

## ION SLIP EFFECT ON THE UNSTEADY FLOW OF A DUSTY COUPLE STRESS FLUID THROUGH A CIRCULAR PIPE

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### Abstract

In this paper, the transient flow of a dusty viscous incompressible electrically conducting couple stress fluid through a circular pipe is studied taking the ion slip in to consideration. A constant pressure gradient in the axial direction and a uniform magnetic field directed perpendicular to the flow direction are applied. The particle phase is assumed to behave as a viscous fluid. A numerical solution for the governing equation is obtained by using transformation techniques [Cosine and Hinkle Transformation].

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