The boundary value problems of steady vibration problems in the linear theory of thermoviscoelasticity for Kelvin-Voigt materials

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The boundary value problems (BVPs) of steady vibration in the theory of thermoviscoelasticity for Kelvin-Voigt materials are investigated. The uniqueness theorems for classical solutions of internal and external BVP-s are proved by using Green's formulas. The basic properties of surface and volume potentials are established. The existence theorems in this theory are proved by using of the potential method and the theory of singular integral equation.