CFD analysis of Solar air heater with and without porous media.

ABSTRACT

The performance of solar air heaters are improved by various techniques of heat transfer enhancement such as modifications in the geometry, use of fins and porous media to increase surface area. In the present work, double-pass flat plate type solar air heater will be used to study the effect of various design and operating parameters on its performance. The solar air heater is simulated using available commercial software - **Fluent.**

PROBLEM STATEMENT

The parametric study will be carried out to investigate thermal and hydraulic performance the solar air heater. The optimum design and operating conditions will be identified for the specified solar air heater. Computational Fluid Dynamics (CFD) technique will be used to optimize the performance of solar air heater.