# <<纺织英语>>

## 图书基本信息

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## 内容概要

本书包括纺织原料、纱线生产、织物生产、织物染整和织物检验等内容，同时还涉及非织造布、高性能纤维、纺织复合材料、服装等内容。

本书每篇课文后均附有生词表、课文注释以及为理解课文内容而设置的问题。书后附有总单词表，在本书附带的光盘中提供了单词的正确发音，以及纺织生产工艺的录像资料。通过学习本书，可以掌握纺织领域常用的英语词汇以及基本的纺织英语资料翻译技巧。

本书是为高等院校纺织工程专业学生编写的也可供具有一定英语基础并且对纺织生产感兴趣的人员学习使用。

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## 书籍目录

## 章节摘录

Lesson Nineteen Stretch Yarns and Fabrics The word stretch has acquired a specific meaning in modern textile terminology.A true stretch fabric has the ability to extend or stretch under tension plus the equally important capacity to return to its original size after release of strain. The degree of potential stretch,sometimes referred to as elon~tion, varies from as little as 5 percent to as much as 500 percent. Stretch has been introduced through the use of elastomeric fibers, especially rubber. Fine filaments of rubber were covered with cotton, rayon, or silk, and then woven, knitted, or braided into fabrics. Usually these were combined with other yarns. Narrow elastic fabric is a typical example of early stretch fabrics using fiber stretch. Rubber core yarns were early examples of stretch made through the use of elastomeric fibers. Since the introduction of synthetic elastomeric fibers, rubber has been replaced by spandex in a large percentage of fabric constructions. Spandex owes its stretch ability to its chemical molecular configuration, not to a mechanically imparted property. Spandex fibers can be used in several ways in stretch fabrics. Uncovered or bare spandex filaments are combined with other fibers into yarns that are then constructed into fabrics for such end uses as foundation garments, swimsuits, and surgical supplies such as special types of hosiery and bandages. Bare spandex may be used in comfort stretch, but this is less common than for uses where a high amount of stretch is required or desired. Spandex fibers may be used in core-spun yams, where the spandex provides the central core, and these yams may be used in a wide variety of fabrics, especially where comfort stretch is desired. In core spinning the tension under which the elastomeric filament is held is carefully controlled. The resulting yam has variable degrees of stretch, depending on the controls used. Core-spun yams have two significant advantages: only 3 to 10 percent spandex is required to produce a high-quality stretch yarn, and the yam has the appearance of the covering fiber and, depending on what covering fiber is used, may have good moisture shsorbency. Core spinning makes it possible to control the amount of stretch that is to be built in-from as low as 10 percent to as much as 200 percent. The majority of core-spun stret曲yarns are used in comfort-stret thproducts and do not exceed 30 percent stretch at standard stress loads. The care of core-spun yams is basicaljy the same as that required for the covering fibers. Spandex fibers may be used also in intimate blend spuuung. This procedure involves the cutting of spandex filaments into staple lengths to match the length of the fibers with which it is to be blended. These are then spun to producea true blended fiber yam. The amount of stretch for such yarn depends upon the amount of spandex fiber used. Yam stretch can be introduced by texturizing processes. Such yams are heat-set in such a manner that extensibility is built in. The current methods used for producing stretch yarns through texturizing include the false-twist method and the knife-edge method. It is possible to produce stretch yams using the stuffer-box method, but this is not a common procedure.

Texturization as a means of producing stretch is primarily confined to filament fiber yarns; however, it is possible to build yarn stretch into staple yarns. In the late 1960s, attemnts were made to create stretch yams from such fibers as cotton using processes called back twisting and crimping. Although these have not experienced wide spread acceptance, they are mentioned here as background knowledge. In the back-twisting method, cotton yam is treated with a cellulose cross-linking resin, which is used in making durable-press or minimum-care fabrics. The yarn is twisted, the twist is cured into the yam, and the yarn is then untwisted and retwisted in the opposite direction. The resulting yarns are kinky and springy and have good stretch properties. The crimping process involves treating the cotton with some chemical that reacts with the cellulose to form a cellulose ester or ether that is thermoplastic. The modified cotton is then processed by one of the texturizing methods used for thermoplastic fibers. The.most common method for introducing stretch in the fabric construction stage is knitting.

Other fabric construction processes that may provide some type of stretch include braiding and knotting The process ofimparting stretch to a fabric after it has been constructed is caLled by such names as piece-goods stretch, mechanical stretch, and chemical stretch. The first of these is probably the most logical. The actual finishing procedure involves the use of chemicals and results in some chemical change, so, theoretically, the term chemical is appropriate. For some procedures a physical or mechanical change takes place. Because both chemical and mechanical changes may occur, it appears to be reasonable to select the term piece-goods stretch, which indicates

when the stretch is imparted and does not try to identify the specific method. As the phrase indicates, stretch is introduced into the fabric after it has been constructed (weaving is the most common structure adapted to this process). Cotton, cotton blends and wool fabrics have been treated in this manner. The procedure used on cotton and cotton blends is called slack mercerization. For wool, special processes have been developed but are not widely used. Slack merceruation utilizes the same principle as those applied in standard yam or fabric mercerization, except that the fabric is not held under tension, hence the term slack mercerization. For horizontal or filling stretch, the fabric is held under lengthwise tension, or if no tension is used at this step, the fabric is restretched and set for length at a later time. If both horizontal and lengthwise stretch is desired, the fabric is treated without tension for the entire process. ……

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