

Determination of Optimum Fin Wave Angle and Its Effect on the Performance of an Intercooler

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Abstract : Fins play an important role in increasing the efficiency of compact shell and tube heat exchangers by increasing heat transfer. The objective of this paper is to determine the optimum fin wave angle, as one of the geometric parameters affecting the efficiency of the heat exchangers. To this end, finite volume method is used to model and simulate the flow in heat exchanger. In this study, computational fluid dynamics simulations of wave channel are done. The results show that the wave angle affects the temperature output of the heat exchanger.

Keywords : fin wave angle, tube, intercooler, optimum, performance

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