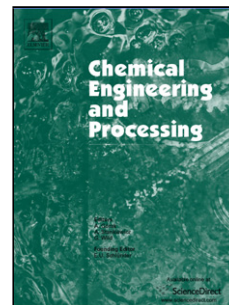


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Study on performance enhancement factors in turbulent flow of CNT/water nanofluid through a tube fitted with helical screw louvered rod inserts

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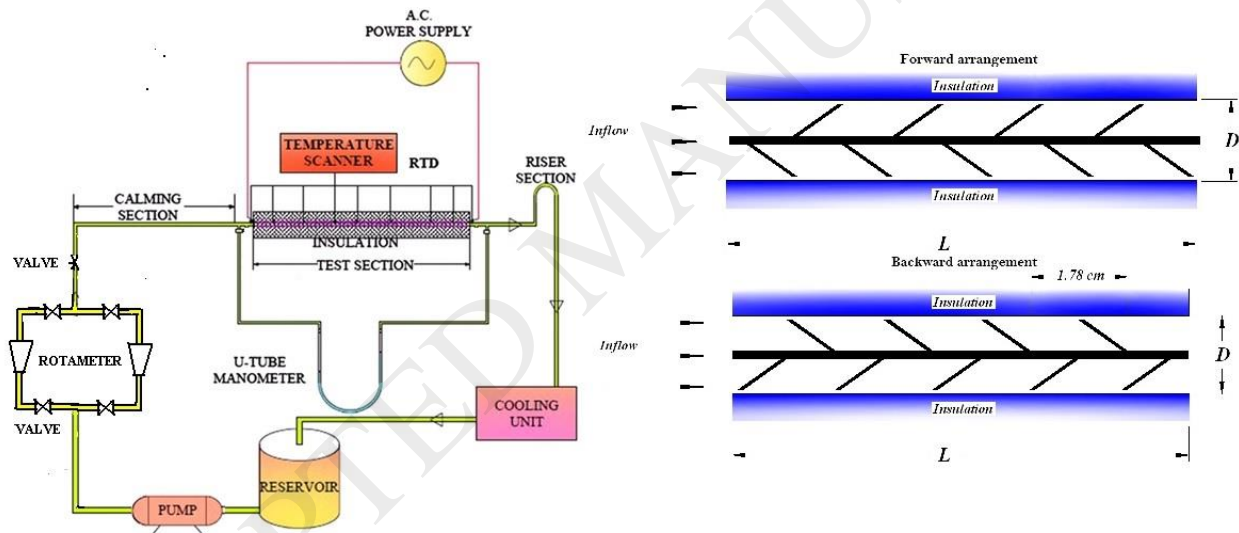
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GRAPHICAL ABSTRACT



Highlights

- 1) CNT nanofluid of different volume fractions was used.
- 2) Thermal performance factor of three different inserts were compared
- 3) Helical Louvered rod inserts of pitch ratio $Y = 1.78, 2.44$ and 3 were used
- 4) Correlations were developed for forward and backward insert arrangement
- 5) Backward flow produced better performance compared to forward flow

ABSTRACT

The aim of this study is to investigate the enhancement of thermal performance characteristics in a plain tube fitted with helical screw louvered rod inserts using water and carbon nanotube (CNT)/water nanofluids of 0.1%, 0.2% and 0.5% volume concentration

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