



THE RESEARCH ON GEAR MANUFACTURING METHDOLOGY USING STANDARD GEAR MECHANISM.

¹. PROF HARSHAL RAUT, ². SEEMA KHEDGARKAR,
³. PRASHANT DHOBLE, ⁴. AJIT GAIKWAD.

¹. Assistance Professor, ^{2,3,4}. Student
^{1,2,3,4} Department of Mechanical Engineering.
JD College Of Engineering & Management, Nagpur.

Abstract- Papers present the Review analysis and modification of gear manufacturing methodology. Research aimed is constructed a new system to making the gear in same types of gear production.this methodology is used to increasing the efficiency of manufacturing of gear. Theoretical information and overall concept of research is also present in that papers.

Keyword- Introduction, Construction, Diagram, Working, One Tooth Gear, Bearings, Conclusion, Refrences.

1. INTRODUCTION

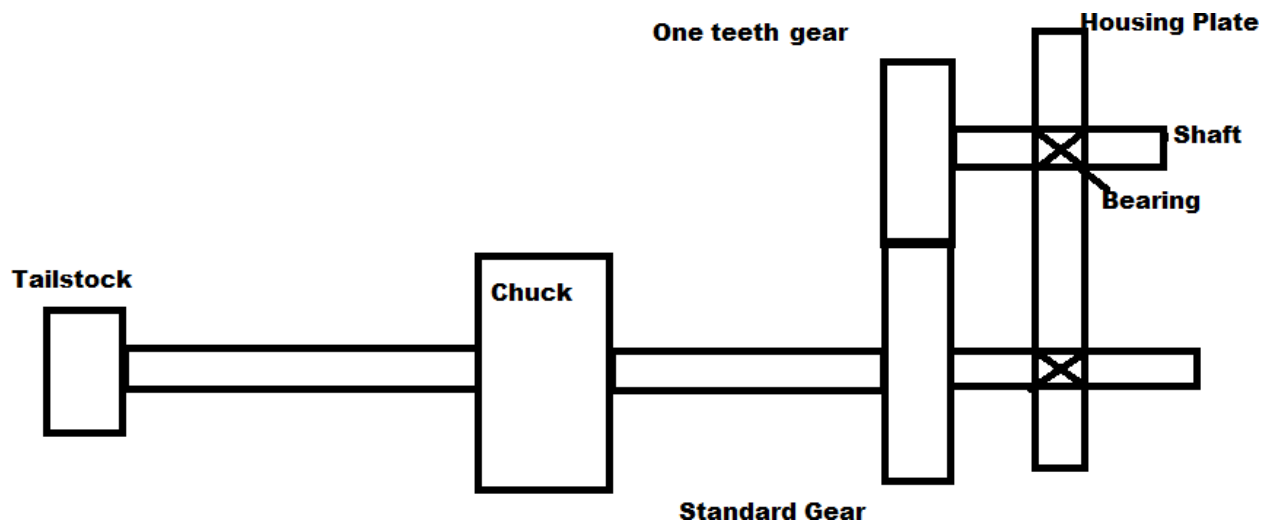
Milling machine were first invented and developed by Eli Whitney .Theproduction machine assisted man in maintaining high accuracy and uniform shape while duplicating parts do not be manufactured developing of the milling machine and parts may be continued.

In this research paper we introduced attached new system .This system is used for the same production of gear by analyzing the gear terminology.

2. CONSTRUTION

Attached System is consist on milling machine ,they are consist two shaft on bearing housing & one shaft take place one teeth driver gear and second shaft take place a standard gear used for production of gear. Blank is also attached to the second shaft. Locking of the gear is used the Pawl & Ratchet mechanism.

3. DIAGRAM



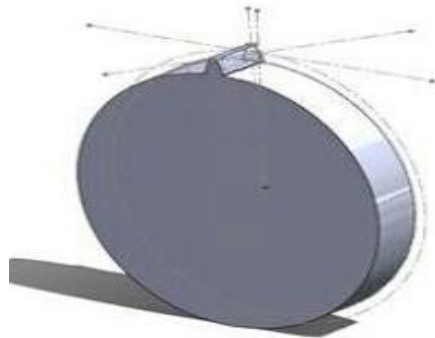
4. WORKING

Principle of Working of this system is based on Geneva mechanism. when we are moving one teeth of gear in 360° then standard gear is rotates only one teeth. Working of this mechanism is semi-automated .this system is attached with replaced

of indexing mechanism. whole attachment is placed on the horizontal milling machine. The milling table is take place bearing housing, bearing and shaft of driver one teeth gear is also attached to this mounting. Handle is also provided o this shaft .when we are rotating the one teeth gear then power is transmitted to the second gear which is available in standard gear. This motion is required for blank takes position for the cutting of gear teeth.

5. ONE TEETH GEAR

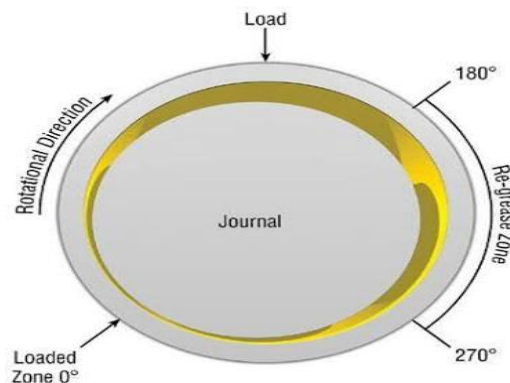
One teeth gear is driver of these system. its have only one teeth for power transmitting motion. One teeth gear provide it take place in shaft and handle is also provided for rotating of one teeth gear.



The principle of one teeth is just like a Geneva mechanism. Manufacturing of one teeth gear is selected when we are manufactured. this gear consider and cut all teeth accepting one teeth gear. its application is only to get the motion of the system .To increasing accuracy is used pawl and ratchet mechanism for locking the system.

6. BEARING

A plain Bearing is a Simplest Types of Bearing. It is used to bearing element and rolling element.



The Design of a plain Bearing is Depends on-

- Journal Bearing:-It is common types of bearing plain bearing.it are used to simply shaft rotating bearing.
- Linear Bearing:-Is the bearing provides linear motion.
- Thrust Bearing:-A trust Bearing provides a bearing surfaces for forces acting axial to the shaft.

7. CONCLUSION

Paper performed a comparative analysis of methodology of manufacturing gear. System is used to introduced a new way to manufacturing of gear and comparing the gear parameters with standard gear.

8. REFERENCES

- [1] Choy,H.S.;Chan,K.W.(Februry 2003).
- [2] https://en.m.wikipedia.org/wiki/gear_manufacturing.
- [3] [Uhv.cheme.cmu.edu/procedure/manufacturing/ch8pdf](http://uhv.cheme.cmu.edu/procedure/manufacturing/ch8pdf).
- [4] Theory of machine by R. S. khurmi & J.K.Gupta.
- [5] Journal Bearing, Achived from the on 2009-12-30,retrived 2009-12-29.
- [6] Glaseser, William A. (1992),Materials for tribology, Elsever, ISBN 978-0-444-88495- 4.
- [7] Abele, E. and Frolich, B. "High speed milling of titanium alloys".Journal of Advance in production Engineering and Management. Vol. 3,pp.131-138,2008.