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MEC299

**DESIGN AND FABRICATION OF PORTABLE
CLOTH RACK**

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ABSTRACT

Cloth rack is usually used to dry wet laundry by evaporation. The cloth rack is made of wood, metal or plastic. The problems that can be seen with the common design of cloth rack is that it is heavy and difficult to move. It also not ergonomic. This project goal is to redesign and create a portable cloth rack using SOLIDWORKS to CAD modelling the project to solve the problem revolves around current cloth rack design which is the difficulty to move the cloth rack around and takes up a lot of spaces. There are many process involved in fabricating the cloth rack such as welding, cutting and milling process. The suggested design for the cloth rack is by using hollow stainless steel pole as the main material, wheels and detachable sections. The expected result will be detachable cloth rack to comply with the objectives stated. As a conclusion, this project is to improve cloth rack design for better quality of life.

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CHAPTER ONE

1.1 Background of Study

Cloth rack is a rail used in houses or stores to hang items of clothing on display, such as shirts and coats [1]. Folding cloth rack are easy to transport or store, making them popular for many retail uses in clothing stores. Cloth rack have the long steel or wood rod to place cloth hanger to hang clothes. Cloth rack can be designed in many ways whether it can be stationary or portable, big or small, store many clothes or can save spaces. Figure 1 shows a woman with a stationary cloth rack with limited capacity [8].



Figure 1 Difficulty of Stationary Cloth Rack

1.2 Problem Statement

In this project, there is a few problems that have been found which is moving heavy object such as cloth rack can be quite a difficult task for certain consumer such as elderly, the work can be time consuming, tiring and can lead to health issue such as back pain problem.