

Approximation error of one finite-difference scheme for the problem of diffraction by a gradient layer

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Abstract

© 2017 Pushpa Publishing House, Allahabad, India. The finite-difference scheme, constructed by the method of approximating an integral identity, is considered for a boundary value problem involving the one-dimensional Lamé equations, which describe the problem of diffraction by gradient isotropic and transversal-isotropic layers. We prove that the finite-difference scheme is second-order accurate and can be recommended for use in solving the Lamé equations with continuous coefficients.

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Keywords

Boundary value problem, Error of method, Finite-difference scheme, Lamé equations

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