

## HEAT TRANSFER OF AN AXIALLY SYMMETRICAL JET MIXING INCOMPRESSIBLE DUSTY FLUID

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### Abstract

The heat transfer of an axially symmetrical jet mixing incompressible dusty fluid has been studied. Assuming the velocity and temperature in the jet to differ only slightly from that of the surrounding stream, a perturbation method has been employed to linearize the basic differential equations. The linearized boundary layer equations have been solved by using Hankel transform technique. Numerical computations have been made to discuss the profiles of perturbed fluid phase temperature and perturbed particle phase temperature. It is observed that the heat transfer significantly towards downstream direction.

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Key Words : *Particulate suspension, Boundary layer characteristics, diffusion, Incompressible, Dusty fluid.*