

COMPUTATIONAL AND EXPERIMENTAL RESEARCH OF THE THERMAL STATE OF A PERFORATED WALL OF A LINER WITH INCLINED SLOTS

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The thermal state of a perforated wall with inclined slots for liners was determined experimentally by means of a thermovision system. Three-dimensional calculations of boundary layer aerodynamics on the wall with cooling air injection through discrete inclined slots were carried out on the basis of numerical integration of a three-dimensional system of Navier-Stokes equations. It is established that the cooler jet penetrate into a hot stream less intensively with fan air supply than with straight supply. Consequently, the wall is cooled more efficiently with fan air supply. Dependence of cooling efficiency on the angle of inclined slots was obtained.