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# An approximation for the calculation of the degree of dependence of amplification of the convective heat transfer and friction by taking into account the effect of vorticity in the vicinity of the critical point of the sphere in hypersonic flow

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*In work intensification of convective heat transfer and friction in the vicinity of the critical point of the sphere due to the effect of vorticity at different values of the Mach number in the incoming flow, the Reynolds number and the enthalpy factor are investigated. We give approximation formulas for calculating the degree of amplification of the convective heat transfer and friction due to the effect of vorticity, built on the basis of the results of numerical solutions of self-similar equations of the boundary layer (PS).*

**Keywords:** *approximation dependence, convective heat exchange, the vorticity effect, critical point, enthalpy factor, self equation.*

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