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BOUNDARY INVERSE PROBLEMS IN THE CASE OF INCOMPRESSIBLE FLUID JETS

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Abstract: The paper deals with the "aposteriori" design of a symmetric airfoil for a problem involving a two-dimensional incompressible fluid jet, by prescribing "apriori"the velocity along the contour. This is the inverse boundary value problem and a singular integral equation is derived for the velocity angle. For prescribed velocity distributions, the geometrical equations of the airfoilare established numerically and the drag coefficient C_X is also computed.