Asymptotic stability of 3D functional Brinkman-Forchheimer equation

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November 17, 2021

Abstract

This paper is concerned with the asymptotic stability of global weak and strong solutions for a 3D incompressible functional Brinkman-Forchheimer equation with delay. Under some appropriate assumptions on the external forces especially the averaged state, the well-posedness of 3D functional Brinkman-Forchheimer flow model and its steady state equation have been obtained rstly, then the asymptotic stability of global solutions also derived via the convergence of trajectories for the corresponding systems.

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