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Influence of Initial Stress and Corrugation on Rayleigh-Type Wave in Piezomagnetic Half-Space

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Abstract : Propagation of Rayleigh-type surface waves in an initially stressed piezomagnetic half- space with irregular boundary is investigated. The materials are assumed to be transversely isotropic crystals. The dispersion relations have been derived for electrically open and short cases. Effect of initial stress and corrugation have been shown graphically. It is also found that piezomagnetic material properties have an important effect on wave propagation. The result is relevant to the analysis and design of various acoustic surface wave devices constructed from piezomagnetic materials.

Keywords : corrugation, frequency equation, piezomagnetic, rayleigh-type wave
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