



Textile Research Journal

Volume 81
Issue 9
June 2011

<http://trj.sagepub.com>

 SAGE Publications

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Introduction

Denim apparel plays an important role in the fashion and textile industry. Denim jeans provide durability and a highly worn look for fashionable appearance which is the reason why denim jeans are welcomed by mass people all over the world. Different washing processes and effects contribute further to enhance the appeal of denim fabrics but washing effects cannot be tailored solely on the basis of the treatment technique. More parameters also need to be considered. The degree of twist or torque in the yarn affects the final fabric properties. Low twisting is residual torque of a relaxed yarn. In the short processes and fundamental factor contributing to fabric shrinkage and surface unevenness of denim fabric. Traditional methods for reducing yarn twist involve gradual torque by two plying but these methods are too expensive

Recently, a torque-free spinning technique was developed for producing low twist yarn in a ring spinning system. The technique proposed a yarn torque reduction device on the conventional ring spinning system, by which yarn torque is reduced and yarn twist is reduced to a great extent, without affecting the strength. When weaving yarn was made by torque-free ring spun yarn, the yarn possess similar yarn tenacity, elongation and weakness to conventional ring spun yarn. In addition, the mechanical properties of denim fabric produced by this torque-free spinning

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