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Milton C. Lopes Filho* (mlopes@ime.unicamp.br), IMECC-UNICAMP, Rua Sergio Buarque de Holanda, 651, Campinas, SP 13083-859, Brazil. *Newtonian limits of complex fluid models.*

We consider two complex fluid models, the second-grade fluid equations and its inviscid version, called the Euler- α system. We are interested in conditions on the regularity of the flow to obtain convergence in the limit $\alpha \rightarrow 0$, and its uniformity with respect to viscosity. We study the special case of bounded domains with Navier friction condition. (Received September 22, 2010)