

The Significant Effect of Turbulence Characteristics On Heat Transfer Enhancement Using Nanofluids: A Comprehensive Review

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ABSTRACT

In this article, turbulent flow characteristic of nanofluids is thoroughly reviewed. Turbulent flows have unique characteristics and are preferred in many industrial applications. Therefore, this paper reviews different techniques used to enhance heat transfer using nanofluids within turbulent regime. This paper also presents the effects of some important parameters such as nanoparticle type, nanoparticles concentration, and Reynolds number on heat transfer rate. Studies on numerical techniques are also discussed. Finally, the conclusions and important summaries are presented according to the data collected.

KEYWORDS: Turbulent flow; Nanofluids; Nanoparticles; Inserts; Corrugated channel; Reynolds number

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