tools because tools are not well organized as it will take their time for returning the tools. Therefore, we came out with the idea to design a multipurpose toolbox trolley to cut the time of taking tools and act as a moving workstation.

We decided to produce an innovative trolley with lifting mechanism, toolbox cabinet and extension wall for long items or more load to be carry. Workbench are also provided at the top of toolbox for light operation works. However, we included every possible works in production area such as operational, lifting, store items and carry items to be compact in standard trolley size. As it is, our main objective is to release a product to cut the cost of buying extra trolley and improves the efficiency of working condition.

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CHAPTER 1: INTRODUCTION

1.1 Content of report

Flow diagram in figure 1.1 shows step taken in designing and manufacturing a product. Since there are various field in our community, selection of product design scope will be the first step to be taken. To fulfil criteria for theme 1, we decided to produce a “Toolbox Trolley” which an innovation of trolley with possibilities to carry heavier and longer load with special features, lifting mechanism for

Selection of product design scope

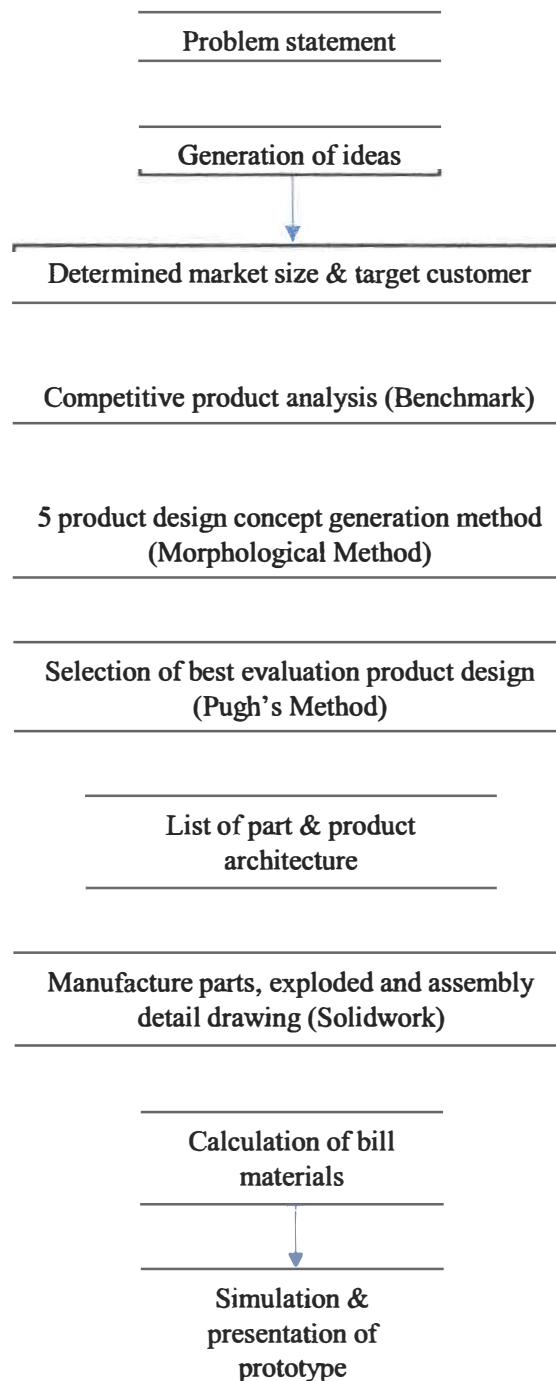


Figure 1.1 Flow of design process