

UNIVERSITI TEKNOLOGI MARA

**AUTOMATIC SAND FILTER AND
SEPARATOR MACHINE**

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ABSTRACT

The fabrication system is demonstrated here. Sand is used in building, manufacturing, and a variety of other sectors. Before it can be used, sand must be filtered and removed from unwanted particles such as stones and other big particles. Our system proposes a completely automated sand filtering and separating system that filters sand that is dumped on it. In this case, we're employing a motorized shaft that's horizontally attached using mounts. The shaft is attached to a filter frame, which has mesh below and an enclosing frame on the sides. We now have a rod linked from the shaft to the filter frame in such a way that the horizontal motion is optimized. We also have a frame that holds the filter frame in place while ensuring proper horizontal motion. When we turn on the motor using our motor controller circuit, the system allows us to operate it. This enables us to control the sand filter action to meet our specific sand filtering requirements.

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1.5 Significance of Study

The significance of this study from this project are is concerned with the generation of a new concept for the production of a sand filter machine with a new design. Because of an issue that occurred, we are producing a sand filter machine for small building construction and domestic usage. In addition, I want to achieve my aim in technical developments based on current concepts. Explosive concepts based on a description of concerns reported from studies on the quality of fine sand and workload applied. Many factors and studies help me to build this product as my project. I develop and improve a product that can filter excellent sand without contaminating it with foreign materials, hence minimizing the burden associated with sand filtering. It would also show two functionalities in one notion. Next, my concept differs from other sand filter machines on the market in that my sand filter machine is mobile owing to the wheel that is attached to it. Some of them have wheels, but they do not serve two functions like mine. My sand purifier equipment comes with a funnel that aids in packing into a sandbag.