Standard Method of

SLUMP TEST FOR FIELD CONSISTENCY OF MAGNESIUM OXYCHLORIDE CEMENTS[1]

ASTM Designation: C 249 – 52

ADOPTED, 1952.[2]

This Standard of the American Society for Testing Materials is issued under the fixed designation C 249; the final number indicates the year of original adoption as standard or, in the case of revision, the year of last revision.

Scope

1. This method of test covers the procedure to be used in the field for determining the consistency of magnesium oxychloride cements.

Apparatus

2. The test specimen shall be formed in a mold of No. 16 gage galvanized metal in the form of the lateral surface of the frustrum of a cone with the base 8 in. in inside diameter, the top 4 in. in inside diameter, and the altitude 12 in. The base and the top shall be open and parallel to each other and at right angles to the axis of the cone. The mold shall be provided with foot pieces and handles as shown in Fig. 1.

Sample

3. (*a*) Samples of oxychloride cement for test specimens shall be taken at the mixer or mixing box immediately after completion of the mixing and shall be representative of the entire batch.

(*b*) Samples from a mechanical mixer shall be taken from the first discharge of the mixer.

(*c*) Samples of batches mixed by hand in a mixing box shall consist of approximately equal portions taken from not less than six points uniformly distributed over the entire batch. These portions shall be combined and mixed to form a single sample for test.

(*d*) The sample thus obtained shall be transported not more than a few feet from the working area to the place of molding the specimen and, to counteract segregation, shall be mixed in the container with a shovel or scoop until it is uniform in appearance before testing for consistency.

Procedure

4. Dampen the mold and place it on a level, moist, nonabsorbent surface. From the sample of oxychloride cement obtained as described in Section 3, fill the mold immediately in three layers, each approximately one third the volume of the mold. In placing each scoopful of oxychloride cement, move the scoop around the top edge of the mold as the cement slides from it, in order to ensure symmetrical distribution of cement within the mold. Rod each layer with 25 strokes of a $\frac{5}{8}$-in. round rod, approximately 24 in. in length and tapered for a distance of 1 in. to a spherically shaped end having a radius of approximately $\frac{1}{4}$ in. The strokes shall be distributed in a uniform manner over the cross-section of the mold and shall penetrate into the underlying layer. Rod the bottom layer throughout its depth. After the top layer has been rodded, strike off the surface of the cement with a trowel so that the mold is exactly filled. Remove the mold immediately from the oxychloride cement by raising it carefully in a vertical direction. Measure the height at the vertical axis of the specimen to the nearest 0.5 in., and calculate and report the slump as follows:

Slump = 12 – inches of height after subsidence

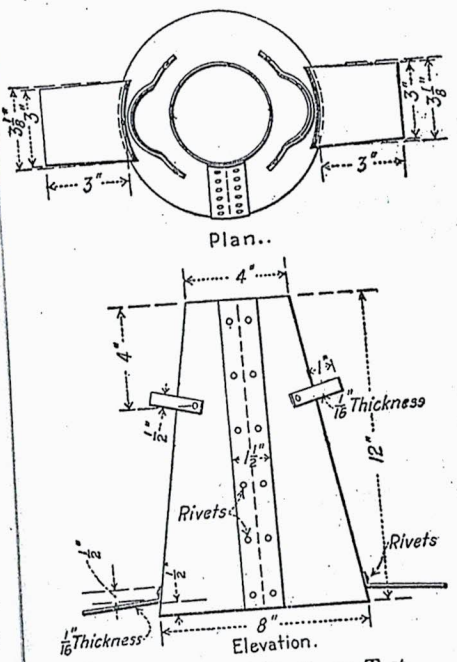

FIG. 1.—Mold for Slump Test.

[1] Under the standardization procedure of the Society, this method is under the jurisdiction of the ASTM Committee C-2 on Magnesium Oxychloride and Magnesium Oxysulfate Cements.

[2] Prior to adoption as standard, this method was pub-