APPARATUS

1. Pycnometer:
   (a) One of the following containers:
      1. Volumetric flask, capacity 500 mL (or more)? ..... ____.
   or 2. Fruit jar with fitted pycnometer top? ..... ____.
   (b) Volume content can be reproduced to ± 0.1 cm^3? ..... ____.
   (c) Volume of container filled to mark at least 50% greater than space required to accommodate test sample? ..... ____.
   (d) Pycnometer has been calibrated at 23 ± 2°C? ..... ____.
2. Conical mold:
   (a) Inside diameter at top 40 ± 3 mm? ..... ____.
   (b) Inside diameter at bottom 90 ± 3 mm? ..... ____.
   (c) Height 75 ± 3 mm? ..... ____.
   (d) Metal, 0.8 mm minimum thickness? ..... ____.
3. Tamper:
   (a) Weight 340 ± 15 g? ..... ____.
   (b) Flat circular tamping face? ..... ____.
   (c) Diameter of tamping face 25 ± 3 mm? ..... ____.
4. Burette (Optional), readable to 0.15 mL? ..... ____.
5. Balance, Capacity at least 1 kg? ..... ____.
   Accurate to 0.1%, sensitive to 0.1 g or less? ..... ____.
6. Oven, maintains 110 ± 5°C? ..... ____.

COMMENTS:

RELATIVE DENSITY OF FINE AGGREGATE LS-605 ____.
C128 ____.

PROCEDURE

Sample preparation

1. Sample obtained by ASTM ***D 75 ; C 702*** ..... ____.
2. ***Approximately 2400g of dried fine aggregate obtained and split into 2 approximately1200g sub samples?*** ..... ____.
3. ***Samples washed as per LS 601?***..... ____.
   Note: Oven drying not necessary if naturally moist condition is desired.
4. Covered with water or at least 6% moisture added?..... ____.
5. Allowed to stand 20 to 28 hours, or naturally moist?..... ____.
6. Excess water decanted (if necessary) without loss of fines?..... ____.
7. Sample spread on flat nonabsorbent surface? ..... ____.
8. Uniformly dried by a current of warm air?..... ____.
9. Mold placed on flat, nonabsorbent surface and filled to overflowing? ..... ____.
10. Tamped 25 times with 5 mm drop?(Note: Provisional cone test - C128, note 3,(1) may be used with materials that do not readily slump)..... ____.
11. Tamper allowed to fall freely under gravitational attraction? ..... ____.
12. Loose sand removed from around base and mold lifted vertically?..... ____.
13. Sample fails to slump on first test?..... ____.
14. If it does slump, is water added, sample covered and allowed to stand 30 minutes?..... ____.
15. Drying continued and slump test repeated at frequent intervals until sample slumps slightly? ____.

Procedure

1. Pycnometer partially filled with water and 500 ± 10 g sample added? ..... ____.
2. Pycnometer filled to 90% capacity and agitated to eliminate air bubbles? ..... ____.
3. Temperature of contents adjusted to 23 ± 2°C?..... ____.
4. Water level adjusted to calibrated capacity and pycnometer and contents weighed? ..... ____.
5. Sample removed and dried to constant weight at 110 ± 5°C?..... ____.
6. Sample cooled in air at room temperature for 1 ± ½ hour and weighed?..... ____.
7. Empty pycnometer filled to its calibration capacity with water at 23 ± 2°C and weighed?.... ____.
8. All weights determined to nearest 0.1 g? ..... ____.
9. Lab says proper book formulas used in calculations?..... ____.

Use of Laboratory Control Aggregate

1. Laboratory has a supply of control aggregate? Source: James Dick Sand..... _____
2. Control sample tested every 10 samples or at least every week when samples tested?..... _____
3. Control chart showing data for last 20 samples of reference material?..... _____

Mean relative density for last 20 samples ..... _____
Low relative density for last 20 samples..... _____
High relative density for last 20 samples..... _____
Mean absorption for last 20 samples ..... _____
Low absorption for last 20 samples ..... _____
High absorption for last 20 samples..... _____

Comments: