

عنوان مقاله:

Modelling of Love Waves in Fluid Saturated Porous Viscoelastic Medium resting over an Exponentially Graded Inhomogeneous Half-space Influenced by Gravity

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خلاصه مقاله:

The present article is devoted to a theoretical study on Love wave vibration in a pre-stressed fluid-saturated anisotropic porous viscoelastic medium embedded over an inhomogeneous isotropic half-space influenced by gravity. The expression of dispersion has been achieved with the help of mathematical tools such as variable separable method and Whittaker's function's expansion under certain boundary conditions. After that, the obtained result has been coincided with the pre-established classical equation of Love wave, as shown in the section of particular case and validation. The substantial influence of various affecting factors like gravity, initial stress, porosity, viscosity and inhomogeneity on dispersion curves of Love wave has been investigated extensively by means of graphical depictions and discussions accomplished by numerical results.

کلمات کلیدی:

Love waves, porous, Viscoelastic, Gravity, Whittaker's function

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