

The Navier-Stokes equations in a space of bounded functions

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We consider blow-up rates of the Navier-Stokes flow for domains with boundaries subject to the non-slip boundary condition. It is known that the type I blow-up of the Navier-Stokes flow in the whole space or a half space is a minimum rate at which a singularity can develop. We develop an existence theorem on L^∞ for domains with curved boundaries by means of L^∞ -estimates for the Stokes semigroup and deduce the minimum blow-up rate.