

Device for monitoring of waste volume stability

Description/Parameters

Device for monitoring waste volume stability induced by the action of water. The test device consists of a stainless steel water tank, which is connected with reaction vessels for holding the sample. This assembly is placed in a sand bath where it is possible to control the temperature during the experiments. The device includes a temperature sensor measuring the temperatures of the samples, the sand bath and the water in the reservoir in the range 0 to 100 °C. The laser distance sensor is mounted on a tripod and allows non-contact measurement of the height change of the sample in the reaction vessel.

Continuous data collection occurs according to the required time interval. The data acquisition system of the temperature and distance sensor is adapted to continuously record the measured sample height and the temperature of the sand and water. All sensor outputs are stored in a computer.

Utilization/services

The device is used to observe the changes of volume as are observed depending on the time due to the action of water on the sample to be tested. The method is suitable for assessing volume change of wastes on the base oxides, for example metallurgical slags.

