

SAMPLING METHOD MB3

SAMPLING OF CEMENT AND LIME

1 SCOPE

The method describes the procedures that should be followed when samples of cement or lime are taken from:

Bulk stock or consignments;
Containers such as 50 kg bags of cement or 25 kg bags of lime

2 APPARATUS

- 2.1 Suitable, clean containers such as tins with tightly-fitting lids which can hold 5 kg of cement or lime.
- 2.2 Suitable equipment for taking samples such as a grooved sampling device for taking samples from large containers, and a tube type sampling device for small containers such as bags (see drawings). The former apparatus must be about 1.7 m long with an outer diameter of about 35 mm. It must consist of two brass telescopic tubes with corresponding grooves that can be opened and closed by turning the inner tube. The outer tube must have a sharp point to facilitate penetration into the cement or lime.

3 SAMPLE SIZE

- 3.1 **Cement:** Minimum of 2.0 kg for each 12 single samples.
- 3.2 **Lime:** Minimum of 0.5 kg for each single samples.

4 METHOD

4.1 Cement or lime in bulk containers

If the stock of cement or lime is less than 2 m deep (see note 6.3) single samples can be obtained with slotted samplings device. Take single samples at as many different depths and well spaced points in the container as possible, and place each sample in a separate sample container. Close the sample container properly to prevent moisture or air getting to the sample.

4.2 Cement or lime in bags

Choose the number of bags to be sampled from the consignment or stock in a random manner. Push a sampling into the mouth of the bag. Place a thumb over

the airhole of the sampling advice and withdraw the instrument. Empty the contents of the sampling device into a sample container. Repeat the procedure until the required quantity has been obtained. Close both the sample container and the hole made by the sampling device in the mouth of the bag tightly so that no air or moisture can get in.

- 4.3 Mark or label each sample, showing clearly what consignment or stock it was taken from, the date of sampling, the sample number and from where in the stock the sample was taken.

5 REPORTING

The samples must be sent to the laboratory under cover of a full report. The report must give, amongst others, the number of each sample, particulars of the stock or consignment from which the samples were taken, and the position of each sample in the stock or consignment.

6 NOTES

- 6.1 All types of cement and lime
- 6.2 When the stock is deeper than 2 m, a more sophisticated apparatus such as a sampling pipe which works on an air-current should be used. Such an apparatus is capable of taking separate samples at various depths of lime and cement.
- 6.3 Samples must not be taken from broken bags. The number of samples taken will depend on the size of the consignment or stock, but at least 12 single samples must be taken from each consignment or stock.

References

ASTM: C 183-86 (a)
SABS 471
SABS 626
SABS 831
SABS 824

FIG 1&2 OF TUBE SAMPLER PG 17

