

Explicit secular equations of Rayleigh waves in a non-homogeneous orthotropic elastic medium under the influence of gravity

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Abstract: The problem of the Rayleigh waves in a non-homogeneous orthotropic elastic medium under the influence of gravity is investigated. Using an appropriate representation of the solution we derive the secular equation of the wave motion in the explicit form. Moreover, following the same approach, we obtain the explicit secular equations for a number of previously investigated Rayleigh wave problems whose dispersion equations were obtained only in the implicit form. © 2009 Elsevier B.V. All rights reserved.

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