

“Requirements for using satin fabrics in evening wear through studying the effect of stitch length.”

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Abstract:

Satin weave fabrics are commonly used in evening gowns, where a close fit is often required. However, issues such as fabric tearing and seam slippage have been observed, particularly when sitting, likely due to the horizontal expansion of the body in this position. This can exert stress on the fabric's weave structure or the stitching lines. Therefore, the aim of this study is to examine the strength of Atlas fabric (type 4) as well as the stitching performance relative to stitch length. The study reached the following conclusions: The strength of the Atlas fabric used is significantly higher than the strength of the various stitching lines; therefore, the likelihood of the fabric tearing along the stitching lines is unlikely. The strength of a stitching line with a stitch length of 3 mm is higher than that of a stitch with a length of 5 mm, whether in the warp or weft direction. Furthermore, the work required to cut a stitching line with a 3 mm stitch length is higher than that for a 5 mm stitch length, whether in the warp or weft direction.

Statement of the Problem: Satin weave fabrics have been used widely for evening and wedding gowns, due to its shiny appearance. However, problems such as fabric tearing and seam slippage have been noticed, especially while sitting or sudden body movements, remained problems facing the consumer and requires studying it and trying to find solutions to avoid it.

Objectives: This research aims to achieve the following: - To study the properties of satin fabrics. -To study the reasons for seam slippage in satin fabrics when sitting and moving.
- To study the seam performance in relation to the stitch length. - To establish recommendations to avoid the seam slippage in satin fabrics

Significance: Importance of the research: Studying the problem of fabric tearing and seam slippage of satin fabrics, which appear frequently in evening gowns that require close fit

Methodology: Descriptive analytical method and Experimental method

Paper History:

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