

Edge waves in an initially stressed visco-poroelastic plate

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Abstract:

The purpose of this paper is to investigate the propagation of edge waves in a homogeneous visco-poroelastic plate which is initially stressed in horizontal direction. The pertinent governing equations are derived and the frequency equation is obtained in the framework of Biot's theory. Frequency and attenuation are computed as a function of wavenumber. For the numerical process, solids namely, sandstone saturated with kerosene, sandstone saturated with water are considered and the results are presented graphically.

Keywords: *Visco-poroelastic plate, Initial stress, Frequency, Attenuation*

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