

Tentative Methods of Test for

PLY ADHESION OF PAPER OR VULCANIZED FIBRE¹



A.S.T.M. Designation: D 825 - 46 T

ISSUED, 1945; REVISED, 1946.²

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 of test cover procedures for measuring the amount of bond or adhesion between the plies of a multiply paper, such as that made on a cylinder type of paper machine, or of vulcanized fibre up to and including 0.032 in. in thickness.

METHOD A. FOR PAPER

Apparatus

2. The apparatus shall consist of the following:

(a) *Testing Machine.*—The essential features of a satisfactory type of testing machine (Fig. 1) are as follows: The base of the testing machine, *A*, shall consist of a horizontal metal frame about 2 ft. in length and 6 in. in width, inside of which two jaw carriages, *B* and *C*, may be made to move horizontally in ball bearings. The two jaws, *D* and *E*, 3 in. in width set in the carriages 6 in. in length are such that they may approach and touch each

other. By means of a crank, *F*, attached by a reversed direction cord, *G*, to the left jaw carriage, *B*, the left jaw carriage may be slowly pulled away from the right jaw carriage. The right jaw carriage, *C*, is attached by a cord, *H*, to the periphery of a 6-in. diameter grooved face wheel, *J*. Pendulum weight arms, *K*, of definite mass and length are attached to the axle of this wheel. The axle turns in ball bearings. The circumference of the wheel bears a graduated scale ranging from 0 to 110 in 5-unit divisions. The frame of the testing machine is equipped with leveling glasses for the two principal directions and leveling screws at each end. Zero reading is indicated by a stationary pointer when the tester frame is level, the weight arms are freely hanging vertically, and the right jaw carriage is far to the right. As this carriage is moved to the left and the cord tension turns the wheel clockwise, an increasing force is indicated until, when the weight arms are about horizontal,^{2a} the maximum

¹ Under the standardization procedure of the Society, these methods are under the jurisdiction of the A.S.T.M. Committee D-6 on Paper and Paper Products.

² Revision accepted by the Society at annual meeting, June, 1946.

^{2a} Editorially corrected in January, 1947. The position of the weight arms formerly was incorrectly given as "vertical."