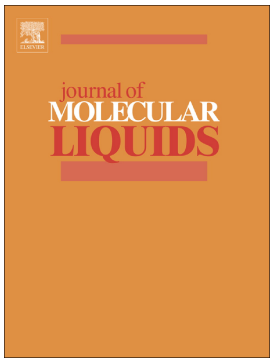

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Abstract

In this research, entropy generation and forced convection heat transfer of Al_2O_3-water nanofluid in a heat exchanger equipped with helical twisted tape is investigated via Finite volume method. Influences of height ratio (BR), pitch ratio (PR) and Reynolds number (Re) on nanofluid entropy generation are reported. Suitable formula for entropy generation is provided. Results reveal that thernal entropy generation decreases with rise of BR and *Re*. Frictional entropy generation augments with rise of height ratio.

***Keywords*:** Second law analysis; Nanofluid; Entropy generation; Helical twisted tape; Turbulent flow.

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