

AUTOMATIC TAPPING MACHINE

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ABSTRACT

Quality and productivity play important role in today's manufacturing market. Automation providing high end quality. Now a day's due to very stiff and cut throat competitive market condition in manufacturing industries. The main objective of industries reveal with producing better quality product at minimum cost and increase productivity. Drilling machine and tapping machine is most vital and common machine used for producing hole operation use for produce machine part with desire surface quality and cost constrain. To obtain main objective of company regards quality and productivity. In the present project an attempt is made to reduce the effect of machining idle time parameters because of mounting dismounting, marking etc. that are influences on responsive output parameters such as time of producing hole, quantity of job, quality of job. This is done by using indexing. The effort to investigate optimal time of producing hole and their contribution on producing better Surface quality and higher Productivity with less cost automation.

Keyword - Automation, indexing, Manufacturing industry, Productivity, Quality.)

I. INTRODUCTION

In this automatic Tapping machine, We have to use the crank and lever mechanism and rack and pinion mechanism use to lift the job or lower die for tapping operation. In short we have to remove the rod which used in existing system to lift the die and Then We are connect the lever of crank and lever mechanism to the gear instead of rod. Then the lever is connected to the crank and crank is rotate with the help of the motor. We have known that the crank is rotary and lever is reciprocating, That Mean we have converted the rotary motion of the crank into the reciprocating. Finally we get the upper and downward moment of lower die is automatic.

I. CONSTRUCTION OF A TAPPING MACHINE

The main part of this mechanism is crank and lever which is made up of metal steel.

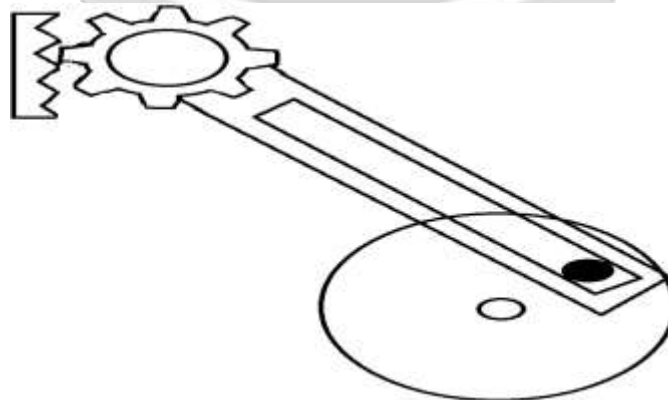


Fig.A- CRANK AND LEVER MECHANISM



Fig -1 Crank with motor

Fig-2 Lever

3. WORKING OF THE TAPPING MACHINE:-

Working of the tapping machine is same as the other tapping machine only the difference that the instead of the hand operated lever we used the crank lever operated lever and it will be rotate with prime mover.

When we start the prime mover the crank is rotate. The crank is connected to lever that is crank means rotary motion converted into reciprocating motion with the help of lever. And the movement of the hand lever is get automatic. So the effort required and the time required is less to produced the tap or hole.

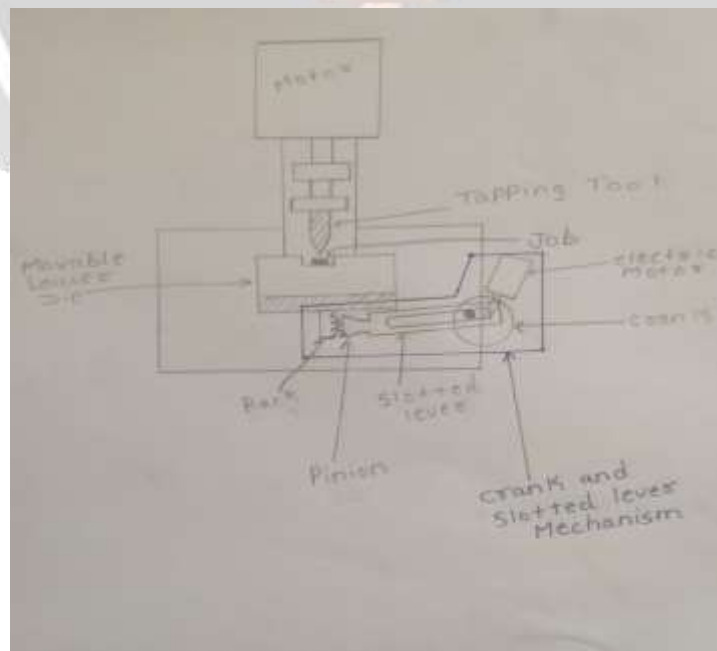


Fig B- BLOCK DIAGRAM OF TAPPING MACHINE

3.1 Actual Working

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Fig -C TAPPING MACHINE

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4. CONCLUSIONS

1. *It's a automatic tapping machine in which the lower die movement is automated i.e. up and down moment.*
2. *We used the crank and lever mechanism to lift the lower die.*
3. *Production time is increases.*

5. PURPOSE OF TAPPING MACHINE

SR. NO.	DESCRIPTION	SPECIFICATION
1.	Name	TAPPING MACHINE
2.	Power	7HP
3.	Voltage	415v/3phase
4.	Power (W)	12W
5.	Dimension of lever Dimension of crank	340mm by 25mm -lever. 180mm by 10mm –slot. 220mm diameter...
6.	Type	Automatic

6. ADVANTAGES

1. Initial cost is less as compare to other automatic machine.
2. Maintance cost is less.
3. Simple in construction and working.
4. Effort and time required is less.
5. Less automation cost.
6. Skill person is not required
7. Reduction of labor work which results in cost reduction.

7. REFERENCES

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