International J. of Math. Sci. & Engg. Appls. (IJMSEA)
ISSN 0973-9424, Vol. 6 No. II (March, 2012), pp. 179-188

UNSTEADY DUSTY VISCOUS FLOW THROUGH A CIRCULAR PIPE

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Abstract

The aim of the preset investigation is to examine the unsteady flow of dusty viscous liquid through circular cylinder under three different pressure gradients. The governing differential equations with corresponding boundary conditions in dimensionless form are solved numerically using implicit finite difference method. An interesting observation of the investigation is that both dust and clean gas particles have obtained maximum velocity at the centre of the cross-section for all Reynold numbers and for all times, except in the case of periodic pressure gradient.

Key Words : *Viscous flow, Circular pipe, Finite difference method.*