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Stationary Stokes and Navier-Stokes systems on two- or three-dimensional domains with corners. I: Linearized equations. (English) [Zbl 0681.35071](#)

SIAM J. Math. Anal. 20, No. 2, 74-97 (1989).

The author studies the regularity of solutions of the system of Stokes equations in domains with corners, e.g. exterior domains around airfoil profiles. Both two and three dimensional domains are considered. An H^2 -regularity result, conditions implying the Fredholm property and singular functions are given.

Reviewer: [G. Warnecke](#)

MSC:

[35Q30](#) Navier-Stokes equations

[35D10](#) Regularity of generalized solutions of PDE (MSC2000)

[35J25](#) Boundary value problems for second-order elliptic equations

[76D05](#) Navier-Stokes equations for incompressible viscous fluids

Cited in **115** Documents

Keywords:

corner; edge; polyhedron; Stokes equations; Fredholm property

Full Text: [DOI](#)