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Design of Grain Refining Machine

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ABSTRACT

The study has been undertaken to get the refined grains directly after the threshing process. It is the portable machine and its capacity may change as per requirement. It will help in cost reduction of refined grains available in market and will also reduce human effort. It is a semi-automatic machine which will remove impurities i.e. stone, husk, flask etc. present in its grain With the help of Neodymium magnet and light density particle will be eliminate from the Blower. A magnetic bed specially designed to separate under constraints operational and environmental condition.

Keywords: Portable Machine, Semi-automatic Machine, Neodymium Magnet, Blower.

I. INTRODUCTION

The Grain refining machine itself describe by name. The grain refining machine in which we can separate the stone, flask and other dust particle. After Threshing some impurities like stone, husk are left over in grain after threshing it is very necessary to remove thus particles. As we know that it is harmful for human being which leads to affect the health. By using this machine we can remove the dust particle and other impurities. In this machine several components are mounted for some special purpose.

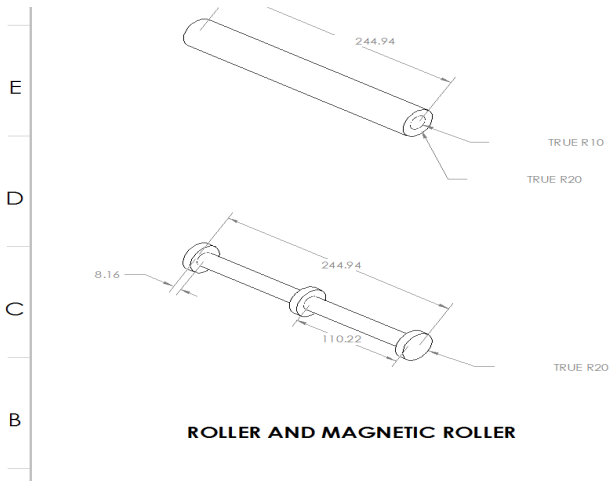
The grain Refining machine is available in different sizes according to use. Small grain refining machine will be used at home for refining small quantity of grains. By using this machine we can reduce the man power and fatigue.

Nowadays separating mud balls and Black stones are the rising issues industries are facing now. There

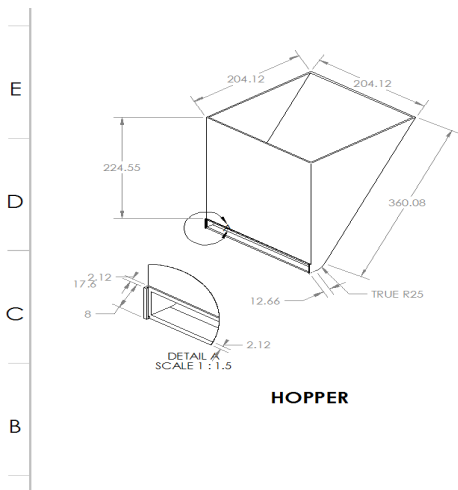
machines are not highly efficient to remove impurities from grains. They are trying to solve the problem of removing paramagnetic impurities and looking for machines which have the capacity to solve various kinds of problems regarding the separation of mud balls, Black stones, Metallic, Glass pieces, Rat faces and other impurities from grains like rice, wheat, Gram etc.

Day-by-day in flour mill and cleaning line the mud ball and Black stone is one of the biggest issues. Industries are looking for newly designed and high capacity machine because their equipment is still not able to remove impurities and black stones. Their machines are not capable enough to remove mud balls and black stones.

II. METHORD AND MATERIAL



ROLLER AND MAGNETIC ROLLER



HOPPER

Area of opening cross-section=2584.15mm²
Material of Hopper is Galvanized Iron.

III. RESULT AND DISCUSSION

Contamination in Food product is a challenging part for the industries especially when the world is moving towards, purity, and healthy consumption. By keeping the critical situation in mind, we making this grain refining machine for betterment of our health. By introduction of high intensity magnet and blower, By using highly intense magnet that attract the dust, stones and other ferrous material and blower that blows the light material like husk and straws. In this

machine we can easily separate out the impurities from the grains by using 0.25HP motor which rotates the roller and belt.

IV. CONCLUSION

The Grain Refining Machine is the machine in which we can reduce the effort of man power. In this machine we can achieve the most pure form of grains. Since we know that the application of Neodymium Magnet that attract the soil impurities and dust particles. By application of Blower which remove the husk and other light particle. The Grain Refining Machine gives the most pure form of grain after threshing.

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