



Product Code . JL-SATHE-7380

Shell and Tube Heat Exchanger

Description

Shell and Tube Heat Exchanger

Shell and Tube Heat Exchanger is popular in industries because they occupy less space and offer reasonable temperature drop.

This is two-pass heat exchanger so that hot water passes to one end of shell through the tubes and returns to another end through remaining tubes.

Valves are provided to control the flow rates of hot and cold water.

The apparatus consists of fabricated SS shell, inside which copper tubes with baffles on the outer side are fitted.

Flow rates of hot and cold water are measured using Rotameters.

The cold water is admitted at the one end of the shell, which passes over the hot-water tubes.

A magnetic drive pump is used to circulate the hot water from a re-cycled type water tank, which is fitted with heaters and Digital Temperature Controller.

Experiment:

The main object of the experimental setup is to study the following at various flow rates:-

LMTD.

Overall Heat Transfer Co-efficient.

Heat transfer rate.

Utilities Required:

Electricity Supply: I Phase, 220 V AC, 4 kW.

Water supply 20 lit/min (approx.) and drain.

Floor area of 1.5m x 0.75 m.
