

BOUNDARY VALUE PROBLEMS FOR MOTION EQUATIONS OF POLYMERIC FLUIDS WITH NONLINEAR SLIP CONDITION ON SOLID WALLS**M. A. Artemov, E. S. Baranovskii**

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We study boundary value problems describing flows of polymeric fluids with slip on solid walls of the flow domain. We use the nonlinear Navier slip condition. The existence of stationary weak solutions is proved for a boundary value problem in the model of motion of low-concentration aqueous polymer solutions. The global solvability of an initial boundary value problem for Oskolkov's system is also proved. Estimates for the norms of solutions are obtained.

Keywords: motion model for aqueous polymer solutions, Oskolkov's system, slip boundary condition, boundary value problems, weak solutions.

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