should be determined with comparison based on testing specimens randomly drawn from one sample of material of the type being evaluated.

NOTE 3—The kind of force transfer and strength that occur when knitted goods are worn is prevented by clamping them as directed in this test method.

5.2.1 If there are differences of practical significance between reported test results for two (or more) laboratories, comparative tests should be performed to determine if there is a statistical bias between them. The test samples used should be as homogeneous as possible, drawn from the material from which the disparate test results were obtained, and randomly assigned in equal numbers to the laboratories for testing. Other materials with established test values may be used for this purpose. The test results from the two laboratories should be compared using a statistical test for unpaired data at a probability level chosen prior to the testing series. If a bias is found, either the cause must be determined and corrected or future test results must be adjusted in consideration of known

6.2.1 The polished steel ball shall have a diameter of 25.400 ± 0.005 mm (1.0000 ± 0.0002 in.) and shall be spherical within 0.005 mm (0.0002 in.). The ring clamp shall have an internal diameter of 44.450 ± 0.025 mm (1.750 ± 0.001 in.).

7. Sampling

7.1 *Lot Sample*—Take a lot sample as directed in the applicable material specification. In the absence of such a specification, randomly select the rolls or pieces of fabric that constitute the lot sample using the following schedule:

Number of Rolls or Pieces in Lot, Inclusive	Number of Rolls or Pieces in Lot Sample
1 to 3	all
4 to 24	4
25 to 50	5
Over 50	10 % or a maximum of 10 of the rolls or pieces

7.2 *Laboratory Samples*—From each roll or piece of fabric selected from the lot sample, cut at least one laboratory sample

FIG. 2 Ball Burst Attachment

9. Conditioning

9.1 Bring the specimens (or laboratory samples) from the prevailing atmosphere to moisture equilibrium for testing textiles in the standard atmosphere for testing as prescribed in Practice D1776.

10. Procedure

10.1 Make all tests on samples conditioned in the standard atmosphere for testing as specified in 9.1.

10.2 Place the specimen without tension in the ring clamp and fasten securely by means of the screw or lever device. Start the CRT tensile testing machine, using a pulling clamp speed of 305 ± 13 mm/min (12 ± 0.5 in./min), and continue at that speed until the specimen bursts. Record to the nearest 0.5 N (0.1 lb) the ball-bursting strength of the specimen.

11. Calculation

11.1 Calculate the average bursting force to the nearest 0.5 N (0.1 lb) for each laboratory sample and for the lot.

12. Report

12.1 State that the specimens were tested as directed in ASTM Test Method D3787. Describe the material or product sampled, and the method of sampling used.

12.2 Report the bursting strength of each specimen and the average bursting strength of the five specimens from each laboratory sample to the nearest 0.1 lbf (0.5 N).

13. Precision and Bias[4]

13.1 *Interlaboratory Test Data*—an interlaboratory test was run in 1990 in which randomly drawn specimens of three fabrics were tested in each of four laboratories. The fabrics were circular knit, stabilized knit, and brushed knit fabrics. The components of variance for bursting strength results expressed as variance are reported in Table 1.

TABLE 1 Components of Variance for Bursting Strength Expressed as Variance

	Within Laboratory Component	Between Laboratory Component
Cotton Circular Knit	2.31	6.75
Brushed Warp Knit	0.76	5.22

NOTE 4—The difference in variability between the two groups of fabrics is attributed to the differences between the source yarns rather than the type of equipment on which the fabrics were knit. There is no objective evidence to support this supposition.

13.2 *Critical Differences*—For the components of variance reported in 13.1, two averages of observed values should be considered significantly different at the 95 % probability level if the difference equals or exceeds the critical differences listed in Table 2 (Note 5).

NOTE 5—The tabulated values of the critical differences should be considered to be a general statement particularly with respect to between-laboratory precision. Before a statement can be made about two specific laboratories, the amount of statistical bias, if any, between them must be established, with each comparison being based on recent data obtained on specimens randomly drawn from a sample taken at random from a lot of the material to be evaluated.

13.3 *Bias*—The procedure of this test method produces a test value that can be defined only in terms of a test method. There is no independent, referee method by which bias may be determined. This test method has no known bias.

[4] Supporting data have been filed at ASTM International Headquarters and may be obtained by requesting Research Report RR:D13-1086.

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