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METHOD OF AUTONOMOUS STATISTICAL MODELING ASMTURBC AND ITS TESTING ON  
THE EXAMPLE OF A DIFFUSION TURBULENT COMBUSTION**Abstract**

A new principle of constructing statistical models for processes of diffusion turbulent combustion is formulated and a method of autonomous statistical modeling of hydrodynamic characteristics of such processes (ASMTurbC method) is proposed. The distinguishing peculiarity of the method is consideration of the intermittency effects of dynamic and scalar fields combined with the known method of “reduced concentration of fuel”. The advantage of ASMTurbC method is the possibility of constructing mathematical models for statistical characteristics of each of the intermitting media of diffusion turbulent combustion. The method is tested on the example of construction of a mathematical model of a turbulent flame of the axisymmetric submerged jet combustion using the simplest circuit hypotheses. The results of testing are presented in the form of calculations of the main statistical characteristics of dynamic and scalar fields of the flame. It is shown that the calculations are not time consuming and agree well with the known experimental data.