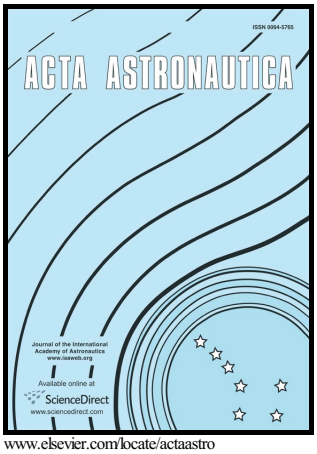

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Improvement of Aerodynamic Characteristics of a Thick Airfoil with a Vortex Cell in Sub- and Transonic Flow

Sergey Isaev[1*], Paul Baranov[1], Igor Popov[2], Alexander Sudakov[1], Alexander Usachov[3]

[1]Saint-Petersburg State University of Civil Aviation, Saint-Petersburg 196210, Russia

[2] A. N. Tupolev Kazan National Research Technical University (Kazan Aviation Institute), Kazan 420111, Russia

[3] N. E. Zhukovskii Central Aerohydrodynamic Institute, Moscow 107005, Russia

isaev3612@yandex.ru

paul-baranov@yandex.ru

popov-igor-alex@yandex.ru

sudakov-1950@mail.ru

usachov_al@mail.ru

[*]Corresponding author.

Abstract

The modified SST model (2005) is verified using Rodi– Leschziner–Isaev's approach and the multiblock computational technologies are validated in the VP2/3 code on different-structure overlapping grids by comparing the numerical predictions with the experimental data on transonic flow around an NACA0012 airfoil at an angle of attack of 4^o for M=0.7 and $Re=4\times10^6$. It is proved that the aerodynamic characteristics of a thick (20% of the chord) MQ airfoil mounted at an angle of attack