

## عنوان مقاله:

Effect of fins and baffles on the performance of a upward type single pass solar air heater

## محل انتشار:

دومین کنفرانس بین المللی رویکردهای نوین در نگهداشت انرژی (سال: 1391)

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## خلاصه مقاله:

In this study, the performance of a upward type single pass baffled solar air heater was investigated. The performance evaluation was studied in terms of outlet air temperature, energy efficiency and effective energy efficiency for various width of baffle and distance between baffles. In addition, effect of mass flow rate and solar radiation intensity was determined. It was found that attaching fins and baffles on the absorber plate effectively increases the outlet air temperature and efficiency in comparison to simple air heater. The obtained results indicate that with increasing the mass flow rate as well as baffle width and distance between baffles, the more pump work is required which results in lower values of effective efficiency in comparison to efficiency. Also it was found that the increasing the solar intensity leads to lower values of the difference between effective efficiency and efficiency.

## کلمات کلیدی:

Solar air heater, energy efficiency, effective energy efficiency, fins and baffles

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/222515>

