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REVIEWER'S REPORT

Manuscript No.: IJAR- 55245

Title: PHYSICO MECHANICAL CHARACTERISATION OF ECOLOGICAL COATINGS BASED ON CATTAIL AND TURF

Recommendation:

Accept

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

Reviewer Name: Dr. Ashish Yadav

Detailed Reviewer's Report

Reviewer's Comment for Publication.

Acceptance Comment are mentioned below suitable for the paper titled “PHYSICO MECHANICAL CHARACTERISATION OF ECOLOGICAL COATINGS BASED ON CATTAIL AND TURF”

Reviewer Comments: Accept

Reviewer Comments –

1. Introduction

The introduction clearly establishes the relevance of ecological coatings and their role in improving building energy performance. However, it would benefit from a sharper problem statement highlighting the specific limitations of conventional coating mortars and a clearer justification for selecting cattail and turf as reinforcement materials. Explicitly stating the novelty and research gap addressed by this study would further strengthen the section.

2. Literature Review

The literature review provides a general background on eco-friendly building materials, but it should be expanded to include recent studies on natural fiber-reinforced clay or earth-based coatings. A comparative discussion of thermal and mechanical properties reported in previous research versus the present study would help position the contribution more clearly within existing knowledge.

REVIEWER'S REPORT**3. Methodology**

The methodology is generally well-structured and based on standard characterization procedures. Nevertheless, greater clarity is needed regarding sample preparation, fiber treatment (if any), curing conditions, and test repetitions. Including a schematic or flowchart of the experimental procedure would improve reproducibility and reader understanding.

4. Results and Discussion

The results are relevant and clearly demonstrate the influence of cattail fiber content on thermal conductivity and compressive strength. However, the discussion could be strengthened by deeper interpretation of the observed trends and by comparing the obtained values with those of conventional coatings or similar ecological materials reported in the literature. Statistical analysis or error margins would also enhance the robustness of the findings.

5. Conclusion

The conclusion effectively summarizes the main findings and highlights the sustainability potential of the developed coating. To improve this section, quantitative performance gains and practical implications for building applications should be emphasized more explicitly. Additionally, future research directions could be more detailed, particularly concerning long-term durability, adhesion behavior, and large-scale application methods.