

(INACTIVE)

**OHD L-28
METHOD OF TEST FOR
DRY SIEVE ANALYSIS OF QUICK LIME**

I. SCOPE.

- A. This method of test covers the sieve analysis of quick lime for use in highway subgrades.
- B. The quick lime is hand-sieved through standard sieves, starting with the sieve with the largest opening specified and progressing successively through the specified sieves in the order of decreasing size of opening, and computing the weight of quick lime and the percentage passing each of the sieves.

II. APPARATUS. The apparatus shall consist of the following:

- A. **Balance**, sensitive to 0.05 gram.
- B. **Sieves**, 8 inches in diameter, conforming to the Standard Specifications for Wire-Cloth Sieves for Testing Purposes (AASHTO M 92), and including such sieves as may be required by the specifications for the quick lime.
- C. **Oven.**

III. SAMPLES. By quartering or riffle sampling (Note), select a representative sample from the material to be tested. Take at least one representative sample of approximately 500 grams from each shipment in the ratio of one sample for each 90,000 pounds (40.8 metric tons) or fraction thereof. Approximately 50 grams of quick lime is required for each test.

NOTE: The quartering procedure for reducing bulk samples, to obtain representative test samples of suitable size, is described and illustrated in the Standard Method of Sampling Coke for Analysis (ASTM D 271) and the Standard Methods of Sampling Coals Classified According to Ash Content (ASTM D 492), riffles with smaller openings will be required for use with quick lime in this method.

IV. PROCEDURE.

- A. Weight 50 grams of the quick lime to the nearest 0.1 gram and place on the sieve with the largest opening in the series specified for the test, which shall be thoroughly dry. Hold the sieve, with pan and cover attached, in one hand in a slightly inclined position so that the sample will be well distributed over the sieve, at the same time gently striking the side about 150 times per minute against the palm of the other hand on the upstroke. Turn the sieve every 25 strokes about one sixth (1/6) of a revolution in the same direction. Continue the operation until not more than 0.05 gram passes through the sieve in one (1) minute of continuous sieving. Each time, before weighing the material passing through the sieve, tap the side of the sieve with the brush handle in order to remove any material adhering to the wire cloth.

- B. When the sieving has been finished, remove the cover of the sieve and carefully remove the residue remaining on the sieve to a tared container. Invert the sieve over a piece of glazed white paper and clean the wire cloth by brushing the underside. Add the material thus removed from the wire cloth to the residue removed from the sieve.

- C. Weigh the portion of the sample retained on the sieve to the nearest 0.1 gram. Place the material passing through the largest sieve on the sieve with the next smaller opening for the series selected for the sieve analysis . Continue sieving in a similar manner, using successively each of the selected series of sieves in the order of decreasing size of opening, and recording the weight of that portion of the sample retained on each sieve. Calculate the weight of material and the percentage of the sample passing each of the sieves.

- D. Washers, slugs or shot shall not be used on the sieves.

- V. **MACHINE SIEVING.** Mechanical sieving devices may be used but the quick lime shall not be rejected if it meets the specification requirements when tested by the hand-sieving method described in Section IV. When mechanical sieving devices are used, their thoroughness of sieving shall be tested by using the hand method or comparison.

- VI. **REPORT.** The report shall include the following:
 - A. Results of the sieve analysis reported as the total percentage passing each sieve, expressed to the nearest 0.5 percent.

 - B. The method of sieving used.