

UNIVERSITI TEKNOLOGI MARA

**DESIGN AND FABRICATE
THERMOFORMING PLASTIC
MACHINE**

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ABSTRACT

An electric utensils is now considered as one of the most important things one can have in the house. It is because right now almost all utensils uses electrical power. As an example, there is an air fryer, refrigerator, water dispenser and many more. An electric utensils mainly consist of the body, the wiring inside the body and the plug. Plug is the important part of the electric utensils as it becomes the connector for the electric current to flow through to the electric utensils for the utensils to work. Currently, the plug is being mass produce all over the world at multiple factory across the country of the world. It being produce by using the bigger thermoforming plastic machine so that the plug can be produce many more to be used and sell. The machine work by heating the plastic into the mold that was made. There are 2 types of mold that is known which is inside and outside mold. The inside mold work by blow the heat into the mold and push it into the mold and the outside mold work by heating the plastic and fold in onto the mold. The research that is being work is to try and produce the same machine but in a much smaller scale as it can help for self work engineer or maybe someone who want to made a wire plug connection to sell or maybe to be used in the small machine. That being said, the process of making the plug is time consuming and it's hard to made one without any help of a machine. The new concept of my propose product is going to make the production of the plug much easier and faster.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

An electric utensils is now considered as one of the most important things one can have in the house. It is because right now almost all utensils uses electrical power. As an example, there is an air fryer, refrigerator, water dispenser and many more. An electric utensils mainly consist of the body, the wiring inside the body and the plug. Plug is the important part of the electric utensils as it becomes the connector for the electric current to flow through to the electric utensils for the utensils to work. Currently, the plug is being mass produce all over the world at multiple factory across the country of the world. It being produce by using the bigger thermoforming plastic machine so that the plug can be produce many more to be used and sell. The machine work by heating the plastic into the mold that was made. There are 2 types of mold that is known which is inside and outside mold. The inside mold work by blow the heat into the mold and push it into the mold and the outside mold work by heating the plastic and fold in onto the mold. The research that is being work is to try and produce the same machine but in a much smaller scale as it can help for self work engineer or maybe someone who want to made a wire plug connection to sell or maybe to be used in the small machine. That being said, the process of making the plug is time consuming and it's hard to made one without any help of a machine. The new concept of my propose product is going to make the production of the plug much easier and faster.

1.2 Problem Statement

Some people who recently started a business on selling wiring and connecting cable find it hard for them to make the plug for their cable because it uses a big machine to made one plug. Furthermore it uses a lot of money so their budget is limited. So to use the machine that mainly used in the factory to produce this plug, it requires a lot of time to find the most suitable machine to work with and it cost a lot of money because when use the machine that is big as that machine, it use a lot of electricity. So, it will use a lot of money to produce just one small, simple plug. If this situation does not have any