A Project Report on

"SWIRL HEAT EXCHANGER"

(SPONSORED BY K.S.C.S.T)
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ABSTRACT

Over 85% of all new heat exchanger applications in oil refining, chemical, petro-chemical, and power generation are accommodated through the use of conventional shell and tube type heat exchangers. The fundamental basis for this statistic is shell and tube technology is a cost effective, proven solution for a wide variety of heat transfer requirements.

However, there are limitations associated with the technology which include inefficient usage of shell side pressure drop, dead or low flow zones around the baffles where fouling and corrosion can occur, and flow induced tube vibration, which can ultimately result in equipment failure.

This project on "Swirl heat exchanger" intends to study, analyse and come out with a feasibility study whether swirl heat exchanger can really be used as a industrial heat exchanger. The concept of increasing the Reynolds number is the base of our project.

Software analysis is done to view the effect of blade angle on turbulence and select best blade angle