

# **DEVELOPMENT OF A PROTOTYPE MOTORISED SIEVING MACHINE**

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## **ABSTRACT**

Materials such as sand is one of the important materials needed, especially in agriculture activities. Throughout the era of globalisation, there have been machines that happen to sieve sand to acquire a higher percentage of sand, rather than a mixture of sand and stones but these machines have only been marketed for industrial use. Therefore, this project has targeted to build home-friendly machine with the mutual purpose, as well as providing ergonomics when operating the machine. Therefore, a morphological chart and a pugh chart is analysed to acquire the final design of this project. Based on the results made within the research made for this project, it is expected for the machine to perform below the industrial standards, but able to achieve its purpose. It can also be concluded that this project will be a success as the machine serves its purpose, which is to sieve sand from stone.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of Study

A sieving machine is a machine that has a purpose of sieving types of grain materials that have been mixed with larger materials such as chunks. It is severely important to separate two different sized objects when it comes to any activity whether it is light or heavy. For example, soil is best separated from rocks to be used for gardening, which can be achieved by sieving. It gives a big impact as it provides as a nutrient source for plants after it has been sieved. That is why a sieving machine plays a big role as it does its job which is separating two different sized materials, when it has been mixed previously.

Although there has been a method for sieving, which is by shaking the materials on a sieving net with bare hands, there is more benefit in using a sieving machine. There has also been a sieving machine that has been used for the decade although the sieving machines is only used in factories. Thus, this project is to create a sieving machine that will be conventional for home uses.