abstract-Hind al Baba

Title:
L^p-L^q estimates and maximal regularity to the
Stokes problem with Navier-type boundary conditions"

Abstract:
Stokes and Navier-Stokes equations play a central role in
fluid dynamics, engineering and applied mathematics. Based on the theory
of semigroups and on the complex and fractional power of operators we
prove the L^p-L^q estimates and maximal regularity to the Stokes
problem with Navier-type boundary conditions on the boundary of the
fluid domain in the case where the domain in not simply connected. These
boundary conditions, while being perfectly motivated from the physical
point of view, have been less studied than the most conventional
Dirichlet boundary condition.