UNIVERSITI TEKNOLOGI MARA

DESIGN AND FABRICATION OF AN AUTOMATIC CLOTHES WRINGER

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ABSTRACT

The automatic clothes wringer is design to be a helpful device in the Car Wash Industry. As this device can drain out the water from the clothes faster than using a dryer machine. It also powered by 2 motor that connect to alternative current socket that usually have in the building. The objective of this device is to create a better improvement for worker to use the clothes many times without taking much time to dry the clothes.

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CHAPTER ONE
INTRODUCTION

1.1 Background of Study

A clothes wringer is a mechanical device for wringing water from wet clothes. It is commonly a frame containing two elastic rollers in contact and turned by a crank, between which the clothes are passed to squeeze out the water. A clothes wringer can be used for laundry at home but a dryer has been invented to lessen the work and energy needed. The project's study was created because of the problems with the usability of the current clothes dryer that focus on instant drying. There is a normally used dryer to dry clothes at home, but this was focused on car wash companies that need to dry the clothes faster instead of hanging them under the sunlight.

The design utilized to create the clothes wringer is the source of the size that persists in them. Most companies and designers make dryers with bigger sizes to make sure they can be used for a large number of clothes. The wringer is designed to dry a small amount of clothes in less time. For example, towels, handkerchiefs, and more. To begin with, sizes are important for car wash companies because they will take up less space. Besides, clothes wringer can be mounted on the wall. Apart from that, an elastic roller is a good component for the device. However, an elastic roller is capable for squeeze out the water from thick clothes. Another component that is important for the device is the motor. The motor is an electrical component that helps the device to be automatic. Instead of rolling the device manually, a motor that is powered through an alternating current outlet will help the device operate. In a nutshell, these components each have their usage.

This project must be done because this project wants to produce clothes wringers that exceed the past clothes wringer in terms of time, size, and user-friendliness. The clothes wringer rarely use in the ’20s because the dryer was invented. The dryer has many designs and safety precautions. For example, a dryer must have safety aspects such as not being harmful to any person. Hence, the dryer is more useful for society, but this project is used for users that need a drying device that is more suitable for them to use. It is an advantage for them if the clothes wringer is allowed to wring many clothes at once. Presently, this research is to build an automatic clothes wringer that fulfills all the aspects and provides a suitable clothes wringer that can be allowed to be used in a small space, less time taken and less work energy.

This project aims to create a more realistic and affordable approach to solving the problems. The main idea is to create a clothes wringer that is easily used for Car Wash Industry The design will be created based on a standard engineering design process and the design will be rendered using SolidWorks. A prototype will be created as a roof of concept by the end of the Final Year Project 2.

1.2 Problem Statement

1. Used a lot of space

Take into consideration small car wash shops with limited space because it will be hard for them to work around if they have limited space in their shop. Most of the car wash shops in the country have limited space for a dryer or even do not have space for it. The effect of this problem is they don’t usually dry the clothes well before using them.

2. Required more work

The current device used to dry clothes is a dryer, but it is not suitable for car wash companies to use. Most car wash companies used their worker hand to wring a cloth or towel. Typically, it takes energy to make sure the clothes are dry. The automatic function of the motor helps to squeeze out the water from the clothes or towels that are used to wipe the car after has been washed.