Generalized Couette Flow of a Third-Grade Fluid with Slip: The Exact Solutions

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The present note investigates the influence of slip on the generalized Couette flows of a third-grade fluid. Two flow problems are considered. The resulting equations and the boundary conditions are nonlinear. Analytical solutions of the governing nonlinear problems are found in closed form.

Key words: Third-Grade Fluid; Nonlinear Equations; Nonlinear Slip Conditions; Exact Solutions.