
Substitution Weighing

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FIG 1.

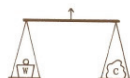


FIG 2.

The substitution principle has been known for a long time as an important method of accurate weighing. It has two main variants, one with a variable load, the other with a constant load on the beam.

The variable load method is mostly conducted on a conventional equal-armed two-pan balance. The load 'L' is put into one of the pans, Fig 1, then any material 'C' is put in the other pan until the balance is in equilibrium. Then the load is removed, and in its place are put weights 'W' until equilibrium is again achieved, Fig 2. These weights must then be exactly equal to the unknown mass of the load.

As any ordinary two-pan balance can be used for this method, it is not possible to find old instruments made specially for this variant of substitution weighing. >

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Abstract

Remarks