Standard Method of Test for

EDGE TEARING STRENGTH OF PAPER [1]

ASTM Designation: D 827 - 67 (Reapproved 1971)

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Scope

1. This method of test covers a procedure for determining the edge tearing strength of paper. A strip of paper of a specified size is simultaneously torn at opposite points at the edges of the strip by means of a thin V-notched beam held in a stirrup which is fastened in one of the clamps of a tension testing machine. The use of this test shall be limited to papers which will fold evenly over the V-notched beam.

Significance

2. The significance of the edge tear test is open to question, being a subject of controversy among paper technologists. Some experts familiar with paper handling equipment, which subjects the sheet to high stress on the edges feel the test correlates well with actual performance on such equipment while others believe that the internal tear resistance test is more significant. It may however be considered as having sufficient significance to justify it as a standard in evaluating paper suitability for certain conversion processes and end uses.

Apparatus

3. The apparatus shall consist of the following:

(*a*) *Edge Tear Stirrup.*—A Finch edge tear stirrup (Fig. 1) shall be used, attached to a suitable pendulum type tension testing machine. The edge tear stirrup consists of a thin steel plate which forms a horizontal beam supported on edge by the ends of a stirrup-shaped frame. The thin metal tang of the stirrup frame is fastened in the lower clamp of the tension testing machine so that the vertical center line of the stirrup coincides with the line connecting the mid-points of the upper and lower clamps. The horizontal beam is removable from the stirrup frame and two beams of different thicknesses are furnished for use with papers of different

[1] Under the standardization procedure of the Society this method is under the jurisdiction of the ASTM Committee D-6 on Paper and Paper Products

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