Abstract

We study a nonstationary wave propagation in a finite length rectangular prism subjected to the action of axial forces instantly applied on end areas.

The material of the body is assumed to be linear-elastic and isitropic. In such a case, naturally, the process will be described by a system of Lame three-dimensional equations.

Similar to [2,3] the integration method of the system is worked out for the considered boundary conditions and exact solution is constructed. The Laplace integral transformation was used in the course of solution and originals were found exactly, for any moment t.