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Rotating Disk Flow With Heat Transfer of a Non Newtonian Fluid in Porous Medium

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Abstract: The steady flow of an incompressible viscous non-Newtonian fluid above an infinite rotating disk in a porous medium is studied with heat transfer. Numerical solutions of the nonlinear differential equations which govern the hydrodynamics and energy transfer are obtained. The effect of the porosity of the medium and the characteristics of the non-Newtonian fluid on the velocity and temperature distributions is considered.

Key Words: Rotating disk flow, Heat Transfer, Porous medium, Non-Newtonian fluid.