Lab Work No. 2

Determination of bulk density of the material

To determine the bulk density, a sand sample weighing 5 ... 10 kg is dried in an oven to a constant weight and sieved through a sieve with a mesh size of 5 mm. Then the sand is poured into the funnel and, opening the valve, fill the vessel with a volume of 1 dm^3. Excess sand is cut with a ruler on both sides of the center. The vessel with sand is weighed and the bulk density with rounding to 10 kg/m^3 is calculated by the formula

$$\rho_b = \frac{m_2 - m_1}{V}\ , \qquad (3)$$

where ρ_b – bulk density of the material, kg/m^3; m_1 – mass of measuring vessel, kg; m_2 – mass of measuring vessel with material, kg; V – measuring vessel volume, m^3.

The bulk density of sand is determined twice, using a new sample each time, and the arithmetic mean value is calculated from these results.

The results of the experiments are entered in table.2.

Table 2

The results of determining the bulk density of sand

Exp. №	Mass of Measuring Vessel, kg	Mass of Measuring Vessel with Material, kg	Bulk Density of the Material, kg/m^3	Average Value of Bulk Density, kg/m^3