

عنوان مقاله:

Investigation of the effect of angle beam transducer parameters on the lamb wave field in the three-layer plate by normal mode expansion method

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خلاصه مقاله:

The effect of angle beam transducer parameters such as wedge angle and width transducer on the Lamb wave field generated in the elastic-viscoelastic three-layer plate has been investigated using normal mode expansion method. At first, the propagation of Lamb wave in the three-layer plate has been investigated using global matrix method, and all the modes that are propagated in the three-layer plate have been specified. Then, the optimum parameters of angle beam transducer have been obtained to generate a mode with minimum attenuation at a specific frequency. In addition to this mode, other modes are also generated in the three-layer plate, but this mode has maximum energy in the three-layer plate. The results indicate that the energy contribution of the mode with minimum attenuation at a specific frequency is 99.9% of the total energy and this mode has the highest energy contribution.

کلمات کلیدی:

Angle Beam Transducer, Three-Layer Plate, Attenuation, Lamb Wave, Normal Mode Expansion

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