

Review Form 3

Journal Name:	Journal of Energy Research and Reviews
Manuscript Number:	Ms_JENRR_124046
Title of the Manuscript:	Material and Parametric Design Optimization of Improved Heat Transfer Rate of AC Condenser
Type of the Article	Research

Review Form 3

PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
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.	This manuscript holds significant importance for the scientific community as it addresses a critical challenge in the field of thermal management and energy efficiency in air conditioning systems.	
Is the title of the article suitable? (If not please suggest an alternative title)	Yes	
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 content is enough.	
Are subsections and structure of the manuscript appropriate?	Yes	
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.	The use of advanced simulation tools, such as ANSYS for Computational Fluid Dynamics (CFD) and thermal analysis, allows for precise modeling and analysis of fluid flow and heat transfer characteristics.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. :	<p>Need to be add the following in reference section:</p> <p>Baskar, S., M. Chandrasekaran, T. Vinod Kumar, P. Vivek, and S. Ramasubramanian. "Experimental studies on flow and heat transfer characteristics of secondary refrigerant-based CNT nanofluids for cooling applications." <i>International Journal of Ambient Energy</i> 41, no. 3 (2020): 285-288.</p> <p>K. Jayappa, V. Kumar, and G. G. Purushotham, "Effect of reinforcements on mechanical properties of nickel alloy hybrid metal matrix composites processed by sand mold technique," <i>Applied Science and Engineering Progress</i>, Vol. 14, no. 1, pp. 44–51, Jan.–Mar. 2021, http://dx.doi.org/10.14416/j.asep.2020.11.001</p> <p>Raja, T., Mohanavel, V., Kovuru, V., Udhayakumar, G., Alnaser, I. A., Abdo, H. S., & Abdelgawad, H. (2024). Study of basalt/hemp fibers reinforced B4C nanoparticles influenced hybrid epoxy composite: a novel approach for optical fiber insulation. <i>Optical and Quantum Electronics</i>, 56(3), 427. https://doi.org/10.1007/s11082-023-05938-8</p>	

Review Form 3

<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>Yes</p>	
<p>Optional/General comments</p>	<ol style="list-style-type: none"> 1. What specific parameters were optimized in the study to improve the heat transfer rate of the AC condenser? 2. Which materials were analyzed in the CFD and thermal analysis, and why were they chosen? 3. How did the simulation results compare to the expected outcomes in terms of heat transfer efficiency? 4. Need to be add the following in reference section: Baskar, S., M. Chandrasekaran, T. Vinod Kumar, P. Vivek, and S. Ramasubramanian. "Experimental studies on flow and heat transfer characteristics of secondary refrigerant-based CNT nanofluids for cooling applications." International Journal of Ambient Energy 41, no. 3 (2020): 285-288. <p>K. Jayappa, V. Kumar, and G. G. Purushotham, "Effect of reinforcements on mechanical properties of nickel alloy hybrid metal matrix composites processed by sand mold technique," Applied Science and Engineering Progress, Vol. 14, no. 1, pp. 44–51, Jan.–Mar. 2021, http://dx.doi.org/10.14416/j.asep.2020.11.001</p> <p>Raja, T., Mohanavel, V., Kovuru, V., Udhayakumar, G., Alnaser, I. A., Abdo, H. S., & Abdelgawad, H. (2024). Study of basalt/hemp fibers reinforced B4C nanoparticles influenced hybrid epoxy composite: a novel approach for optical fiber insulation. Optical and Quantum Electronics, 56(3), 427. https://doi.org/10.1007/s11082-023-05938-8</p>	

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)
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes. Kindly please write down the ethical issues here in details)</i></p>	

Reviewer Details:

<p>Name:</p>	<p>S. Baskar</p>
<p>Department, University & Country</p>	<p>VISTAS, India</p>