Petr Kaplický, Josef Málek, Jana Stará

Full regularity of weak solutions to a class of nonlinear fluids in two dimensions – stationary, periodic problem

Comment.Math.Univ.Carolinae 38,4 (1997) 681-695.

Abstract: We prove the existence of regular solution to a system of nonlinear equations describing the steady motions of a certain class of non-Newtonian fluids in two dimensions. The equations are completed by requirement that all functions are periodic.

Keywords: non-Newtonian fluids, shear dependent viscosity, regularity, Hölder continuity of gradients
AMS Subject Classification: 76F10, 35Q35, 35J65