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**VIDYAVARDHINI'S
NATIONAL CONFERENCE ON
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4TH APRIL, 2020**



Organized by:
Vidyavardhini's College of
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About us:

Vidyavardhini means a Body committed to enhancement of Knowledge. Vidyavardhini was established as a registered society in 1970 by late Padmashri H. G. alias Bhausaheb Vartak for the noble cause of education in rural areas.

Vidyavardhini's College of Engineering and Technology, Vasai is located on the sprawling campus of Vidyavardhini, spread over an area of 12.27 acres. It is a short, two minutes walk from Vasai Road (W) Railway Station. The college is also accessible by road from Mumbai.

Vidyavardhini Society received approval from AICTE to start the new college of Engineering & Technology with effect from July, 1994. The college is affiliated to the University of Mumbai for the four year degree program leading to the degree of Bachelor of Engineering in six branches.

Objective of VNC 2020 TASU

Technology has always been potential tool for simplifying the way we do things. Present time demands directing the technological advancements towards addressing societal challenges such as improving health care, education environment, sanitation, agriculture, smart city, etc., VNC 2020 TASU aims to provide an opportunity to researchers, academicians, Industrialist and students to interact and share their ideologies and contributions made for social upliftment with the aid of technological advancements.

Call for paper

We welcome submission in following area

1. Sustainable Computing
 2. High Performance Computing
 3. High Speed Networking and Information Security
 4. Software Engineering and Emerging Technologies
 5. Mathematical, Experimental, Computational and AI, IoT Techniques in Mechanical Engg.
 6. Industrial Engg., ERP, MRP, SCM
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 11. Present practices in construction management
 12. Recent developments in Instrumentation, control and automation
 13. Embedded Systems, IoT and VLSI Design
 14. Optical and Wireless Communication for NGN
 15. Antenna and Microwave Devices
- Any other relevant topics

Publication Information

Proceedings of VNC - 2020 TASU will be published with ISBN number

1. Selected Papers will be published in International Journal of Information Technology, Published by Springer Nature, ISSN: 2511-2104 (Print Version), ISSN: 2511-2112 (Electronic Version)
2. All papers will be published in IJERT, ISSN: 2278-0181

Important Dates:

- Submission of full length paper
15th Feb 2020
- Paper Acceptance Notification
22nd Feb 2020
- Submission of Final Version of Paper
29th Feb 2020
- Registration Deadline
5th March 2020
- PPT Submission
20th March 2020
- Conference
4th April 2020

Registration Fee Details:

Category of Delegates / Authors	Indian Authors & Delegates (in INR)
Full Time Students (UG)	1,500.00
Teachers/ Research Scholars/ PG students	2,500.00
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Paper Submission:

Paper submission should be made strictly via Easy Chair the submission link for VNC 2020 "TASU":
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***Best paper award
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Double Head Chamfer Machine Design & Development of Double Head Chamfer Machine

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Abstract: The Industrialization is moving towards automation and in this era of automation where it is broadly defined as replacement of manual effort by mechanical power in all applications of manufacturing. Chamfering is one of the major operations in manufacturing of automotive parts. In manufacturing industry there are many small scale and medium scale industries are there who performs this operation and as per the requirement or customer. For many industrial applications round bars and square bars are required to be chamfered using different machines. This operation for mass production consumes time and manpower of the industry. To reduce the time consumption and energy consumption of worker we have designed and developed double head chamfer machine.

Key Words: Automated, linear guided, double head, chamfering, automation, chamfer tool, SPM

I. INTRODUCTION

This is an era of automation where it is broadly defined as replacement of manual effort by mechanical power in all degrees of automation. The operation remains an essential part of the system although with changing demands on physical input as the degree of mechanization is increased.

In present condition many non-automatic operated chamfering machines of different companies with different specifications are available for the use in shop floor. As the requirement of mass production for industries they need to perform this operation in high rate which is not obtained by the conventional machines. So there is a need of improvement in design and technology of such machines. This machine can chamfers both side of component simultaneously and can also achieve mass production with maximum profit for that company. This machine after improvement overcomes all the drawbacks of conventional machines, which are later beneficial for small and medium scale industries. It is also helpful for small-scale industries due to its simple working and operating conditions along with its compatibility, efficiency and affordable price. A chamfer is a 45-degree bevelled edge that is built into various designs, including architectural and tech products. This paper proposes the model of double head chamfer machine.

This is able to chamfer simultaneously without any jerk and minimum vibrations. This model overcomes the limitations of conventional chamfering machines, which can chamfer single piece at a time. It is able to chamfer metal bars of different materials at same time and will be helpful in many industries due its compatibility, reliability and efficiency.

II. DESIGN APPROACH

The setup of our project consists of a bed on which the chamfering tools and other parts are mounted. The chamfering tools are mounted on the ends of the base table and at the centre the work piece is being held with the use of pneumatic cylinder and grippers. The work piece is moved forward with the help of feed tracks and motor. To perform this operation tools are moving ahead and back according to the size of work piece with the help of guide rails and guide block placed at the bottom of motor plate. After this when tool and work piece comes in contact the chamfering is done.

Following are the main parts of this project:

- Bed
- Chamfering Tool
- Motor
- Lead screw
- Pneumatic cylinder
- Linear guide rails and block
- Electronic components

A) BED

Bed or the base of the machine is our primary element on which all the other components are to be mounted and the required operations are to be performed. The dimensions are also mentioned below.

- Width of the bed (with cutting mechanism) = 1.5meter
- Length of the bed = 1.5meter
- Area = $2.25 \times 10^4 \text{ cm}^2$

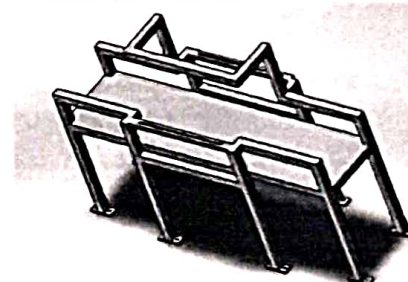


Figure 1 BED

B) CHAMFERING TOOL

This is the chamfer tool designed according to our project. Considering the centre of work piece should not move after the rotation of feed track. So to keep the work-piece stationary the cutting tool or the cutter needs to be rotated

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Certificate of Participation


This certificate is presented to
Tusharkumar Raut

of
VCET, Vasai Road (West)

for presenting paper titled

NTASU 1024 Design & Development of Double Head Chamfer Machine.

at the Vidyavardhini's National conference 2020 "Technical Advancements for
Social upliftments" organised by Vidyavardhini College of Engineering and
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