

IMPACT INTERACTION OF A VISCOELASTIC BODY AND UFLYAND-MINDLIN PLATE

Loktev A.A.

In the present paper the transverse impact of a viscoelastic body with viscoelastic isotropic plate, which dynamic behavior is described by the equations taking the rotary inertia of the normal with median surface and deformations of the transverse shear of the plate's cross section into account, is considered. As a method of the decision the ray method, based on conditions of compatibility and ray series, and method of splicing asymptotic expansion received for small times in a contact area and outside of it are used. The simple and compact analytical expressions for contact force are defined. The carried out numerical research allows drawing the conclusion about influence of parameters of a construction, including buffer's and plate's viscoelastic properties, on dynamic characteristics of interaction.