

The movement of a particle at nonlinear oscillations of high amplitude in the closed tube

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Abstract

The movement of a flat particle at longitudinal oscillations of gas of high amplitude in the closed tube is experimentally investigated. It is shown that the oscillating particle on an axis moves from the closed end to the piston with increase in oscillation swing, and in near to a wall in the opposite direction. In the radial direction drift of the oscillating particle comes from an axis to a tube wall. Such behavior of a particle is caused by acoustic streaming of gas in a tube. It is revealed that the increase in frequency of excitement of gas or length of a tube lead to growth of oscillation swing of a particle and increase of its average speed.

<http://dx.doi.org/10.1088/1742-6596/669/1/012020>
