

(INACTIVE)
OHD L-10
METHOD OF TEST FOR
ROUNDNESS OF GLASS BEADS

- I. **SCOPE.** This method shall cover the determination of the percentage of round beads in glass beads used for reflective marking purposes.
- II. **APPARATUS.** The apparatus shall consist of the following:
- A. **Electrical Vibrator**, upon which is mounted at a 3° angle, a smooth glass panel, 14 inches (35.6 cm) wide and 20 inches (50.8 cm) long. The vibrations shall be transmitted to the glass panel at a frequency of 60 impulses per second.
 - B. **Dispensing Device or Pan**, constructed in such a manner that the selected sample of glass beads may be evenly dropped over the area of the glass panel.
 - C. **Collecting Pan or Container**, placed at the lower end of the sloping glass panel to collect the rounds and imperfect particles.
 - D. **Sieves**, conforming to the Standard Specifications for Sieves for Testing Purposes. (AASHTO M 92.)
- III. **SAMPLE PREPARATION.**
- A. Representative samples shall be an unbroken bag or other container selected at random from the shipment to be tested.
 - B. The entire representative sample shall be split over a riffle splitter to obtain test samples of approximately 50 grams.
- IV. **PROCEDURE.**
- A. Separate the test sample using the No. 50 sieve. Run the beads retained on the sieve as one group and run the beads passing the sieve as a second group.
 - B. Place the material retained on the No. 50 sieve in the dispensing device. Set the slope of the glass panel at 3° and with the vibrator running, disperse the glass beads along the upper portion of the glass panel in several passes allowing the rounds to fall into the collecting pan. Any cluster which develops should be broken up by tapping. The rounds and imperfect particles (those remaining on the glass panel) should be retained in different containers.
 - C. Repeat the procedure outlined in paragraph IV B with both the rounds and the imperfect particles until separation is complete. The + #50 rounds and the + #50 imperfect particles are individually weighed and recorded.
 - D. Repeat the procedure outlined in paragraph IV B using the material passing the No. 50 sieve with the glass panel set at an angle or 9° until separation of the minus (-) No. 50 rounds and imperfect particles is complete. The minus (-) No. 50 rounds and the minus (-) No. 50 imperfect particles are individually weighed and recorded.

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V. **CALCULATIONS.**

- A. From the total weight of rounds obtained from both size groups, calculate the percentage of rounds in the total sample, using as 100 percent, the total weight of rounds plus imperfect particles collected in test -- thereby eliminating from the calculations any loss of beads that may have occurred during handling and testing.

$$\% \text{ Rounds} = \frac{\textit{Sum (All Rounds)}}{\textit{Sum (All Rounds and Imperfects)}} \times 100$$

- B. The percentage of rounds in the sample will be reported to the nearest 0.1 percent.