**Overall Heat Transfer Coefficient of a Solar Air Heater with and without Absorption Coating**

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**Abstract**

The continuous reduction of conventional fuel resources on the earth, increasing global warming on world-wide basis has motivated to think about the alternative sources of energy, such as solar energy. Solar energy is a very large inexhaustible source of energy. The amount of solar radiation incident on a solar collector is a very important so as to meet the energy requirements. Solar radiation travels to earth through space in the form of thermal energy and light energy (photons). Solar energy collectors are employed to convert solar radiation energy to thermal energy or electrical energy. Solar thermal collectors are those devices which convert solar radiation energy to thermal energy. Thermal energy could be stored in the form of either sensible or latent heat. The Solar flat plate collectors are generally classified as solar liquid collectors and solar air heaters. Solar air heater is a simple, cheap and most widely used for various applications such as processing industries, space heating and cooling, power generation etc. This paper aims at the presenting techniques used for emphasizing the increasing in thermal efficiency of the solar air-heater. The work involves comparative study of performance analysis of solar air heating system with the use of overall heat transfer coefficient for different absorber plates, one being copper plate and another copper plate with the absorption coating.

*References:*

*1. S. Anil Kumar, Dr. K. Sridhar and G. Vinod Kumar, Applied Solar Energy, Vol. 55, No. 1 (2018) pp 17-22.*