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Res. Agr. Eng.

R. Adamovský, D.
Adamovský, D. Herák

Exergy of heat flows of

exchanger

Res. Agr. Eng., 50 (2004): 130-135

Based on extensive measurements of the temperature, humidity and flow rate of the heated and cooled air in the plate heat exchanger this article analyses the influence of air inlet temperatures on both the exergy efficiency of the heat exchanger and the heat loss exergy. Furthermore, it describes the dependence between the thermal and exergy efficiency of the heat exchanger. The analysis of the tested heat exchanger indicated that the exergy efficiency of heat utilization from cooled air increases with rising inlet air temperature different, while the exergy efficiency of the heat transfer from cool to heated air decreases. In addition, the experiments confirmed the validity of the relationship between heat loss exergy and the values of air inlet temperatures.

Keywords:

heat exchanger; air; efficiency; energy; exergy; anergy; heat flow; stables

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