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Multi Purpose Machine

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Abstract :- *This Project is about MULTIPURPOSE MACHINE which is use for production of useful goods at low production cost, machinery cost and low inventory cost. A machine which can perform operation like Cutting, Shaping, Drilling operation at one place simultaneously. On the main shaft a Bevel Gear System is used for power transmission for drilling machine.*

Keywords:- *Power Transmission, Cutting, Grinding, Drilling*

INTRODUCTION:-

1. This Machine Perform Multipurpose Operation At Same Time With Required Speed and this machine is automatic which is controlled or operated by a motor which is run with the help of Current , This machine is based on the mechanism of withworth return.
2. This model of the multi OPERATIONAL machine is may be used in industries and domestic OERATION which can perform mechanical operation like drilling , cutting and shapping of a thin metallic as well as wooden model or body. Economics of manufacturing: According to some economists, manufacturing is a wealth-producing sector of an economy, whereas a service sector tends to be wealth-consuming. Emerging technologies have provided some new growth in advanced manufacturing employment opportunities in the Manufacturing Belt in the United States. Manufacturing provides important material support for national infrastructure and for national defense.

LITERATURE STUDY:-

1. **Heinrich Arnold1 November 2001:** Rather long re-investment cycles of about 15 years have created the notion that innovation in the machine tool industry happens incrementally. But looking at its recent history, the integration of digital controls technology and computers into machine tools have hit the industry in three waves of technology shocks. Most companies underestimated the impact of this new technology. This article gives an overview of the history of the machine tool industry since numerical controls were invented and introduced and analyzes the disruptive character of this new technology on the market.
2. **Dr. Toshimichi Moriwaki (2006)**: Recent trends in the machine tool technologies are surveyed from the view points of high speed and high performance machine tools, combined multifunctional machine tools, ultra precision machine tools and advanced and intelligent control technologies.
3. **Frankfurt-am Main, 10 January 2011.** : The crisis is over, but selling machinery remains a tough business. Machine tools nowadays have to be veritable “jack of all trades”, able to handle all kinds of materials, to manage without any process materials as far as possible, and be capable of adapting to new job profiles with maximized flexibility. Two highly respected experts on machining and forming from Dortmund and Chemnitz report on what’s in store for machine tool manufacturers and users. Multi-purpose machines are the declarations of independence.

Advantages:-

1. *All operation are performed by one motor.*
2. *Low manufacturing and maintenance cost*
3. *Time saving.*
4. *Size is compact therefore it require less space*

Application:-

1. *This machine is mostly useful In various engineering institutes workshops.*
2. *It can be applicable in small industries.*
3. *It can be used ion garage for small household purposes.*

FOOTNOTES:-

Our machine will perform three operation at a time namely drilling , cutting , shaping. So our main aim is to find or use a mechanism that can fulfill our demand.

CONCLUSION

The scotch yoke mechanism is made and its advantages and disadvantages are discussed. Its motion characteristics are studied. It is concluded that this mechanism is a good choice to convert rotating motion into reciprocating motion because of fewer moving parts and smoother operation

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