

## **FABRICATION OF 3 IN 1 MULTIPURPOSE MECHANICAL MACHINE USING WHITWORTH MECHANISM**

### **ABSTRACT:**

This machine is designed for the purpose of multi operations i.e., Drilling , Hacksaw Cutting and shaping operations. This machine performs multipurpose operations at the same time with required speed and this machine is automatic which is controlled or operated by motor which is run with help of current.

This machine is based on the mechanism of whitworths return. This model of the multi operational machine may be used in industries and domestic operations, which can perform mechanical operations like Drilling, cutting and shaping of a thin metallic as well as wooden model Or body.

### **PROBLEM STATEMENT**

To design and development of multi purpose machine a structure which is designed for the purpose of multi operations i.e., drilling, hacksaw cutting and shaping.

### **PROBLEM IDENTIFICATION**

This machine performs multi operations at the same time with required speed and this machine is automatic which is controlled and operated by motor and run with the help of current. This machine is based on the mechanism of whitworths returns.

### **OBJECTIVE**

The objective of this experiment is to investigate the performance of a whitworth quick return stroke and a slow cutting or a forward stroke.

## MECHANISM

Mechanism in the simplified model, usually in the form of lined diagram, which is used to reproduce exactly the motion occurring in a machine. The purpose of the reproduction is to enable the nature of motion to be investigated without the encumbrance of the various solid bodies which form the machine elements.

## ADVANTAGES

- Multi operations are performed at one time.
- Our machine is used in return stroke mechanism also.
- all operations are performed in single motor.
- Size is compact therefore it requires less space.
- Time saving.
- Less man power is required.
- Low manufacturing and maintenance cost.