




<b>Department : Mechanical Engineering</b>		
<b>Academic Year: 2021-22</b>		
<b>Sr. No.</b>	<b>Programme Code</b>	<b>Name of the Programme</b>
01.	217	B. Tech Mechanical Engineering

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A  
Project Report  
on

**“Fabrication and Testing of Bio Piezoelectric Nano Generators”**



Submitted to  
**Department of Mechanical Engineering**  
**Guru Ghasidas Vishwavidyalaya**  
(A Central University)  
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In partial fulfilment of requirement for the award of Degree  
of

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in

**Mechanical Engineering**

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**May 2022**



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## Certificate of Supervisor

This is to certify that the work incorporated in the project

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is record of work carried out by Mr. Nikhil Kumar Ahirwar, Miss Harshikha Shendey, Mr. Kuldeep Meena and Mr. Vinay Kumar bearing Enrolment No. GGV/18/1182, GGV/18/1122, GGV/18/1151, GGV/18/1341 respectively, under my guidance and supervision at Department of Mechanical Engineering, School of Studies of Engineering & Technology Guru Ghasidas Vishwavidyalaya, (A Central University) Bilaspur, (CG) India. To the best of my knowledge and belief.

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- Has duly been completed.
- Is up to the desired standard both in respect of contents and language for being referred to the examiners.

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Assistant Professor

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**गुरु घासीदास विश्वविद्यालय**  
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A

**Project Report**

On

**“DESIGN, DEVELOPMENT & PERFORMANCE ANALYSIS OF A THREE-PASS  
TUBULAR SOLAR AIR HEATER”**



**Submitted to**  
Department Of Mechanical Engineering  
Guru Ghasidas Vishwavidyalaya  
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**Submitted as Major Project Work For 8<sup>th</sup> Semester**  
Of  
Bachelor Of Technology  
In  
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**Session 2021-2022**





Department of Mechanical Engineering  
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**Certificate of Supervisor**

This is to certify that the work incorporated in the project “**Design, Development & Performance Analysis of a Three-Pass Tubular solar air heater**” is a record of work carried out by **Mr. Adarsh Singh, Mr. Aryan Raj, Mr. Digu, and Mr. Om Kapoor Maurya** bearing Enrolment No. GGV/18/1011, GGV/18/1061, GGV/18/1100, and GGV/18/1192 respectively, under my guidance and supervision at the Department of Mechanical Engineering, Institute of Technology Guru Ghasidas Vishwavidyalaya (A Central University) Bilaspur, (CG) India.

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- Is up to the desired standard both in respect of contents and language for being referred to the examiners.

  
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A

Project Report

On

**“Experimental analysis of the thermal performance of an evacuated tube solar air heater using copper mesh”**



Submitted to

School of Studies of Engineering and Technology

Guru Ghasidas Vishwavidyalaya

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**In partial fulfilment of requirement for the award of Degree**

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A  
Project Report  
On  
**CFD ANALYSIS AND DESIGN OF CEILING FAN BLADE**



Submitted to  
**Department Of Mechanical Engineering**  
**Guru Ghasidas Vishwavidyalaya**  
(A Central University)  
Bilaspur (C.G.)  
**Submitted as Major Project Work for 8<sup>th</sup> Semester**  
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**In**  
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***Session 2021-2022***



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### CERTIFICATE OF SUPERVISOR

This is to certify that the work incorporated in the project

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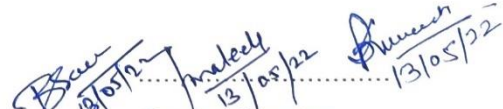
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A

Project Report

On

**“COMPLIANT CENTRIFUGAL CLUTCH”**



Submitted to

**Department of Mechanical Engineering**

**Guru Ghasidas Vishwavidyalaya**

**(A Central University)**

**Bilaspur (C.G.)**

**Bachelor of Technology**

**In**

**Mechanical Engineering**

School of Studies of Engineering & Technology  
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(A Central University)

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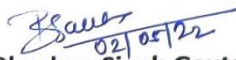
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#### **BATTERY OPERATED SEMI AUTOMATIC SPRAYER**

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A

Project Report

on

**“Powered Semi-Automatic Paddy Refresher Machine”**



Submitted to

**Department of Mechanical Engineering**  
**Guru Ghasidas Vishwavidyalaya**  
(A Central University)  
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**In partial fulfilment of requirement for the award of Degree**

**Of**

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**Mechanical Engineering**

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A  
Project Report On  
"Design, Development & performance analysis of a solar water distiller"



Submitted to

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**Session 2021-2022**





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#### “Design & Development of “Solar Still” for Performance Analysis”

Is record of work carried out by Rohan Raj, Ms Preeti Painkra, Shubham Singh Naurange, Mr Vivek Kumar Sahu bearing Enrolment No. GGV/18/1262, GGV/18/1226, GGV/18/1301, GGV/18/1349 respectively, under my guidance and supervision at Department of Mechanical Engineering, School of Studies of Engineering & Technology Guru Ghasidas Vishwavidyalaya, (A Central University) Bilaspur, (CG) India. To the best of my knowledge and belief.

- Embodies the work of the candidate themselves.
- Has duly been completed.
- Is up to the desired standard both in respect of contents and language for being referred to the examiners.

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**Certificate by the Examiners**

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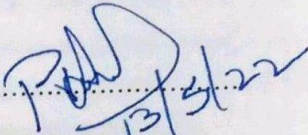
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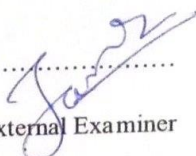
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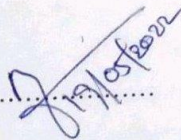
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A  
Project Report  
On  
**CFD INVESTIGATION ON COAXIAL SWIRL INJECTOR**



**Submitted to**  
**Department of Mechanical Engineering**  
**Guru Ghasidas Vishwavidyalaya**  
**(A Central University)**  
**Bilaspur (C.G.)**

**Bachelor of Technology**  
**in**  
**Mechanical Engineering**

**Submitted By**  
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Department of Mechanical Engineering  
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**Certificate of Supervisor**

This is to certify that the work incorporated in the project

**“CFD investigation on Coaxial Swirl Injector”**

is record of work carried out by Mr. Shiv Charan Shukla (18104043), Mr. Siddharth Singh (18104045), Mr. Pawan Kumar (18104029), Mr. Vishal Pandey (18104059) bearing Enrolment No. GGV/15/1293, GGV/15/1302, GGV/15/1200, GGV/15/1343 respectively, under my guidance and supervision at Department of Mechanical Engineering, School of Studies of Engineering & Technology Guru Ghasidas Vishwavidyalaya, (A Central University) Bilaspur, (CG) India. To the best of my knowledge and belief.

- Embodies the work of the candidate themselves.
- Has duly been completed.
- Is up to the desired standard both in respect of contents and language for being referred to the examiners.

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**CFD INVESTIGATION ON COAXIAL SWIRL INJECTOR**

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A  
Project Report  
On  
"The Conventional Way of Milling to get Rice from Paddy



-Automated Dhenki"

Submitted to

Department of Mechanical Engineering

Guru Ghasidas Vishwavidyalaya

(A Central University)

Bilaspur (C.G.)

Submitted as Project Work Progress for 8<sup>th</sup> Semester Requirement

Of

Bachelor of Technology

In

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**Submitted To:**

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Session 2021-22



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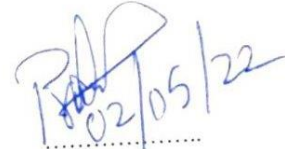
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