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THE INVESTIGATION OF STABILITY OF A DIFFERENCE PROBLEM FOR A SYSTEM OF DIFFERENTIAL EQUATIONS OF SIMULTANEOUS PROPAGATION OF SOUND AND HEAT

Abstract

Application of a finite difference method to the solution of mixed problems for system of differential equations describing sound and heat propagation in gas is considered in the paper. The stability of a difference problem approximating the initial value problem to within $O(h + \tau)$ is proved by energetic inequalities method.