UNIVERSITI TEKNOLOGI MARA

DEVELOPMENT OF A PROTOTYPE AUTOMATIC SMART SAND SIEVER

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ABSTRACT

This sand filter machine is a project designed to help small and medium-sized businesses (SMEs). This machine is designed to separate coarse sand from fine sand. This equipment functions as a sieve to separate the sand. It designed this machine exclusively for small contractors, it allows to cut their labour and prevent the usage of several workers. Finally, the project proposal, "Automatic smart sand siever (ASSASI)" demonstrates that it can satisfy the objectives stated and is compatible with challenges that emerge. This project demands students look into the automatic smart sand siever and create a new one utilising cutting-edge Solidworks 2021 technology and style. It was invented the automatic smart sand siever.

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TABLE OF CONTENTS

CHAPTER ONE
INTRODUCTION

1.1 Background of Study

Many different types of machines have been produced in this globalisation period to assist people get through the day more easily and to make or produce things faster. To stay up with technological advancements, a concept is developed, which will subsequently be implemented through this proposal. The major goal of this project is to make it easier to produce any sand filter item without an uncontrolled quantity of human labour or being compelled to use up human resources. A sand siever is a sand filtering device that employs a motor to move the filters automatically. So, the well-recognised sand siever method is when a connecting rod is powered by a motor and used in the vibrating mode on the sand siever. As we all know, the majority of sand filter merchandise are made by hand, particularly in the construction and manufacturing industries.

The goal here is to incorporate an easy filtering process that can be readily managed by a motor system, switch function, and tyre function into a simple-designed machine. From here, the use of mechanism is introduced, which will especially assist the machine in operating automatically. Users of this machine could complete the process of filtering any sort of sand more quickly and smoothly, with no coarse or lumpy particles. The final touch would be more flawless and attractive than those done by hand, without taxing human energy. Any manual process employs a plethora of superfluous procedures, which we would want to avoid in everyday life, particularly in the manufacturing industry.

During the last several decades, there has also been a rapid development in sievering technology in terms of the machinery used for sievering, the construction of sand siever machines, and the after treatments of sand filers. Fortunately, this project might be one of the devices that improves and advances this sand sievering technique.