On the accuracy of engineering methods for calculation of specific heat flow in laminar boundary layer on non-permeable "wall" of hemisphere surface in a supersonic gas flow

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The research explored engineering methods for specific heat flow calculation in laminar boundary layer on non-permeable "wall" of hemisphere surface in a supersonic gas flow. In this paper we present the results of examining these methods and estimating their accuracy. The study delves into the ways of solving the problem, proposed by I.N. Murzinov and offers a similar engineering technique of high accuracy in accordance with modern scientific and technological achievements. Consequently, we to large extent expanded the variation range of such determining factors as Mach number in the incoming air stream, the brake pressure of this flow, enthalpy.

Keywords*: specific heat flow, supersonic gas flow, laminar boundary layer, engineering methods.*

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