Effect of Thread Type and Tension Control on Cotton Fabric Sewability

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Abstract:
Thread plays an important role in the apparel manufacturing process. When the thread is stronger than the material that it is being used to join and if seams are placed under stress the material may tear before the thread breaks. Garments are usually sewn with threads of lesser strength than the fabric so that if stressed the seam will break before the garment.
Tension control is also a very important element that is used to adjust how loose or tight sewing stitches are. Top thread and bobbin thread should be meeting between the two layers of fabric. If the top thread is not going into the fabric, the tension should be loosen; and vice versa, if the bobbin thread is not going into the fabric the tension should be tighten. Thread runs between various tension disks, and the amount of tension which is set by the regulator will determine how much pressure these disks put on the thread. In this study five different tensions are applied on four types of thread by using super imposed seam. These seams examined for thickness, stiffness, seam appearance, seam pucker, tensile strength and extensibility according to standards. Tests took place into conditioned atmosphere of 21ºC and 65% RH. Comparisons have been made among the five different tensions and the four different thread types this was done with reference to seamed lines' durability, efficiency and appearance.

Keywords:
Thread, spun thread, filament thread, tension control, sew ability