International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 07 Issue: 04 | April - 2023 Impact Factor: 8.176 ISSN: 2582-3930

360-Degree Flexible Drilling Machine

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Abstract - - Drill machines have been the heart of every industry. Drilling holes in parts, sheets and structures is a regular industrial work. Perfect and well aligned drilling needs fixed and strong drills. Some parts cannot be drilled using fixed drills due to low space between drill bit and drill bed. We need to use hand drills in such cases but hand drills have alignment problems while drilling. So here we propose a 360 degree flexible drill that can be mounted on a table or wall and can be used to drill holes horizontally, vertically or even upside down

Key Words: Drilling machine, aligned, driil bit, 360 degree, horizontally, vartically.

1.INTRODUCTION

Drill machine is one of the machines which is it is the heart of every industry. Drilling is a cutting and removal of material process in which a holes are made or expand with the help of a multipoint sharp end cutting tool. By power, when the drill is made to rotate on the workpiece, thus the unwanted material is withdrawn in the form of chips by moving along the shank. The purpose of our project is to rotate 360 degrees and make it more convenient to use. This machine minimize the manufacturing cycle time, the clamping of workpiece is also eliminated: once the workpiece is clamped on magnetic base plate, there is no need for moving work piece at different location for drill at different positions, the number of machines required are also minimum, human errors are also rectified. With the contrast of this machine we can drill in any direction at a particular time with less effort. The machine is mounted on a flat surface like a table or wall. In this drilling machine we were using rack and pinion to move the drill, so the machine can be work in less space with accuracy..

2. COMPONENT

- Motor
- Bit
- Connecting arms
- Hinges
- Wall/Table Mount
- Supporting Frame
- Joints & Screws

3 WORKING

Basically, works on principle of Seim or Jack Mechanism adjustment of demand and upward motion. The motion Scissor Jack is obtain by DC Motor which is connected with Lead Screw. We use connected the base and upward part of Scissor with the help of Aluminium Plates We have placed the Slider Mechanism on Scissor Jack and we place the Drill Biton slider with the help of Motor & we give the sliding motion of slider with the help of Lead Screw & Motor

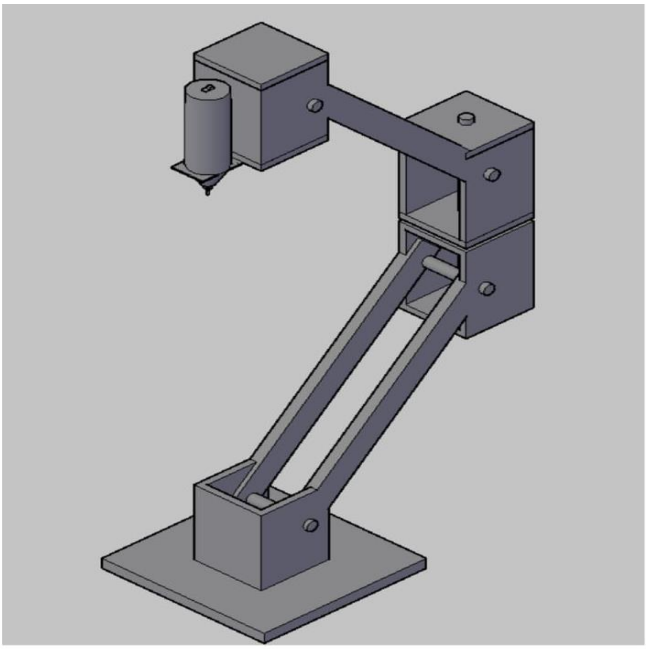

Fig -1: Figure

4. CONCLUSIONS

This project is an efficient operation and competitive cost. Since a number of operation and hole can be performed in a simple unit. It is efficient and economical. Considering its uses and cost of project, it becomes relatively cheap when compared to other units.

ACKNOWLEDGEMENT

We, the students of the mechanical engineering college (Full 2022-2023),would like To present our thanks and deep appreciation to the de am of the college and faculty Members and supervisors of the graduation project. (360 degree flexible drilling machine) to give us this opportunity to gain the knowledge and skills to design and implement this project. We also promise to be the best representatives of the college in the field of workers.

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