

FREE CONVECTIVE MHD JEFFREY FLUID FLOW BETWEEN TWO COAXIAL PERMEABLE CYLINDERS

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Abstract

Free convective conducting flow of a Jeffery fluid between two coaxial cylinders has been investigated by using the quadratic density temperature (Q.D.T) relationship. The inner and outer cylinders are permeable. A perturbation method is used for obtaining the velocity and temperature fields. The effects of heat source parameter, permeability parameter, Jeffrey parameter and Hartmann number on the velocity and temperature distributions are discussed in detail. It is observed that the velocity decreases rapidly due the presence of magnetic field.

Key Words : *Coaxial Cylinders, Permeability, MHD, Jeffrey fluid.*

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