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On the calculation of turbulent fan jets

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Abstract

The self-similar equations for the dynamic and temperature fields of a forced free fan jet have been numerically integrated within the framework of the standard k - ϵ model of turbulence. The tables of solutions obtained for the velocity, temperature, and kinetic turbulent energy of the jet, as well as the mean square of the jet-temperature fluctuations at different turbulent Prandtl numbers, are presented. The quantitative parameters of the evolution of the average and turbulent characteristics of the jet flow were determined.

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