

## Calculation of the total surface area of aggregates

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First, he took some aggregate, washed it and put it in a heater to dry, then weighed it ( $w_1$ ), obtained its volume ( $v$ ) and spread it on a sieve, put it in water and took it out. Time ( $t$ ) (which is constant for all experiments) put it outside in the open air, then weigh it ( $w_2$ ) and obtain the difference of the two weights ( $w$ ) using an artificial neural network whose input variables are  $w$  and  $v$  and  $t$  and the percentage of air humidity and air temperature and the permeability of the tested material and its output variable is the total surface of the tested material (here aggregate), the total surface is obtained. (For a series of materials whose total level is known, it is done to prepare a database, then the desired artificial neural network is trained based on this database)