

Transient Heat Transfer of a Spiral Fin

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Abstract : In this study, the problem of temperature transient response of a spiral fin, with its end insulated, is analyzed with base end subjected to a variation of fluid temperature. The hybrid method of Laplace transforms/Adomian decomposed method-Padé, is applied to the temperature transient response of the fin, the result of the temperature distribution and the heat flux at the base of the spiral fin are obtained, show a good agreement in the physical phenomenon.

Keywords : Laplace transforms, Adomian decomposed method- Padé, transient response, heat transfer

Conference Title : ICAMAME 2016 : International Conference on Aerospace, Mechanical, Automotive and Materials Engineering

Conference Location : Prague, Czech Republic

Conference Dates : July 07-08, 2016