

Effect of Different Types of Washes on the Fabric Strength of Denim

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Abstract : Experimental Design (DOE) economically maximizes information; we deliberately change one or more process variables (looms) in order to observe the effect the changes have on one or more response fabric properties. In DOE obtained data can be analyzed to yield valid and objective conclusions. An Experimental Design is lying out of a detailed experimental plan in advance and maximizes the amount of "information" that can be obtained for a given amount of experimental. Fabric of 36 inches having following weaves was used. 3/1 twill, warp cotton (10.5 den), weft Lycra (16 spandex * 70 den) Ends per inch 86, Picks per inch 52 and washes process includes Stone wash, Rinse wash, Bleaching and Enzyme wash. Once the samples were ready, they were subjected to tensile and tear strength tests, for these two kinds of samples were considered. One washed fabric samples of warp direction type and other type of the samples was weft direction. Then five samples from each were considered for tensile and tear strength tests separately then takes the mean value. The results found that the lowest strength damaged in the weft direction observed by tensile strength test & Enzyme wash. Maximum breaking load of the enzyme washed fabric sample was 42 kg.

Keywords : twill, indigo dye, tear strength, loom, ball warp, denier or den, seam, waist band, pilling, selvage

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