Three-dimensional Flow between Two Parallel Porous Plates with Heat Transfer

K. D. Singh and Rakesh Sharma

Department of Mathematics (ICDEOL), Himachal Pradesh University, Summer Hill, Shimla-171005, India

Reprint requests to Dr. K. D. S.

A theoretical analysis of the steady three-dimensional flow of a viscous, incompressible fluid between two parallel infinite porous horizontal plates is presented. The fluid is injected with constant velocity through the lower stationary plate and removed with a transverse sinusoidal suction velocity through the upper one in uniform horizontal motion. A series solution of the non-linear partial differential equations is obtained and discussed.

Key words: Three-dimensional; Couette Flow; Transverse; Sinusoidal; Injection/Suction.