**CFD ANALYSIS OF DOUBLE PIPE PARALLEL FLOW HEAT EXCHANGER**

**ABSTRACT**

A heat exchanger is a device that is used to transfer thermal energy (enthalpy) between two or more ﬂuids, between a solid surface and a ﬂuid, or between solid particulates and a ﬂuid, at different temperatures and in thermal contact. Heat exchangers are important engineering devices in many process industries since the efficiency and economy of the process largely depend on the performance of the heat exchangers.

The present work is directed towards the modeling of shell and tube parallel flow heat exchanger in SOLIDWORKS 2014 and setting up of flow simulation in SOLIDWORKS by inserting boundary conditions, running the calculations, inserting surface parameters, using cut plots and flow trajectories to visualize the resulting flow field .Finally compared the flow simulation results with effectiveness-NTU method. There is a difference of 7.3% of flow simulation results with effectiveness NTU method.