

Seam Slippage of Light Woven Fabrics with Regards to Sewing Parameters

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Abstract : Seams are the basic component in the structure of any apparel. The seam quality of the garment is a term that indicates both the aesthetic and functional performance of the garment. Seam slippage is one of the important properties that determine garment performance. Lightweight fabrics are preferred for their aesthetic properties. Since seam slippage is one of the most occurable faults for woven garments, in this study, a design of experiment of the following sewing parameters (three levels of needle size, three levels of stitch density, three levels of the seam allowance, two levels of sewing thread count, and two fabric types) was used to obtain the effect of the interaction between different sewing parameters on-seam slippage force. Two lightweight polyester woven fabrics with different constructions were used with lock stitch 301 to perform this study. Regression equations which can predict seam slippage force in both warp and weft directions were concluded. It was found that fabric type has a significant positive effect on seam slippage force in the warp direction, while it has a significant negative effect on seam slippage force on weft direction. Also, the interaction between needle size and stitch density has a significant positive effect on seam slippage force on warp direction, while the interaction between stitch density and seam allowance has a negative effect on seam slippage force in the weft direction.

Keywords : needle size, regression equation, seam allowance, seam slippage, stitch density

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