Differential operator equations with interface conditions in modified direct sum spaces

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Abstract: In this study we consider a Sturm-Liouville problem involving an abstract linear operator in equation and determined by eigendependent boundary conditions and two supplementary interface conditions. We give a characterisation of some spectral properties of the considered problem. Particularly, it is established such properties as isomorphism and coerciveness and find asymptotic formulas for eigenvalues.

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