**PW 04: THE GRANULOMETRIC ANALYSIS**

1. **Objective of the Experiment**

The granulometric analysis aims at three objectives:

* To determine the dimensions of the grains contained in the aggregates.
* To determine the proportions of the grains.
* To deduce the fineness modulus.

1. **Necessary Equipment**

* A sieving machine
* A series of sieves
* A balance

1. **Materials Used**

* A sample of sand
* A sample of gravel

1. **Procedure**

* Set up the series of sieves (bold in the tables) in descending order of mesh size, adding the cover and the bottom.
* Pour the material into the column of sieves.
* Mechanically agitate the column.
* Retrieve the sieves one by one, adopting a cover and the bottom.
* Manually shake the sieve.
* Pour the collected sieve residue into the sieve directly below.
* Determine the mass of the residue for each sieve and the bottom.

1. **Work Required**

* Fill in the tables.
* Plot the granulometric curves.

**Table 1:** GRANULOMETRIC ANALYSIS OF SAND (OR GRAVEL)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **SAND OR GRAVEL** | | | |
| **INITIAL DRY WEIGHT (g)** |  | | | |
| Mesh | Partial Refusal (g) | Cumulative Refusal (g) | Cumulative Refusal (%) | Sieve Residue (%) |
| 28 |  |  |  |  |
| 22 |  |  |  |  |
| 16 |  |  |  |  |
| 11.20 |  |  |  |  |
| 8 |  |  |  |  |
| 5.60 |  |  |  |  |
| **4** |  |  |  |  |
| **2.80** |  |  |  |  |
| **2** |  |  |  |  |
| **1.40** |  |  |  |  |
| **1** |  |  |  |  |
| **0.710** |  |  |  |  |
| **0.500** |  |  |  |  |
| **0.355** |  |  |  |  |
| **0.250** |  |  |  |  |
| **0.180** |  |  |  |  |
| **0.125** |  |  |  |  |
| **0.090** |  |  |  |  |
| **0.063** |  |  |  |  |
| **Bottom** |  |  |  |  |