Zhukov, M. Yu.; **Petrovskaya, N. V.**

The streams of numerical modeling of a viscous fluid in an annular domain with a rotating inner boundary. (Russian) Zbl 1108.76334

Izv. Vyssh. Uchebn. Zaved., Sev.-Kavk. Reg., Estestv. Nauki 2004, Spec. Iss., 113-116 (2004).

The two-dimensional flow of an incompressible fluid in the domain between two concentric circles is numerically investigated. The Galerkin method is used for obtaining the approximate solutions of this problem. Numerical experiments allow observing non-axisymmetric stationary flow regime. This solution does not bifurcate from the base stationary axisymmetric solution.

Reviewer: Evgenij Nechaev (Moskva)

MSC:

76D10 Boundary-layer theory, separation and reattachment, higher-order effects
76E07 Rotation in hydrodynamic stability
76M25 Other numerical methods (fluid mechanics) (MSC2010)

Keywords:

viscous fluid; Galerkin method; two-dimensional flow; rotating inner boundary