IS 5516 : 1996 - Variable flow type air - Permeability apparatus (Blaine Type) - Specification (First Revision)

A number of Indian Standards has been formulated on different types of cement and methods of tests of cement. As it has-been recognized that reliable and reproducible test results could be obtained only with standard types of testing equipment which are capable of giving the desired level of accuracy, a series of specifications covering the requirements of testing equipment have been brought out to encourage the development and manufacture of standard testing equipment for cement testing in the country.

This standard covers the requirements of variable flow type air-permeability apparatus (Blaine type) and its accessories used for determination of specific surface of cements, pozzolanas and other powdery materials. The major requirements in this revision include changes in some dimensions of the apparatus, provision of rubber tube and aspirator bulb in the manometer and recommendation of inscription of a mark on centre position of the perforated disc on one side to ensure correct and uniform placing of disc. The extent of smoothness of the internal wall of the permeability cell has also been defined in this standard.

The variable flow type air-permeability apparatus (Blain type) shall consist essentially of a means for drawing a definite quantity of air under a falling pressure head through a prepared bed of powder of a definite porosity. The number and size of the pores in a prepared bed of cement of definite porosity is a function of the size of the particles and determine the rate of air flow through the bed.

Dimensions of different component parts of air permeability apparatus along with their material of construction are covered under this standard. This standard covers the requirement for Permeability Cell, Perforated Disc, Plunger, Filter Paper Discs, Manometer and accessories such as filter paper disc cutter and air evacuating rubber bulb may also be supplied as accessories.