Review of: "Numerical Study of Thermal Performance on Fin and Tube Heat Exchanger with Flat Rectangular and Sinusoidal Winglet Vortex Generators"

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Potential competing interests: No potential competing interests to declare.

Manuscript title: Numerical Study of Thermal Performance on Fin and Tube Heat Exchanger with Flat Rectangular and Sinusoidal Winglet Vortex Generators

The authors investigated numerically the thermal performance of the fin and tube heat exchanger by employing conventional rectangular and sinusoidal sine wave vortex generators, using the CFD code. These generators were tested within a Reynolds number (Re) range of 400 to 1100 and compared against a baseline configuration.

The authors should revise the paper by taking into consideration the following comments:

1. Improve your paper. Fix the English; revise the grammar and the conjugation mistakes. Double-check the whole article carefully.
2. Aiming to improve the clarity and understanding for the reader, nomenclature should be presented.
3. The abstract should contain the novelty of the research, and the importance of the present work must be highlighted.
4. In the introduction section, the authors should improve the coherence of the text. The authors should show and explain the novelty of their work and its importance.
5. Aiming to make the introduction section more coherent and clear, the authors should use linking phrases and words (in addition, besides, moreover, further, furthermore…).
6. In the Model Description section, the dimensions of the computational domain must be mentioned.
7. The authors should declare that it is a 2D analysis.
8. The boundary conditions must be presented in the figure evidently.
9. The analysis was carried out with a Reynolds number Re range of 400 to 1100, while the authors chose the RNG K-ϵ turbulence model. Justify why the flow is turbulent, not laminar?
10. Justify the choice of the tetrahedral elements type.
11. The mesh size (of the fine, medium, and coarse mesh) must be declared.
12. The numerically used model should be validated with an experimental approach in order to ensure the reliability of the carried numerical simulation.
13. The details of the numerical method must be mentioned, such as the convergence criteria, the scheme method…
14. More graphical contours are needed to describe the results of this research, especially the temperature distribution.

15. In the Results and Discussions section, the author should discuss their results deeply. The significance of the obtained results and the novelty must be declared.
16. Additionally, to the London area goodness factor, it is recommended to predict and present the thermo-hydraulic performance parameter (THPP) evolution according to the Reynolds number with several investigated configurations.
17. In the conclusion section, the author needs to define their future direction for research and highlight any limitations of their examinations.