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Simulation and Modeling of Solar Trough Collector

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Abstract

Computational fluid dynamics (CFD) simulations are widely used; as these are cost effective in a manner that it saves finance for the preparation of experimental setups, and time involved in experimentation. This paper presents the CFD validation of L2S2 parabolic trough collector, which was determined by Sandia Laboratory USA in 1994. In this paper temperature variation of HTF (heat transfer fluid) with the variation of mass flow rates are investigated. Further the effects of receiver length and its diameter upon the temperature of HTF and glass cover are also studied. The HTF used here in the