Heat transfer characteristics of an unsteady shrinking sheet with mass transfer in a rotating fluid

ABSTRACT

The problem of unsteady laminar boundary layer flow and heat transfer over a permeable shrinking sheet in a rotating fluid is considered. The transformed boundary layer equations are solved numerically using an implicit finite-difference scheme, namely the Keller-box method. Numerical results for different values of the Prandtl number, suction, unsteadiness and rotation parameters on the heat transfer characteristics are obtained and discussed.

Keyword: Boundary layer; Unsteady flow; Shrinking sheet; Rotating fluid; Numerical results