

ALIEN PROPERTY CUSTODIAN

INCREASING THE ELASTICITY OF TEXTILE FIBRES

Walter Voigt, Saalfeld/Saale, Germany; vested in the Alien Property Custodian

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The present invention relates to a method of increasing the elasticity of textile fibres.

As is well known, the usability of a fibre is dependent not only on its resistance to tearing, but to a high degree also on its elasticity properties. Consequently efforts are made to produce fibres having besides a high tensile strength also a sufficient elasticity.

Hitherto the ways chosen to obtain the object aimed at exclusively were in the line of the spinning technics. So for instance it has been tried to obtain fibres with the desired properties by suitable combinations of the spinning conditions, whereby, however, it was found that the spinning measures, allowing to obtain a larger elasticity, in most cases also cause a reduction of the tensile strength.

Now, according to the present invention the elasticity properties of artificial fibres may, without depriving the fibres of their resistance to tearing, be increased by passing the fibres in a wet state, preferably in the form of a ribbon, between strongly squeezing rolls of soft rubber.

It is well known that two strongly squeezing rubber rolls do not contact along a line, but along a squeezing surface which is the larger, the larger the pressure is with which the two rolls are forced against each other. The circumferential speed of these rotating rubber rolls is not uniform at

all points of the circumference, but is first reduced along the squeezing surface and is then again raised to its original value. The reduction occurs at the beginning of the squeezing surface, i.e. from the beginning of the contact of the two rolls and extends as far as to the middle, i.e. the point of highest pressure. The increase occurs from this point and extends to the end of the squeezing surface, i.e. to the end of contact.

In accordance with the above explanations, the fibre bundle on its way from the beginning as far as to the middle of the squeezing surface is first compressed and is then lengthened from this point to the end of the squeezing surface. Both processes, compressing and lengthening, act in the longitudinal axis of the fibres and thereby increase the elasticity of the fibres. So for instance freshly spun viscose threads in the form of a ribbon were rendered substantially more elastic by this treatment without considerably reducing the tensile strength. By once passing the fibre bundle through a pair of squeezing rolls the elasticity of the fibres was increased in the dry state from 8 to 12% and in the wet state from 11 to 16%. The effect may still be increased by repeatedly passing the ribbon of fibres through the squeezing rolls.

WALTER VOIGT.