

PROCEDURE FOR CALIBRATING, STANDARDIZING OR CHECKING EQUIPMENT

Original 12/96, Revised 1/99, 3/11, 3/14

PROCEDURE #40

Equipment Checked:

COARSE & FINE SCREEN SHAKERS

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Purpose:

To provide instructions for checking the thoroughness of sieving of mechanical shakers.

Inspection Equipment Required:

1. A set of sieves typically used in a mechanical shaker.
2. Scale readable to 0.1 g, 20,000 g capacity.

Tolerance:

The tolerance for thoroughness of sieving can be found in the test method listed above.

Procedure:

1. Obtain an appropriate size sample of aggregate with a relatively uniform size distribution over the range of sieves to be included in the shaker.
2. Record the total weight of Sample (A) and place the sample into the set of sieves. Set the timer for a sufficient period of time (approximately 10-15 min.) to meet specifications (not more than 0.5% by weight of the total sample passes a given sieve in one minute of continuous hand sieving).
3. For mechanical shakers with screen trays (e.g., Gilson TM-6), remove a screen from the shaker. Then place the material from the screen into a 12" diameter sieve (do not overload), with the same opening size.
4. Hold the individual sieve in one hand. Strike the side of the sieve sharply, with an upward motion, against the heel of the other hand at the rate of about 150 times per minute. Turn the sieve about one-sixth of a revolution at intervals of about 25 strokes. Hand shake for one minute. Weigh and record the weight of material that has passed (B). Repeat for all screens.
5. For round sieve mechanical shakers (e.g., Mary-Ann, Ro-Tap), remove the nest of sieves. Then carefully remove a sieve from the nest and hand shake that sieve in the same manner as explained above. Repeat for all sieves.
6. Calculate thoroughness on the Check Record Form to determine if the shaking time is adequate.
7. In determining the sufficiency of sieving for sizes larger than the #4 sieve, limit the material on the sieve to a single layer of particles.