

MECHANICS

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RESEARCH OF MAIN CHARACTERISTICS CHANGE OF SEISMIC WAVES IN SATURATED EARTH SOLIDS

Abstract

Energy dissipation stipulated by viscoelastic properties of material should be taken into account while investigating wave processes in multilayer media. We research properties of viscous wave propagation in laminated earth solids on the example of plane waves in unbounded laminated medium. The fact that even ignoring the dissipation effects in soft layers some forms are attenuated for certain frequencies, is typical for laminated media. These are so-called non-transmission zones. Taking into account viscous properties of material in soft layers the amplitude of majority of possible wave forms decrease during their propagation. Attenuation rate of the waves that were not attenuated for perfect ideal laminated medium, is many times less than the attenuation rate of waves in non-transmission zones.