

## عنوان مقاله:

Numerical Investigation of Heat Transfer and Pressure Drop in a Corrugated Channel

## محل انتشار:

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## خلاصه مقاله:

Changes in rib-height to channel-height ratio ( $e/H$ ) has a significant effect on the heat transfer and pressure drop characteristics inside corrugated channels. In current paper, the variation of ( $e/H$ ) was investigated numerically as well as a deep concern for finding the adequate turbulent model. In this regards, the governing equations were solved by a finite volume approach in a wide range of rib-height to channel-height ratio ( $0.06 < e/H < 0.26$ ) and the Reynolds numbers ( $5400 < Re < 23000$ ). The predicted results reveal that the RNG  $k - \epsilon$  turbulence model provides better agreement with available experimental data than other turbulence models. The computed results not only confirm the noticeable effects of ( $e/H$ ) on the heat transfer performance and pressure drop but also, demonstrate the optimum corrugation design limits

## کلمات کلیدی:

Numerical Modeling, Corrugated Channel, Turbulent Flow, Heat Transfer

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/254927>

