World Academy of Science, Engineering and Technology
International Journal of Materials and Textile Engineering
Vol:12, No:07, 2018

Eli-Twist Spun Yarn: An Alternative to Conventional Sewing Thread

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Abstract : Sewing thread plays an important role in the transformation of a two-dimensional fabric into a three-dimensional garment. The interaction of the sewing thread with the fabric at the seam not only influences the appearance of a garment but also its performance. Careful selection of sewing thread and associated parameters can only help in improvement. Over the years, ring spinning has been dominating the yarn market. In the pursuit of improvement to challenge its dominance alternative technology has also been developed. But no real challenge has been posed by the any of the developed spinning systems. Eli-Twist spinning system can be a new method of yarn manufacture to provide a product with improved mechanical and physical properties with respect to the conventional ring spun yarn. The system, patented by Suessen has gained considerable attention in the recent times. The process of produces a two-ply compact yarn with improved fiber utilization. It produces a novel structure combining all advantages of condensing and doubling. In the present study, sewing threads of three different counts each from cotton, polyester and polyester/cotton (50/50) blend were produced on a ring and Eli-Twist systems. A twist multiplier of 4.2 was used to produce all the yarns. A comparison of hairiness, tensile strength and coefficient of friction with conventional ring yarn was made. Eli-Twist yarn has shown better frictional characteristics, better tensile strength and less hairiness. The performance of the Eli-Twist sewing thread has also been found to be better than the conventional 2-ply sewing thread. The performance was estimated through seam strength, seam elongation and seam efficiency of sewn fabric. Eli-Twist sewing thread has shown less friction, less hairiness, and higher tensile strength. Eli-Twist sewing thread resulted in better seam characteristics in comparison to conventional 2-ply sewing thread.

Keywords : ring spun yarn, Eli-Twist yarn, sewing thread, seam strength, seam elongation, seam efficiency
Conference Title : ICTTM 2018 : International Conference on Textile Technology and Materials
Conference Location : Paris, France
Conference Dates : July 19-20, 2018

Open Science Index, Materials and Textile Engineering Vol:12, No:07, 2018 publications.waset.org/abstracts/84534/pdf