

## **INFLUENCE OF VERTICAL VIBRATIONS ON STRUCTURE SEISMIC RESISTANCE**

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**Abstract.** The problem of body fluctuation freely laying on vertically vibrating plane is discussed. It is proved that at high-frequency longitudinal vibrations of the structure the force directed opposite to the force of weight occurs. Applying the obtained results to the behavior of the structure at vertical ground motions it is concluded that vertical vibration may cause the reduction of seismic impact on the structure at the corresponding designing of foundation and on the construction base.

**Keywords:** vibration, weight, longitudinal vibrations, frequency of vibrations.