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Upper estimates of airfoil aerodynamic characteristics for a viscous incompressible flow

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Abstract

In the present work the method of the inverse boundary-value problems is used to obtain upper estimates for two main integral airfoil characteristics: lift coefficient C_l and the aerodynamic ratio K in a certain class of airfoils flown by an incompressible flow of viscous fluid at a fixed angle of attack at high Reynolds number (10^6 - 10^7) with the presence of a thin non-separating turbulent boundary layer.
