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Numerical simulation and experimental validation of a solar-assisted heat pump system for heating residential water.

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Highlights

- A mathematical model of a heat pump with solar evaporator was created
- A solar-assisted heat pump system for heating residential water was built
- Validation of the mathematical model with experimental data was successfully done
- Temperature in the exchangers as a function of time and space were analyzed
- Efficiency of this equipment type depends on climatic conditions

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