MATHEMATICAL MODELLING AND PARAMETRIC RESEARCH OF FLOW OF THE TWISTED TURBULENT SINGLE-COMPONENT STREAM OF THE PROPULSIVE MASS IN THE TRANCE - AND SUPERSONIC AREAS OF LAVAL NOZZLES

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With use of mathematical model of the space (twisted) viscous (turbulent) flow of a single-component propulsive mass in a trans-and supersonic areas on the basis of system of the equations of Nave-Stokes and the software of computer systems ANSYS CFX and STAR-CD CD-adapco, distribution of gasdynamic properties in Laval nozzles is gained and some regularity of such type of flows is determined.

Laval nozzle, trans-and supersonic field of flow, swirl parameter, way of the organization of swirled flow, gasdynamic parameters, sound surface, legitimacies of flow

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