## **IJARSCT**



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Volume 2, Issue 2, February 2022

## Design and Manufacturing of Flange Yoke Fixture for milling machine

Amol Nankar<sup>1</sup>, Samadhan Wadalka<sup>2</sup>, Vivek Muthal<sup>3</sup>

SHHJB Polytechnic, Chandwad, Maharashtra, India<sup>1</sup>
Plant Head, M/S Panchal Engineering India Pvt. Ltd, Nashik Maharashtra, India<sup>2</sup>
Front end Software Architect, Dreamwares IT solution LLP<sup>3</sup>
amolnankar@gmail.com and vmuthal.18@gmail.com

Abstract: Flange Yoke is a part of Drive Shaft which is required when power is to be transmitted from engine to differential of an automobile. A flange yoke for a universal joint is used to join fork halves; each comprising a base component and a bearing component. During spot facing on the flange, vibrations takes place and it leads to tool breakage. Hence the tool changing time is increased. Thus there is a need to design a fixture to nullify the problems. We have designed such a fixture which will carry out the milling operation efficiently. The newly designed fixture uses an insert type of milling cutter which removes the material as per requirement, which reduces the vibrations and tool breakage and ultimately reduces the tool changing time.

Keywords: Component; Formatting; Style; Styling; Insert

## REFERENCES

- [1]. "Design of Machines Element", R.B.Patil; Tech-max Publications.
- [2]. "PSG Design data Book"; PSG College of Engineering, Coimbatore, Revised Edition 1997, Pg. No. 1.10, 1.40, 5.42, 5.60, 8.3, 12.26.

DOI: 10.48175/IJARSCT-2792

- [3]. "Machine Design", V. B. Bhandari, Third Edition 2008.
- [4]. "Jigs and Fixtures", D. Hoffman, Thomson Demler Learning Publication, Fifth Edition.
- [5]. "Design of Machine Tools", S.K. Basu, D.K. Pal, Fifth Edition.