

Abstract

In the paper we theoretically study wave flow of dispersive weakly compressible liquid in semi-infinite thin-shelled visco-elastic tube. Using diffusion approximation, inertia effect of relative motion of phases is neglected and mixture velocity is given on the whole. Dispersibility is taken into account by means of "correction" of dynamic viscosity coefficient and mixture density. Evolution equation describing non-linear waves propagation in dispersible liquid allowing for tube reaction, is derived. We consider principal regularities following from numerical integration of Korteweg-de Vries-Burgers (KdVB) modified equation by means of the finite difference method.