

I have reviewed this paper and found there are several intriguing parts but many unclear elements.

Major comments:

1. The first part of this paper is devoted to evaluating the impact of the PCM position on its performance. However, I can not clearly understand what "upper the tubes" and "lower the tubes" really represent. Probably schematic illustrations of these two configurations should help readers to understand your content.
2. In your model validation section, you mentioned that this model was validated using a computational fluid software. So, could you provide more details about how you validate this model using this software instead of just presenting your results?
3. Based on my understanding, your contribution is the numerical analysis of the thermal behavior of a heating floor with PCM. You didn't develop a new PCM material, and the NePCM used in your analysis is an existing material by others, or you just use numerical analysis to calculate the thermal behaviors of the NePCM with different particles. If this is the case, I don't think you have made this clear in your abstract and introduction sections.
4. To be honest, your language is a disaster. Please double-check your language, including typos, grammar issues, etc. There are many language problems in your paper, and these language issues have already constituted a fatal problem for me to understand your content. For example, there is a grammar problem in line 25, " a heated floor which integrates." The grammatically correct expression should be " a heated floor that integrated" or "a heated floor, which integrates.." In lines 97~98, "Hence, the idea of adding nanoparticles to PCMs microcapsules"... This is not even a sentence. Also, in line 136, "Starting by 4cm of ...", the preposition "by" may be incorrect here, and the correct one should be " with."

Specific comments:

1. Please resize your table to make the contents fit in your table better. For example, you can change the width of each column of Table 2 to make the last three columns fit in your table and to avoid wrapping your text.
2. Please double-check your nomenclature. There are numerous errors in your nomenclature. For example, there are multiple symbols H but with different meanings, including total volume enthalpy, the vertical ordinate of upper surface of floor, and convective heat transfer coefficient... Please consider using different symbols for these terms, so I, as a reader, don't need to guess the exact meaning of each symbol.
3. I think it is professional to keep the font style and size of all your figure captions consistent. I know that this is not a fatal and uncorrectable flaw, but it is clearly not qualified to be published.