

Review Form 3

Journal Name:	Journal of Engineering Research and Reports
Manuscript Number:	Ms_JERR_125035
Title of the Manuscript:	An Investigation on the Properties of Alkyd-Based Varnish Coated of Post-Microwave Treated Wood Exposed to Outdoor
Type of the Article	Original Research Article

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PART 1: Review Comments

Compulsory REVISION 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)
<p>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</p>	<p>This article provides useful insights into the unexplored field of microwave irradiation's impact on wood surface qualities prior to varnish application. Given the scarcity of literature on the use of microwave systems in wood science, this work helps to advance our understanding of how this treatment affects water sorption, resistance to cold liquids, and surface qualities of varnished wood. While the findings do not reveal a clear pattern across all examined qualities, the study does identify specific instances in which microwave treatment could improve wood performance. This research is significant for the wood treatment and preservation sectors, as it has the potential to improve durability and appearance in outdoor situations.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The title is good. But it can be more readable and understandable. Alternative title can be "Effects of Microwave Treatment on Alkyd-Varnished Pine Wood Exposed to Outdoor Conditions".</p>	
<p>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.</p>	<p>The abstract of the article provides an excellent overview of the research, covering significant findings such as water sorption characteristics, resistance to cold liquids, surface hardness, and discoloration. I would recommend becoming more brief and minimizing repetition in certain sections like the discussion of discoloration characteristics. For example, instead of giving too much detail about specific color changes, the authors may better describe their findings.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>Yes</p>	
<p>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</p>	<p>The manuscript includes an in-depth investigation into the effects of microwave irradiation on varnished pine wood under outdoor conditions, which is both topical and important to materials science and engineering. The authors use a strong experimental design, with proper controls and repetitions, to increase the dependability of the results. The data analysis is well-structured, and the statistical procedures employed are appropriate for the study, ensuring the validity of the conclusions reached. Overall, the study is technically sound and provides useful information about the durability and treatment of wood products exposed to environmental stresses.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>I think the references are good. But author can include one or two references from 2021-2024.</p>	
<p><u>Minor</u> REVISION comments</p>		
<p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>Yes.</p>	
<p><u>Optional/General</u> comments</p>		
	<p>N/A</p>	

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PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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