Review Form 3

Journal Name:	**Journal of Engineering Research and Reports**
Manuscript Number:	**Ms_JERR_129891**
Title of the Manuscript:	**Research progress of basalt fiber cement-based composites**
Type of the Article	

General guidelines for the Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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Important Policies Regarding Peer Review

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PART 1: Comments

	Reviewer's comment	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	This manuscript addresses a significant topic in construction materials science, and focus on basalt fiber cement-based composites. These materials offer notable improvements in mechanical properties, such as tensile strength and impact resistance, as well as durability, which are critical for modern engineering challenges. The work provides a comprehensive overview of recent advancements, making it a valuable resource for researchers and practitioners aiming to develop sustainable, high-performance construction materials. Its emphasis on practical applications and future research directions underscores its importance for the scientific community and engineering innovations.	
Is the title of the article suitable? **(If not please suggest an alternative title)**	The title, **"Research progress of basalt fiber cement-based composites,"** is clear and accurately reflects the content of the manuscript. However, it could be slightly refined for better impact and specificity. **Suggested alternative title:** "Advances in Basalt Fiber Reinforced Cement-Based Composites: Mechanical Properties and Durability Insights" This version emphasizes the advancements and key focus areas, making it more engaging for readers.	

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Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	The abstract provides a decent overview of the topic, highlighting the importance of basalt fiber cement-based composites, their mechanical improvements, and potential applications. However, it could be improved by addressing a few gaps: **Suggestions for Improvement:** 1. **Add Specific Details:** Include a brief mention of key findings or numerical improvements, such as the percentage increase in tensile strength or durability from the research. 2. **Clarify the Scope:** Expand on the specific areas covered in the manuscript, such as experimental results, challenges, or future research directions. 3. **Avoid Repetition:** Remove redundant phrases like "cement-based composites" appearing multiple times without adding value. 4. **Structure Improvement:** Conclude with a stronger statement about the significance or potential applications to emphasize the impact.	
Is the manuscript scientifically, correct? Please write here.	The manuscript is scientifically correct in its discussion of basalt fiber cement-based composites, their properties, and applications. However, some areas could benefit from clarification or additional evidence to strengthen the scientific validity: **Observations:** 1. **Lack of Quantitative Data:** While the manuscript mentions improvements in mechanical and durability properties, it lacks detailed quantitative data or specific results from experiments to support its claims. For example, stating exact percentages of strength improvements or durability tests would make it more robust. 2. **Inconsistent References:** Some references are cited, but the connection between the claims and the supporting studies is not always clear. Proper linkage to referenced works would enhance the credibility. 3. **Technical Depth:** The discussion on the mechanisms of improvement (e.g., how basalt fibers resist cracking) could be expanded for a deeper scientific understanding. 4. **Potential Overgeneralization:** The manuscript mentions wide applications but doesn't discuss potential limitations or challenges, such as cost, production, or environmental impact.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The manuscript includes several references, but there are areas where improvement is needed to ensure sufficiency and recency: **Observations:** 1. **Recency of References:** ○ Many of the cited studies are from earlier periods (e.g., 2009, 2013). While foundational, they may not reflect the most current advancements in basalt fiber cement composites. ○ Adding references from the past 5–7 years, especially post-2020, would strengthen the manuscript's relevance to current research. 2. **Diversity of Sources:** ○ Most references seem to focus on experimental studies. Including recent reviews or meta-analyses could provide broader context. ○ References to industry standards or technical reports would also be beneficial, especially when discussing applications. 3. **Specific Gaps:** ○ There is limited reference to challenges or limitations (e.g., environmental impact, large-scale adoption). ○ No references to advanced characterization techniques (e.g., microscopic analysis of fiber-matrix bonding) or lifecycle assessments.	

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	Suggestions for Additional References: • Recent reviews or papers on high-performance fiber composites. • Studies on the economic and environmental impacts of basalt fibers in construction. • Research focusing on novel testing methods for durability and mechanical properties.	

Is the language/English quality of the article suitable for scholarly communications?	The language of the manuscript is generally understandable, but it does not meet the high standards expected for scholarly communication. Here are the issues and suggestions for improvement:
	
	Observations:
	1. **Grammatical Errors:**
	  ○ There are frequent grammatical issues, such as incorrect verb tenses (e.g., "cement-based materials are the most widely used engineering materials in the construction industry" could be streamlined).
	  ○ Awkward phrasing, such as "After fiber composite, the mechanical properties and durability of concrete materials are obviously improved," could be reworded for clarity.
	2. **Repetitive Language:**
	  ○ Certain terms, such as "cement-based materials" and "basalt fiber," are repeated excessively, making the text redundant.
	3. **Overly General Statements:**
	  ○ Some sentences, like "Basalt fiber has good thermal stability, high strength," are too broad and lack specificity or examples to support the claim.
	4. **Scholarly Tone:**
	  ○ The manuscript sometimes lacks the formal tone expected in academic writing. Phrases like "helpful to improve the properties of concrete materials" could be replaced with precise terms like "enhances the compressive and tensile strength of concrete."	

Optional/General comments	Some general comments and suggestions for the manuscript: ○ Include more quantitative data to support claims about improved mechanical properties and durability. ○ Discuss challenges or limitations, such as cost, environmental impact, or large-scale adoption. ○ The manuscript could benefit from better organization, especially in the introduction and conclusion. Clearly separate background information, current progress, and future directions. ○ Adding charts, tables, or graphs to represent key findings (e.g., strength improvements or durability tests) would make the content more engaging and easier to understand. ○ The outlook section is promising but needs more specific suggestions on how future research could address existing gaps, such as optimizing fiber dosage or exploring hybrid composites. ○ Update references to include more recent studies, particularly from the last 5–7 years, to ensure the manuscript reflects current research trends.	

PART 2:

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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