Influence of Rotation on Rayleigh-Type Wave in Piezoelectric Plate

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Abstract : Propagation of Rayleigh-type waves in a rotating piezoelectric plate is investigated. The materials are assumed to be transversely isotropic crystals. The frequency equation have been derived for electrically open and short cases. Effect of rotation and piezoelectricity have been shown. It is also found that piezoelectric material properties have an important effect on Rayleigh wave propagation. The result is relevant to the analysis and design of various acoustic surface wave devices constructed from piezoelectric materials also in SAW devices.
Keywords : rotation, frequency equation, piezoelectricity, rayleigh-type wave

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