Mixed Boundary Value Problems for Rayleigh Wave in Anisotropic Half-Plane

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Abstract

The paper deals with mixed boundary value problems in a cubic elastic half-plane. The formulation of the problem depends on an asymptotic model derived for anisotropic materials. It is demonstrated that defining the displacements in terms of a pair of plane harmonic functions reduces the problem to a classical isotropic form, which can be formulated within the framework of the asymptotic hyperbolic-elliptic model developed for isotropic materials. As an example, a semi-infinite rigid stamp moving at a constant speed along the surface is considered

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figures/fig1/fig1-eps-converted-to.pdf

figures/fig2/fig2-eps-converted-to.pdf

figures/fig3/fig3-eps-converted-to.pdf