

BOUNDARY VALUE PROBLEM FOR A STURM-LIOUVILLE
OPERATOR WITH PIECEWISE CONTINUOUS COEFFICIENT

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Abstract

In this paper, a self adjoint boundary value problem with a piecewise continuous coefficient on the positive half line $[0, \infty)$ is considered. The resolvent operator is constructed and the expansion formula with respect to eigenfunctions is obtained. The spectrum of the operator is discussed.

Keywords: Sturm-Liouville operator, resolvent operator, expansion formula

References

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