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INVESTIGATION OF A BOUNDARY VALUE PROBLEM FOR A HIGHER ORDER EQUATION

Abstract

As is known, one of the powerful methods for solving mixed problems for Petrovsky parabilic equations and systems is M.L. Rasulov's [1], [2] contour integral method. One of the main stages of this method is the investigation of appropriate boundary value problems. The solution of composite type boundary value problems was investigated in the papers of N.A. Aliyev (3,a), b) and necessary conditions for the existence of solutions were obtained. Application of this method was investigated for weakly parabilic equations under restrictions on data, existence and uniqueness of solutions was proved [4]. Furthermore, the Cauchy problem for a hyperbolic equation was investigated by applying the contour integral method, and representation of the solution was obtained in the form of the quicly-divergent contour integral [5]. The paper [6] was devoted to the investigation of this method to the solution of problems for the equations and systems not belonging to the standard classification. The present problem is devoted to the investigation of one of such problems.