

Tentative Methods of MEASURING DIMENSIONS OF RIGID RODS USED IN ELECTRICAL INSULATION¹



A.S.T.M. Designation: D 741 - 43 T

ISSUED, 1943.²

These Tentative Methods have been approved by the sponsoring committee and accepted by the Society in accordance with established procedures, for use pending adoption as standard. Suggestions for revisions should be addressed to the Society at 1916 Race St., Philadelphia 3, Pa.

Scope

1. These methods cover procedures for measuring the dimensions of all rigid rods used in electrical insulation, the limitations imposed being those of the size range of the more common forms of measuring instruments used in making the test.

Conditioning

2. In cases of disagreement between the seller and the purchaser because of dimensional changes resulting from changes in temperature and humidity, all specimens shall be conditioned for 48 hr. at 25 ± 1 C. and 50 ± 2 per cent relative humidity, and measured under these conditions. Measurements by both interested parties shall be made within a three-week period

Method of Measurement

3. All measurements shall be made in accordance with the procedures described in the Standard Methods of Test for Thickness of Solid Electrical Insulation

(A.S.T.M. Designation: D 374)³, as applicable. The micrometer or vernier calipers shall be closed slowly on the specimen until contact is made without appreciable distortion of the specimen. The criterion of contact is the initial development of frictional resistance to movement of the specimen between the micrometer or caliper surfaces.

Length of Rods 12 in. and Under in Length

4. (a) *Apparatus*.—A standard machinist's micrometer or vernier calipers of suitable size reading to 1 mil (0.001 in.) shall be used.

(b) *Test Specimens*.—Specimens shall consist of rods cut to lengths of 12 in. and under.

(c) *Procedure*.—The length of the specimen shall be measured to the nearest 0.001 in. Size permitting, four measurements shall be made at points 90 deg. apart around the circumference of the specimen.

(d) *Report*.—The average of the measurements taken shall be reported as the length of the rod.

¹ Under the standardization procedure of the Society, these methods are under the jurisdiction of the A.S.T.M. Committee D-9 on Electrical Insulating Materials.

² Accepted by Committee E-10 on Standards, August 30, 1943.

³ Appears in this publication, see Contents in Numeric Sequence of A.S.T.M. Designations at front of book.