Aditya College of Engineering & Technology

Aditya Nagar, ADB Road, Surampalem – 533437
Department of Mechanical Engineering

Academic Year: 2020-2021

Project Title:	Fabrication and Testing of Neem Shell Resin, Bamboo and Pineapple Fiber Reinforced Composites	
Guide Name:	Mr.M.Rambabu	
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Abstract	PO's Mapping	PSO's Mapping
With the view of exploring the potential use of natural resources, an attempt is made to fabricate bamboo & pineapple fiber biodegradable resin green composite by hand lay-up Method. Natural fibe6 composites are renewable, cheap and biodegradable. Their ease of availability, lower density, higher specific properties, lower cost, and satisfactory mechanical properties makes them an attractive ecological alternative to glass and other Synthetic fibers. In the present study composite material is developed using neem shell Liquid reinforced with Bamboo and Pineapple leaf fibers. Properties like tensile strength, Tensile modulus, flexural strength, and impact strength are determined.	PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO11	PSO2, PSO3

PO1: Engineering Knowledge	**PO5:** Modern Tool usage	**PO9:** Individual & Team Work
PO2: Problem Analysis	**PO6:** Engineer & Society	**PO10:** Communication Skills
PO3: Design & Development of solutions	**PO7:** Environment & Sustainability	**PO11:** Project Management & Finance
PO4: Investigations on complex problems	**PO8:** Ethics	**PO12:** Life Long Learning
PSO1: Mechanical Engineers must be able to analyze, design and evaluate mechanical components and systems using cutting-edge software tools as required by the industries from time to time.	**PSO2:** The ability to work in manufacturing and other sectors' operations and maintenance plants	**PSO3:** As part of a team or individually, plan and manage activities in micro, small, medium and large enterprises

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Relevance to PO's and PSO's

PO1	Applied the subject knowledge in testing of neem shell resin
PO2	Studied and analysed existing testing of neem shell resin
PO3	Separation process pineapple fiber from the leaves
PO4	Mechanical extraction of bamboo fiber
PO5	Preparation of composite specimen
PO6	**Testing of Properties of neem shell resin**
PO9	Impact tensile stress for the specimen
PO11	Fabrication of bamboo and pineapple fibre biodegradable resin
PSO2	Due to light weight, they are used in automobiles which reduce the fuel usage and give more efficiency.
PSO3	Entreprenerd skills attained