

REVIEWER'S REPORT

Manuscript No.: IJAR-59543

Title: DETERMINATION DE LA BANDE DE FREQUENCE DYNAMIQUE (BFD) DÂ'UN PANNEAU COMPOSITE BIOSOURCE BALLE DE RIZ-ARGILE Thicky

Recommendation:

Accept

Rating	Excel.	Good	Fair	Poor
Originality	Yes			
Techn. Quality		Yes		
Clarity	Yes			
Significance		Yes		

Reviewer's ID: JPR- 015

Detailed Reviewer's Report

Reviewer's Comment for Publication.

Acceptance Comment are mentioned below suitable for the paper titled "DETERMINATION DE LA BANDE DE FREQUENCE DYNAMIQUE (BFD) DÂ'UN PANNEAU COMPOSITE BIOSOURCE BALLE DE RIZ-ARGILE Thicky "

Reviewer Comments: Accept

Reviewer Comments –

1. Introduction

The manuscript investigates the thermal behaviour of a bio-based composite panel manufactured from rice husk and Thicky clay. It focuses on determining the Dynamic Frequency Band (Bande de Fréquence Dynamique, BFD) through the analysis of temperature variation and heat flux density under frequency-modulated thermal excitation. The topic is relevant to sustainable building materials and the development of environmentally friendly thermal insulation solutions. The study highlights the importance of understanding dynamic thermal responses for evaluating the performance of composite materials. Overall, the introduction establishes a relevant research objective with potential applications in energy-efficient construction.

2. Literature Review

The manuscript addresses the thermal characteristics of bio-sourced composite materials and their potential contribution to sustainable construction practices. The investigation is connected to important thermal parameters, including temperature distribution, heat flux density, excitation frequency, and surface heat exchange coefficients. The focus on a rice husk-clay composite contributes to research on locally sourced and environmentally sustainable building materials. The consideration of dynamic thermal behaviour provides a useful perspective beyond conventional steady-state thermal analysis.

International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

www.journalijar.com

REVIEWER'S REPORT

Overall, the study addresses a relevant research area in sustainable materials and building thermal performance.

3. Solution Approach / Methodology

The study adopts a frequency-dependent thermal analysis to determine the Dynamic Frequency Band of the composite panel. It examines variations in material temperature and heat flux density as functions of the decimal logarithm of the excitation angular frequency. The methodology also considers the influence of panel depth and the heat transfer coefficients at the front and rear surfaces. These parameters provide a basis for examining the relationship between thermal excitation and the dynamic response of the material. The proposed analytical approach is appropriate for investigating the frequency-dependent thermal behaviour of bio-based composite panels.

4. Results and Discussion

The study focuses on identifying the frequency range associated with the dynamic thermal response of the rice husk–clay composite. The analysis of temperature and heat flux density provides a useful basis for characterising the Dynamic Frequency Band. Consideration of panel depth and surface heat exchange coefficients helps explain how material geometry and boundary conditions may influence thermal behaviour. The investigation offers insights into the factors governing heat transfer under variable-frequency thermal excitation. These findings have potential relevance for evaluating the thermal performance of bio-based panels in building applications.

5. Conclusion

The manuscript addresses an important topic in the thermal characterisation of sustainable composite building materials. Its focus on determining the Dynamic Frequency Band provides a useful approach to understanding the frequency-dependent thermal response of rice husk–clay panels. The inclusion of panel depth and surface heat exchange conditions strengthens the scope of the investigation. The study offers a foundation for further research into the thermal performance and potential insulation applications of bio-sourced materials.

Overall, the manuscript is relevant to sustainable construction research and is suitable for publication.