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SOLVABILITY CONDITIONS OF A BOUNDARY
VALUE PROBLEM FOR AN
OPERATOR-DIFFERENTIAL EQUATION OF THE
THIRD ORDER WITH DISCONTINUOUS
COEFFICIENTS

Abstract

In the paper, on a semi-axis we consider a boundary value problem for a class of third order operator-differential equations with discontinuous coefficient and with some linear operator in one of the boundary conditions. Sufficient conditions of well-defined and unique solvability of the given boundary value problem in the Sobolev type space are found. These conditions are expressed by means of the properties of operator coefficients of the boundary value problem.