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.

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

Subject: Review report

In order to improve the hydrothermal performance of finned tube heat exchangers, the authors have analysed the effects of Flat Rectangular and Sinusoidal Winglet Vortex Generators with some arrangements. They used the RNG K-Epsilon model, which is considered to realize the numerical model. This paper is not suitable for publication in this version, but there are some remarks which can improve its quality.

1. *The abstract should be rewritten.*
2. *A validation task of results should be added.*
3. *The mathematical form of sinusoidal VGs should be added.*
4. *Literature needs more illustrations of different methods of enhancement. We suggest to add the following references:*
    - *DOI: 10.1051/epjap/2017170066.*
    - *https://doi.org/10.15282/jmes.15.2.2021.01.0626*
    - *https://doi.org/10.2514/1.T6023*
    - *https://doi.org/10.2298/TSCI190316090A*
    - *https://doi.org/10.15282/jmes.14.2.2020.13.0525*
    - *10.30464/jmee.2019.3.3.273*
    - *https://doi.org/10.5755/j01.mech.21.6.12240*
5. *How you used the RNG k-epsilon model to predict heat transfer and fluid flow for the laminar flow regime!!!.*
6. *Better quality of figures should be considered (use postprocessor or Tecplot or other…..).*
7. *Contours of temperature should be added.*
8. *Governing parameters should be added.*
9. *Numerical procedure should be added with a detailed discussion.*

> 10. *Results need more discussion.*