

## **FABRICATION OF SAFEST SAW MILL – LIFE SAVER FOR INDUSTRIAL APPLICATIONS (SOLAR OPERATED)**

### **INTRODUCTION:**

In modern days, still we are using manual operated saw mills. Here we have designed one model, which provides automatic safe of life of workers.

The real power required for machine equipment depends on the resistance to the movement of it. Some of these resistances are the wind resistance, the rolling resistance and the gradient resistance. Even now, in 98% of the contemporary machines that run, this power for movement is provided by the burning of fossil fuels in the IC engines or the external combustion engines. This, as evident, has led to widespread air, water and noise pollution and most importantly has led to a realistic energy crisis in the near future.

### **ABSTARCT:**

The main aim for our project has been to develop a solar operated Saw Mill, which is solar powered. In this machine used a solar panel to capture and convert solar energy into electrical energy which in turn is used to charge four 12V batteries, which then gives the necessary power to a shunt wound DC motor.

The main aim of is to guard and product the safety of the workers in saw mills and to ensure that no casualty is occurred during the cuttings works. When they touch the blade by mistake it will cut the hand. To overcome this problem, we have designed a unique system i.e., auto safety device which can be sited at such places and is capable to stop automatically. It is save the life of men who is serving with this machine. It will automatically stop when any one touch the cutting blade.

## WORKING PRINCIPLE:

We are going to fabricate a frame with DC Motor coupled Saw Mill. Once power supply is provided, the saw mill will start rotating and a wooden pieces will be cut into pieces. There will be a Sensor which senses in case any human interruption and immediately turns off the power supply. Thus the damage can be minimized.

Even though the power supply is disconnected due to the applied force, the saw mill wheel will be still rotating. Because of the sharp edges even this may harm a person. To minimize this we are going to apply a hydraulic braking system which will hit the blade and the entire system will be paused immediately, thus we can reduce the injuries to humans.

## ADVANTAGES:

- Human Injuries can be minimized to certain extent
- Safe and secure, Can be implemented with other machineries too.
- Can be use in both Industrial and Residential premises.
- Eco –Friendly Operations can be performed with help of solar renewable energy.
- Solar powered operations will reduce the power consumption cost.