

## Abstract

*Within the scope of the piecewise homogeneous body model with the use of the three-dimensional linearized theory of elastic wave propagation in the initially stressed bodies the axisymmetric longitudinal wave propagation in the finite pre-strained cylinder surrounded with the finite pre-compressed infinite elastic body is investigated. It is assumed that the materials of the components are compressible and the elasticity relations of those are given through the harmonic potential. The numerical results illustrating the influence of the finite initial compressing strains on the wave propagation velocity are presented and discussed.*