

DEPARTMENT OF MECHANICAL ENGINEERING TECHYUGA (2021-22)



Vision and Mission of Institute

Vision

“To Emerge as a learning Centre of Excellence in the National Ethos in the Domains of Science, Technology, and Management”

Mission

M1: To Strive for Rearing Slandered and Stature of the Students by Practicing High standards of Professional Ethics, Transparency and Accountability.

M1: To Provide Facilities and Services to Meet the Challenges of Industry and Society.

M1: To Facilitate Socially Responsive Research, Innovation and Entrepreneurship.

M1: To Ascertain Holistic development of the Students and staff members by Inculcating Knowledge and Profession as Work Practices.

Vision and Mission of Department

Vision

“To emerge as a premier centre in the field of Mechanical Engineering Education and produce competent Engineers”.

Mission

M1: To impart quality Technical Education through effective teaching -learning process.

M1: To provide a better environment to encourage innovation and entrepreneurship.

M1: To strengthen industry institute interaction to meet the challenges of industry and society.

M1: To ensure overall development of students and staff members by inculcating knowledge and professional ethics.

Best of Waste

Students of Mechanical Engineering Department of Tulsiramji Gaikwad –Patil College of Engineering and Technology, Nagpur has organized unveil of “Idol of Ganeshji” Best of Waste –Activity Based Learning on dated 30 September 2021 at Corporate Office, TGPCET, Nagpur. The Chief Guest of Program: Hon’ble Mr. Rakesh Ola (IPS), Superintendent Of Police, Nagpur Rural. The Program has conducted in presence of Hon’ble Mohan Gaikwad-Patil, Chairman of GPG, and Hon’ble Directors, Hon’ble Principle, and Hon’ble Vice-Principle, Respected HOD



Students' Achievement in Project Competition

**Winners of ADHYAAYA - 2020 in
“Government College of Engineering,
Nagpur” Project Competition**



**Winners of Mayor Innovation Awards -
2019 in “Smart City” Category**



Synthesis of Novel adhesive for Bamboo Joinery and comparison of its Mechanical Properties with adhesives available in Market

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Abstract-*In this study, novel adhesive applicable for bamboo joinery has been synthesized using liquefied bamboo (Timber Bamboo) as an alternative to traditional phenol formaldehyde resins. The most objective of this work is to test the feasibility of using liquefied bamboo as stuff for synthesis of Adhesive. The newly synthesized adhesive was analyzed for its physico-chemical parameters and mechanical properties using different bamboo species and was compared with those of adhesives available within the market. The Mechanical properties like tensile strength, compressive strength and shear strength were tested on different samples of bamboo species using newly synthesized adhesive and the adhesives available within the market. The tests were administrated on Universal Testing Machine at room temperature. The results showed that the most values for mechanical properties were obtained when Asian Paints (Loctite touch) was used as an adhesive.*

Keywords- *Adhesive, Bending strength, Compressive strength, Mechanical properties, Tensile strength, Shear strength*

Design & Fabrication of Solar Operated E- Cycle

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Abstract- A solar bicycle is a bicycle which runs using the electrical energy of battery to run the hub motor which ultimately runs the bicycle. Solar energy is used to charge the battery. Two or more Photovoltaic cells may be used to harness solar energy to generate voltage to charge the battery. Battery gives the required voltage to the hub motor mounted on the front wheel to run the bicycle. There have been many patents on electrical vehicles in different countries and thus electric vehicles are not a very new concept. Utilizing solar energy to charge the battery and combining this concept with the concept of electricity generation pedaling is a new concept and there have been very less research in this regard. There are different types of batteries used in electric vehicles like lead acid batteries, lithium ion batteries, Nickel cadmium batteries, etc. Different batteries they have their different advantages for different applications. As far as solar bicycles are concerned lead acid and lithium ion batteries are most commonly used? Lead acid batteries have lower cost, higher current carrying capacity but have smaller life and are heavier. While lithium ion batteries have lower weights but have higher cost and there are chances of explosion.

Keywords- Hub Motor, Solar panel, voltage regulator, Motor controller, Solar Assisted Bike.



Model



Certificate