

Spinning



Spinning is the set of operations that transforms a raw fiber into yarn. The yarn is a set of filaments con

The staple fibers can be present (wool, cotton, flax, hemp, etc. ..) or continuous filament (silk and synthetic fibers), spinning can be performed on:

Short staple fiber

Staple fiber medium

Long staple fiber

Continuous filament fiber

It should also be noted that synthetic fibers can also be cut and made into staple. The purpose of this operation is that they are working together with other fibers such as unlimited length. The phases change depending on the type of fiber departure, in particular on the basis of fiber length. To transform a mass of fibers in a yarn twisting operation is essential. The yarn is a product derived from the combination of a large amount of textile fibers, which generally has characteristics of softness unlike the wire is thin, virtually unlimited in length, consisting of one or more filaments of silk or synthetic fibers or artificial, spun into continuous yarn against, it is usually a section more even, smooth, hard, brilliant, but less soft and less thermal insulation.

Spinning involves the following steps:

Preparation

Cleaning and dusting with compressed air in particular specific machines. Mix: mixing of fibers from different bales or other materials.

Carding

It aims to orient the fibers in one direction (parallel), using special machines called carding. The carding machine consists of large rotating cylinders (drum and doffer) equipped with metal teeth of appropriate gauge and number, registered to each other a few hundredths of a millimeter (40 to 15 gradually) from subsidiary bodies carding (workers and Voltigeurs) and other subsidiary bodies (steering wheel, above the wheel, under wheel, revenue, rouletabosse); fibers pass through these two moving surfaces fitted with spikes, to be disentangled and oriented, be reduced by up to step in step in a veil of fibers parallelized, which is transformed into a carded sliver (flat) and then wick (cylindrical) in the latter part of the machine called "divisor".

Combing

It aims to increase the homogeneity and the parallelization of the fibers, discarding the shortest. This step is only used for fine yarns.

Drawe Frame

The operation of the board is to pull the tape. The tapes are carded irregular operation is preceded by the overlapping of several tapes on top of each other, because, carding tapes themselves are uneven: a different, overlapping them so you can compensate for defects. copulate normally 4 to 6 strips which are stretched 4 or 6 times until they become smooth. Eg. I took 4 tapes titled 1 are stacked from this transaction would result in a Title 4, but with the subsequent stretching back to a title is equal to 1 but with a uniform ribbon.

Spinning

The wick is not very durable, tough and spun to obtain a homogeneous, thus further thinned by half twist to the so-called "roving". The wick coming from the "roving" then undergoes final twisting and winding on spools or coils (winding) in the spinning machines that can be intermittent (selfacting) or continuous (for fins or rings).

Winders

The spindles of yarn produced by spinning ring (ring spinning) are performed by a winding machine and rewound in the form of rock that is usually cone-shaped and weigh between 900 grams to 3000 grams.

Can follow the Doubling , where two wires are assembled (doubling) and Twisting , where they are assembled more pairs of wires.

Titling textiles

The title indicates the fineness of a yarn of the same. They used many ways to measure the title, now the most widely used is the metric count Nm, which indicates the number of miles of wire you get with a kilogram of fiber. 33 nm so that means 33000 meters of wire have the weight of one kilogram is still often used as "33 / 1" indicates that a single wire entitled Nm 33. The phrase "33 / 2" for example, indicates a rather twisted wire to two ends of two wires made from 33 Nm.