

Study of the Relationship between sewing and fabric Parameters and Seam Strength

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Abstract:

Seam performance plays a vital role in the quality of clothing products. Seam strength is one of the key parameter to seam performance. This study aimed at studying the effects of sewing parameters: thread count (59/2 dtex, 35/2 Nm and 20/2 Nm), sewing needle size (14, 16 and 18 of Singer system) and stitch density (3, 5 and 7 stitches/cm) as well as fabric characteristics: yarn count (10/1, 20/1 and 30/1 Ne) and weft density (20, 21 and 22 picks / cm). The results of Analysis of variance of the main findings of this study revealed that seam strength is significantly and positively affected by both sewing and fabric characteristics. A value of correlation coefficient 0.97 was obtained for regression lines between needle size and seam strength and a value 0.99 between sewing thread count and the seam strength.

Keywords:

Seam Strength
Clothing
Sewing Needle
Sewing Machine
Fabric Characteristics

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