

Fabrication of dryer for paddy husk

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Abstract - Rice mill is one of the important cottage industries in India contributing significantly for creation of livelihood in major coconut growing states and Union territories i.e. Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, Maharashtra, Goa, Orissa, Assam, Andaman & Nicobar, Lakshadweep and Pondicherry. Coir fiber is the raw material of the industry and during the extraction process paddy husk is generated in large quantities as waste. In Kerala the rice mill exists since 1859 and coir fiber extraction was prevalent since then. Paddy husk was dumped in the environment around the extraction units in the form of huge hillocks which occupies large land space making pollution problems.

the heater and we can use that for several other applications. In this setup we are having a conveyor heater room, level plate and side plate. In heater room fan has been setup with the heater to send a hot air. Initially when the conveyor starts on by the motor. We can place the paddy husk on the conveyor by using side plate and level plate has been used in this arrangement to level the coir on particular area. When the coir entered into the heater room fan will start working, so that it produces hot air inside that area with the help of heater. Hence the moisture in the pad

1. INTRODUCTION

Paddy husk is a by-product from coir industries. In India, its availability is to the tune of 7.5 million tons per annum in which Tamil Nadu state alone contributes one fourth of its availability. Paddy husk can be used as soil amendment under varied soil conditions, for improving the physical, chemical and biological properties of soil. It is a good source of mulch for increasing the water holding capacity and reducing the weed population. The usefulness of raw paddy husk in crop production has been made in this paper.

1.1 Heater

Water heating is a thermodynamic process using an energy source to heat water above its initial temperature. Typical domestic uses of hot water are for cooking, cleaning, bathing, and space heating. In industry, both hot water and water heated to steam have many uses.

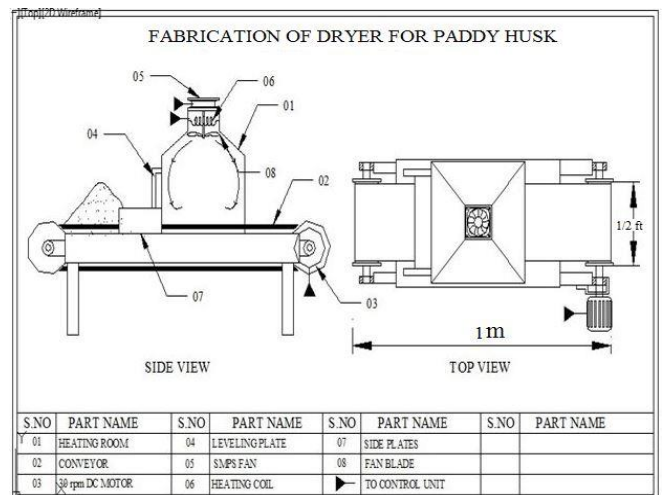
1.2 Belt conveyor

A belt conveyor consists of two pulleys, with a continuous loop of material - the conveyor belt - that rotates about them. One or both of the pulleys are powered, moving the belt and the material on the belt forward. The powered pulley is called the drive pulley while the unpowered pulley is called the idler. There are two main industrial classes of belt conveyors.

2. Working principle

In our project we are fabricating the moisture control in paddy husk. As we know that there are so many uses in paddy husk. We are going to dry the paddy husk by

Figure -1: detailed figure



In our project we are fabrication of dryer for paddy husk. As we know that there are so many uses in paddy husk. We are going to dry the paddy husk by the heater and we can use that for several other applications. In this setup we are having a conveyor heater room, level plate and side plate. In heater room, fan has been setup with the heater to send a hot air. Initially, when the conveyor starts on by the motor. We can place the coir pith on the conveyor by using side plate and level plate has been used in this arrangement to level the paddy husk on particular area. When the paddy husk entered into the heater room fan will start working. So that it produces hot air inside that area with the help of heater it heats the paddy husk.

2.1 Heating fan

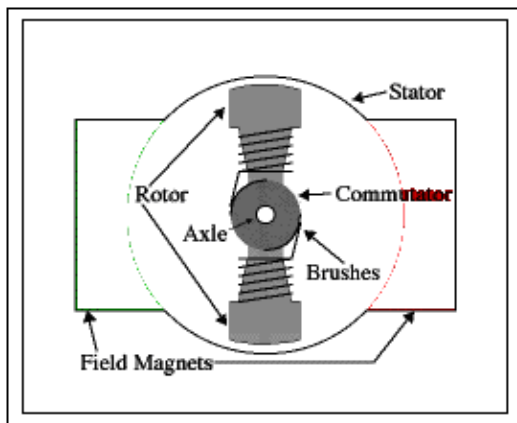
A mechanical fan is an electrically powered device used to produce airflow for the purpose of creature comfort (particularly in the heat), ventilation, exhaust, or any other gaseous transport. Mechanically, a fan can be any revolving vane or vanes used for producing currents of air. Fans produce air flows with high volume and low pressure, as

opposed to a gas compressor which produces high pressures at a comparatively low volume. A fan blade will often rotate when exposed to an air stream, and devices that take advantage of this, such as anemometers and wind turbines often have designs similar to that of a fan.

2.2 Motor

In any electric motor, operation is based on simple electromagnetism. A current-carrying conductor generates a magnetic field; when this is then placed in an external magnetic field, it will experience a force proportional to the current in the conductor, and to the strength of the external magnetic field. As you are well aware of from playing with magnets as a kid, opposite (North and South) polarities attract, while like polarities (North and North, South and South) repel. The internal configuration of a DC motor is designed to harness the magnetic interaction between a current-carrying conductor and an external magnetic field to generate rotational motion. Let's start by looking at a simple 2-pole DC electric motor (here red represents a magnet or winding with a "North" polarization, while green represents a magnet or winding with a "South" polarization)

Figure -2 motor



3. CONCLUSION

This project is made with pre planning, that it provides flexibility in operation. This innovation has made the more desirable and economical. This project is designed with the hope that it is very much economical and help full in agriculture field. It is quite simple in operating methodology as well as highlighted output result of working. This project helped us to know the periodic steps in completing a project work. Thus we have completed the project successfully.

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