

Australian Standard®

Methods for sampling and testing aggregates

Method 11.2: Particle size distribution for vision sizing systems

This Standard incorporates Amendment No. 1 (April 2016). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

1 SCOPE

This Standard sets out the method for the determination of particle size distribution in coarse and fine aggregates by vision systems. The VSS is limited by the discrimination of the optical system and, at present, is suitable for materials coarser than 1.18 mm. A calibration procedure is required to relate results from this procedure to particle distribution by sieving (AS 1141.11).

NOTE: A summary of VSS technology is given in Appendix A.

2 APPLICATION

AS 1141.11 measures particle size distribution of a sample on the basis of mass of sample passing or retained on the square or round hole sizes of the AS 1152 screens used. VSS measures the length dimensions of images of particles in two dimensions, and derives a third dimension. VSS does not measure mass and, hence, variations in particle density in particles within a sample or between samples, will cause a difference in calculating the particle size distribution between the two methods. Some of this difference can be reduced by 'source calibration' especially where the VSS is used in an 'in-plant' application on a consistent source. The VSS has application in the production of rapid, automated particle size distribution data in production plants.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1141	Methods for sampling and testing aggregates
1141.1	Method 1: Definitions
1141.2	Method 2: Basic testing equipment
1141.3.1	Method 3.1: Sampling—Aggregates
1141.11	Method 11: Particle size distribution by sieving
1152	Specification for test sieves
4433	Guide to the sampling of particulate materials
4433.1	Part 1: Sampling procedures