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HYDRODYNAMIC EFFECTS OF SECANT SLIDER BEARINGS LUBRICATED WITH SECOND-ORDER FLUIDS

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Abstract: The constitutive equations governing the flow of secant slider bearings is analysed. The bearing is lubricated with second order fluid. An attempt has been made to solve the equations governing the model and the characteristics of secant slider bearings is presented. An expression for the fluid film pressure is derived. The results reveal that second order fluids enhances the performance characteristics of lubrication indicating that second order fluids are better than Newtonian fluids.

Keywords and Phrases: Fluid film pressure, Newtonian fluids, second order fluids, slider bearings.

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