

Method for determination of normal pressure of bulk materials on constructions of barriers that includes measurement of tangent stresses at contact of bulk material and the barrier, in which the construction of the barrier in height is in hinged way divided into elements with thicknesses Δh . Measurement of tangent tensions T_i is carried out by means of loading with rotary torque M with respect to axis z of the element Δh of the barrier, and distribution of normal pressures σ_i , of bulk material in height of the construction one determines by formula

$$\sigma_i = \frac{M_i - m}{\Delta h \cdot u \cdot D} \operatorname{ctg} \varphi_o,$$

where σ_i - normal pressure of bulk material at depth z of the construction of the barrier, kPa;

M_i - torque stress that corresponds to beginning of rotary motion of the element Δh with respect to the axis z of the construction of the barrier, kN cm;

m - torque stress of friction forces between the elements of the model of the barrier, kN cm;

Δh - height of the elements to which the structure of the barrier is divided, cm;

u - perimeter of the inner or outer barrier, cm;

D - inner or outer diameter of the barrier, cm

i - number of the layer;

φ_o - friction angle of the bulk material over the barrier, degrees.