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# GRAIN SIEVING MACHINE A REVIEW

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## ABSTRACT

This article is an overview of a multipurpose sieving Machine, which is a machine that is typically utilized in the manufacturing industries. Because of the improvements in technology, every task that can be performed over the world can now be done more quickly and with less effort. The goal of every industry today is to increase the production rate. While maintaining high product quality and standard at a lower overall cost. The grain materials sieving Machine has the function to sieve sand and stone mixed to gather. The sand and stone can not process future if they mix these machines will help the operator work which was doing sieve with no machine mechanism with machine mechanism driven by human power will reduce the time to sieve. The objective of this paper is hopefully can make the best concept design in terms of production cost and production capacity. The term mechanical handling material is important for loading and unloading materials. After discovering a will and livers materials move via mechanical convenes. The materials of this device have been selected under the consideration of monetary value design of the device has been completed with the help of solid work software. The manufacturing subject material selection process has also been described as a fabrication sieving machine is the prototype of the actual product.

**Keywords**- Sieving, Quality, Material, machine, Mechanism, Industries

## I. INTRODUCTION

A Multipurpose sieving machine is used for the extrication of the needed elements from unwanted material further it is used for characterizing the element to the required size by the allocation of a sample.[1] Using a pane such as a mesh or net. A sifter is used to separate and break up clumps in the dry ingredient particles like sand and flour. This project titled concentrates on providing descriptions of all the basic operation principles and design of DC motor. In the technical, education of Sieving plays a Major role in operations of various industries. [6-3] Construction of work device under a constrain is achieved by the systematic approach. The prime focus of the study of Sieving Machine integrates various skills and knowledge attainment and gives orientation towards application in practical life. It helps in intensifying the thinking and alternatives for potential applications. Sieving is an uncomplicated practice for sorting out particles of different sizes. [3] Very fine small holes are used in this sieve to sift flour core. [6-2]The fine coarse particle are separated or broken up by grind against one another and screen openings. Different types of sieves are used for the separation of industrial wastages like bolts, nuts washers, and nails of various particle sizes of the holes. Similar types of sieves are used for agricultural equipment.

## II. LITRATURE REVIEW

Before starting our work we have undergone through many research papers which indicates that for a production hased industries machine installation is a tricky task as many factor being associated with it such as power consumption (electricity hill per machine). maintenance cost, no of units produced per machine Le. capacity of machine time consumption and any more. Some research papers which have led us to approach to the ideas of a machine which may give solation to all these factors are as follows Ranjit Sharma. For characterizing the particle size distribution of a sample, a sieve is used, it is a device for separating wanted elements from unwanted material that uses a woven screen such as a mesh net. Authors have focused in their design on, fabrication of the mechanical part of machine and the systems of the sieve machine. Nanchima. When the AC supply is switch ON the motoes starts to mate with the required spa. The V-Belt pulley connected on the motor shaft power transmission one shaft to the another shaft. Comecting rod attached with cam plate and sand sieve or mesh Cam provides sand sieve rotary motion is reciprocation motion, then sand put on the sand

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sieve and reciprocates and sand clean particles collect on the container (sand collecting box) and according to need it's used it SwapnilBandgar et al [3] The criteria that must be considered in designing the sieve machine and durability: wieve machine munt be darable when rotate and vibrate. The material that will be mod must be suitable as fabricate the Sieve machine and easy to get.lt depends on material and manufacturing It should reduce the cost the PranitSetal 14) Reciprocation is a repetitive up-and-downer hack-and-forth liner motion. It is found in a wide range of mechanisms including engines and pumps. The two oppositions that comprise a single section cycle lekes A crank can be used to convert in motion into reciprocating motion, or conversely tum reciprocating motion into circular motion Reciprocating motion is clearly visible in arlymengines, particularly borital stationary engines and outside-cylindered locomotives, as the crank and connecting rod usually are not enclosed. Arun Kumar Netal 15] Criteria vach as strength and mechanical system needs to be concerned over some other ergonomic design whichWere med to achieve fully functional deve machine hody structure. The proposed formula of total sieving energy calculation allows comparing results between soil studies. Our meta-analysis showed that most (26 of 34) studies used insufficient sieving energy, where the aggregate size distribution did not reach the equilibrium state. A detailed protocol for soil dry sieving analysis is provided. For this approach to calculating total sieving energy, using oscillation frequency, vibration amplitude, and time was proposed. Retisol, Phaeozem, and Chernozem topsoil samples from agricultural and native ecosystems were analyzed using a sieving test, in which 50-kg soil samples were divided into 500–700 g subsamples and sieved with a constant oscillation frequency (50 Hz), but with varying vibrational amplitudes (0–2.5 mm), for sieving times that ranged from 1 to 5 min. We found that the optimal sieving regime is characterized by total sieving energy of 1850 J kg− 1, reached during 2 min of sieving with a 50 Hz frequency and a 2.5 mm amplitude. Based on results of the dry sieving test, we have proposed the indicators of mechanical stability of soil structure: index of soil structure stability (SS) which characterize the degree of change in the soil aggregates size during sieving with minimal and optimal sieving energy, and modified the soil friability index (F4), that characterizes the rate of change in the soil aggregates size under mechanical load by dry sieving.

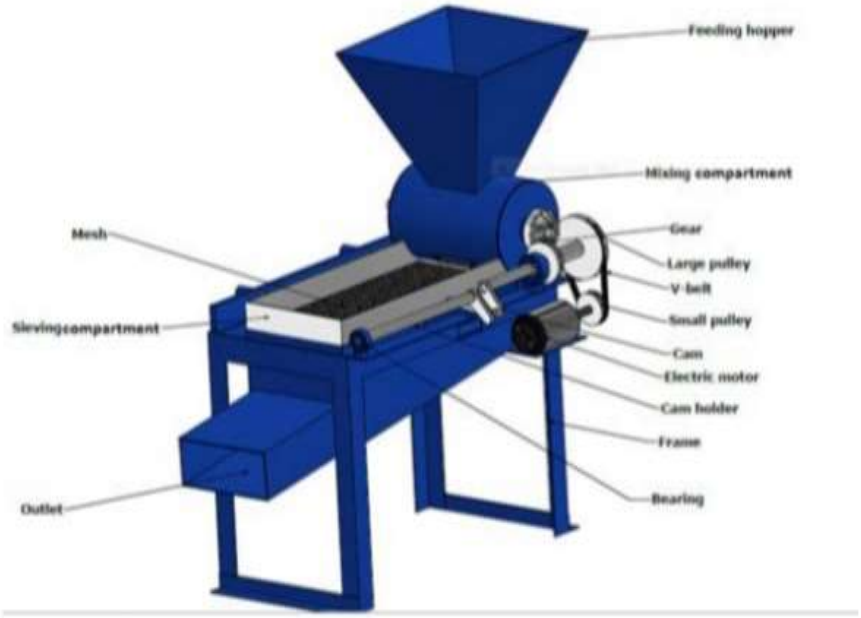


**Figure 1:** Grain sieve machine

## III. CONCLUSION

In this research study, the mild steel failure problems encountered by loads were successfully. Thus, a cost effective and simple design motor operated multipurpose sieving machine is fabricated. This machine reduces the human effort and hence we don't need multiple persons to filter/sieve at a time. Also, machine is portable as it can be de-assembled and assembled easily.

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