COMPLETENESS OF EIGENFUNCTIONS OF DISCONTINUOUS BOUNDARY VALUE PROBLEMS

ERDOĞAN ŞEN

Abstract. In this work, we study discontinuous Sturm-Liouville type problems with eigenparameter dependent boundary condition and transmission conditions at three interior points. A self-adjoint linear operator $A$ is defined in a suitable Hilbert space $H$ such that the eigenvalues of such a problem coincide with those of $A$. We show that the eigenvalues of the problem are analytically simple, and the eigenfunctions of $A$ are complete in $H$.

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Department of Mathematics, Faculty of Science and Letters, Namık Kemal University, 59030 Tekirdağ, Turkey,
E-mail address: esen@nkfu.edu.tr

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