DESIGN AND FABRICATION OF TABLE LIFTING MECHANISM FOR UPRIGHT DRILLING MACHINES

ABSTRACT:

Now a day many industries using drilling machine, they are want to new model drilling machine and more efficiency so, we have to plane this type of drilling machine, let we have an introduced TABLE LIFTING MECHANISM FOR UPRIGHT DRILLING MACHINES, what we have changes in model maximum drilling machine using by on rack pinion mechanism in table height variation but our project model using rack gear, spur gear and worm gear mechanism. Why we have to using this mechanism in heavy drilling machine and lifting easy drive system.

The worm gear, spur gear and rack gear engaged together in attached drilling bed. Most of all drilling machine using in industries simple rack and pinion setup this type of mechanism going to need height variation time drive to hand lever in rough condition. We have a fabricated this thing model in neglect in existing draw back it is operated easy and more efficiency increased in drilling machine.

INTRODUCTION:

Drilling machine is one of the most important machine tools in a workshop. It was designed to produce a cylindrical hole of required diameter and depth on metal workpieces. Though holes can be made by different machine tools in a shop, drilling machine is designed specifically to perform the operation of drilling and similar operations. Drilling can be done easily at a low cost in a shorter period of time in a drilling machine.

Drilling can be called as the operation of producing a cylindrical hole of required diameter and depth by removing metal by the rotating edges of a drill. The cutting tool known as drill is fitted into the spindle of the drilling machine. A mark of indentation is made at the required location with a center punch. The rotating drill is pressed at the location and is fed into the work. The hole can be made up to a required depth.

So this project “DESIGN AND FABRICATION OF TABLE LIFTING MECHANISM FOR UPRIGHT DRILLING MACHINES” is very much useful, if it is provided with good quality. This is used for any drilling operation and heavy drilling operation it will be done.
WORKING PRINCIPLE:

This machine using gear mechanism, it is one of the most common mechanism which is easy to drive and more efficiency given but we have to using small changes in mechanism, what it will be changes means worm and worm wheel using, which is operated bed height adjusting time in drive to worm gear it is simply driven on worm wheel it also rotates by on rack gear so, bed is going down and up operation will be done.

When you need the height variation in drill bed just did it adjust on bed support frame connection thread core hand lever.

LAYOUT:

ADVANTAGE:

- Simply drive system.
- Simple construction and low cost consumption.
- It is improved efficiency level in drilling machine.
- Height variation time it will be reduced.
- Low manual power using in operated.

APPLICATION:

- Small and large scale industrial usage.