

Alvas Institute of Engineering & Technology

Mijar, Moodabidri

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State Name : Karnataka, Code : 29

AJET FO JV-OTH Voucher

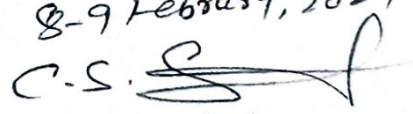
No. : AJET/JV-OTH/00218/24-25

Dated : 19-Jun-2024

Particulars	Debit	Credit
Expenses Payable <i>Dr</i>	26,780.00	
Agst Ref Srinivasa C S 5,000.00 <i>Dr</i>		
Agst Ref Durgaprasad Baliga 6,000.00 <i>Dr</i>		
Agst Ref Sohil Nargunkar 13,554.00 <i>Dr</i>		
Agst Ref Ashok 2,226.00 <i>Dr</i>		
To AEF-Alvas Education Foundation		26,780.00
On Account of : Being the amt paid towards exp incurred for attended International Conference on IC Mech -REC-2024 & attending International Conference on Second generation entrepreneurs,exp of farewldiya programme.		
	₹ 26,780.00	₹ 26,780.00



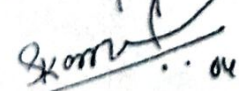
**Application for Permission to attend
conference/Seminars/Workshops and Paper Presentation**

1. Name of the Staff : SRINIVASA C.S.
2. Designation & Department : ASST. Professor
Mechanical Engineering
3. Name of the Conference/Seminar/Symposium/Workshop : IC Mech-REC-2024
NIT, Warangal, Telangana
4. Type of conference is International/
National/State Level : International
5. Place of Conference/workshop : NIT Warangal, Telangana
6. Date of Conference/workshop : 29-31 May 2024
7. Title of the paper submitted/accepted : A Study on Alkali Treatments
effects on Mechanical & water Absorb
Characteristics of Jute-Banana Fiber
phenolic Resin composite
8. Mention the items enclosed
- a. Copy of the brochure : (Yes/No)
- b. Copy of invitation letter : (Yes/No)
- c. Copy of the abstract of the paper : (Yes/No)
- d. Acceptance received by Committee with recommendation : Attached
9. Rough estimate of expenditure
- a. Registration fee : 5000/-
- b. Train/Air fare : online mode
10. Details of previous conference/workshop
Attended (Date/Place/Type) : ISAMPB National conference on
composites (ESIA-NAL)
8-9 February, 2024
C.S. 

Date: 04/5/2024

(Signature) Srinivasa C.S.
Name: ASST. Professor
Designation & Dept Mechanical
Engineering

Recommendation of the HOD

Forwarded for needful
to present a paper

KUD, MB
04.5.2024

Signature of the Principal.
PRINCIPAL

Alva's Institute of Engg. & Technology,
Mijur, MOODBIDRI - 574 225, D.K



ICMech-REC-2024

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AWARDS

- The Overall Best Presentation Award
- The Best Student Presentation Award

- Session's Best Presentation Award
- The Best Poster Presentation Award



2nd International Conference on Mechanical Engineering: Researches and Evolutionary Challenges (Hybrid Mode Conference)



ICMech-REC-2024

on 29 - 31 May 2024 at NIT Warangal

Organized by:

Department of Mechanical Engineering
 National Institute of Technology
 Warangal, Telangana, India.

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ICMech-REC-2024



ICMech-REC-2024

ABOUT HOST

The National Institute of Technology (NIT), Warangal is the first in the chain of 31 NITs*, established in 1959. It is consistently ranked as one of the top engineering colleges in the country. Department of Mechanical Engineering offers One UG program, Seven PG programs and a Ph.D. program. There are 50 qualified and experienced faculty in the department. The department has liaison with reputed industries and R&D organizations.

CALL FOR PAPERS

The conference aims at opening up scope for adequate coverage on current trends, changes and challenges in education and research. ICMech - REC - 2024 hosts following research areas:

Advanced Materials, Composite Materials, Nano Materials, Smart Materials, Additive Manufacturing, Tribology, Digital manufacturing and Industry 4.0, Advances in Machining, Advances in Materials Joining, Trends in Materials Processing, Modelling & Simulation in Manufacturing, Surface Science and Engineering, Artificial Intelligence in Manufacturing Process, Optimization Methods, Robotics, Advances in Manufacturing, Advances in Aerospace Materials, Gas Turbine and Heat Transfer, Thermal Sciences, Combustion, fire and fuels, Computational methods/ tools in Mechanical systems, Engineering fundamentals and methodology, Experimental methods/tools in Mechanical systems, Fundamentals in heat, mass and momentum transfer, Energy Materials/ Bio-materials, Machine Design and Allied Mechanical Engineering Areas



In honour of the excellent academic and administrative services of Prof. G. R. K. Gupta, Associate Professor in the Department of Mechanical Engineering, beginning on 31st May, 2024

*Supremation on 31st May, 2024

* NITs are Institute of Importance established by Act of Parliament

IMPORTANT DATES

Extended abstract submission last date : 30-03-2024
(only for conference)
Full Paper Submission : 10-04-2024
Notification to Authors : 15-04-2024
Revision submission by Authors : 10-05-2024
Early Bird Registration : 25-04-2024

PROCEEDINGS PUBLICATION

Selected papers from the conference will be published by **Springer as a proceedings book volume Springer will conduct quality checks on the accepted papers and only papers that pass these checks will be published.

** International Journal of Metallic Materials, Taylor and Francis Current Nanomaterials, Bentham Publishers Scopus. (will be updated soon)

REGISTRATION

Category	Early Bird Registration (till 10-05-2024)		Late Registration (till 15-05-2024)
	Online	Physical	
Student	5000 INR	6000 INR	1000 INR / 25USD per each paper (extra)
Academician / Faculty	6000 INR	7000 INR	
Industrialist / R&D Lab	9000 INR	10000 INR	
Attendee	2000 INR	3000 INR	
Foreign Delegate	100\$	200\$	

Note: Registration fee includes institute overhead charges and GST as per actuals. There are no additional charges for paper publication.

Accommodation: Limited accommodation will be provided in institute guest house on first come first serve on payment basis. Prior information for requirement of institute accommodation is to be intimated by participants.

Contact: Dr. G. Raghavendra - 99858 03317, Prof. Satish Ben - 98480 65254,

Dr. Syed Ismail - 83329 69367

Email: icmechrec2024@gmail.com

Website: cmc.nitw.ac.in/conference/icmechrec2024

A Study on Alkali Treatments effects on Mechanical and Water Absorption Characteristics of Jute-Banana Fiber Phenolic Resin Composites

Srinivasa c s^{1*}, Raje Siddiraju Upendra², Maruthi Prashanth B H³, Ramesh S⁴

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⁴Assistant Professor, Department of Mechanical Engineering, RV Institute of Technology and Management, Bengaluru, Karnataka- 560 076, India.

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ABSTRACT

In the current work, hybrid fibers made out of jute and banana natural fiber materials, that have been treated with alkali solution (NaOH) were contrasted with untreated fiber applying phenolic resin as an illustration. To prepare the proposed composites, the prepreg process was applied. The inexpensive and portable hot-pressing apparatus was used in the present study to create aimed hybrid composites that were prepared out of the combination of jute and banana natural fiber materials. The mechanical properties of phenolic composites made of jute and banana fibers, such as their tensile, modulus, flexural strength, impact strength, and hardness, were studied. The results reported improved properties of hardness (8%), modulus (39.23%), flexural strength (43.44%), and tensile strength (27.39%) for the treated fiber composites hence it is far better than the untreated ones. The treated fibers' better qualities can be attributed to decreased hemi-cellulose and lignin content, increased surface roughness, and improved interfacial contact with the matrix. Water absorption rates are dramatically reduced after alkali treatment, suggesting enhanced fiber-matrix interaction and reduced hydrophilicity. SEM results of treated fibers showed smoother fiber surfaces with less holes, which supports for the enhanced wettability and bonding qualities during the process of lamination. From this study concludes that the alkali treated and pressed jute and banana natural fiber hybrid composites were shown improved strength compared to the untreated material.

KEYWORDS: Jute, Banana, Phenolic resin, Hybrid composites, Sodium hydroxide

1. INTRODUCTION

Natural materials have been the focus of many academics and engineers due to growing environmental concerns. Because of this move, companies in the construction, automotive, and home furnishings sectors are looking at using natural fiber instead of traditional composite materials. Natural fibers are a less expensive, reusable, low-density, and biodegradable alternative to inorganic fiber reinforcement. Natural fiber composites are often more ecologically friendly than glass fiber composites. [1] Using glass fibers in place of naturally occurring fibers like cotton, kenaf, or flax was found by Mueller et al. [2]. There was a discernible improvement in property and a weight reduction. The natural fiber composites industry is expected to increase by 15-20% annually, with a growth rate of 15-20% for automotive applications and 50% more for construction applications. These days, sisal, kenaf, jute, and hemp make up the remaining 25% of the agricultural fibers used in composites; wood



Srinivasa Cs <srinivasa.mech@gmail.com>

ACCEPTANCE OF PAPER ID - 16 FOR ICMECH REC 2024 CONFERENCE

1 message

Microsoft CMT <email@msr-cmt.org>

Tue, Apr 23, 2024 at 12:57 PM

Reply-To: raghavendra gujjala <raghavendra.gujjala@nitw.ac.in>

To: SRINIVASA C S <srinivasa.mech@gmail.com>

Dear SRINIVASA C S,

Greetings from Organising team of 2nd International Conference on Mechanical Engineering : Researches and Evolutionary Challenges (Hybrid Mode Conference)

Paper ID - 16

Title: A Study on Alkali Treatments effects on Mechanical and Water Absorption Characteristics of Jute-Banana Fiber Phenolic Resin Composites

Your extended abstract has been passed through the preliminary review process by the conference technical committee. We're delighted to inform you that your work has been accepted for oral presentation in offline mode at NIT Warangal, India, during May 29-31, 2024 at the 2nd International Conference on Mechanical Engineering: Researches and Evolutionary Challenges (ICMech-REC 24) .

Those who have received prior approval for online presentation from the organisers they can ignore this email and present in online mode.

Kindly register for the conference using the link below after completing the requisite formalities:

<https://cms.nitw.ac.in/conference/icmechrec2024/registration/>

Fill this form after payment registration

(https://docs.google.com/forms/d/e/1FAIpQLSfmLSpeh9y9SimglMXFvFQyJOxXrviUY1Wug9M3N6U-ATCHLA/viewform?usp=sf_link)

Keep visiting the conference website for regular updates.

Thank you

ICMech-REC24 Organizing Team

NIT Warangal

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Department of Mechanical Engineering

ICMech-REC-2024 Certificate

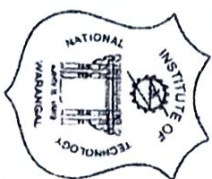
This is to certify that “Srinivasa C S, Rajee Siddiraju Upendra, Maruthi Prashanth B H, Ramesh S” has presented a paper entitled as “***A Study on Alkali Treatments effects on Mechanical and Water Absorption Characteristics of Jute-Banara Fiber Phardic Resin Composites***” in 2nd International Conference on Mechanical Engineering: Researches and Evolutionary Challenges-2024 conducted by National Institute of Technology Warangal, Telangana from 29th to 31th May, 2024.


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Prof. Bidyadhar Subudhi
Director, NITW

NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL



RECEIPT

Sr. No. 7

Paper ID: 16

This is to acknowledge that "SRINIVASA C S" has paid Rs.4237/- with Rs.763 (18% GST), total Rs.5000/- towards the Registration fee of "2nd International Conference ICMech-REC-2024" conducted by National Institute of Technology Warangal, Telangana from 29th to 31th May, 2024.

(Dr. G. Raghavendra)

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