

Title (en)
Method and device for treating tubular knitwear

Title (de)
Verfahren und Vorrichtung zum Behandeln schlauchförmiger Maschenware

Title (fr)
Procédé et dispositif pour le traitement de tricot tubulaires

Publication
EP 0953667 A2 19991103 (DE)

Application
EP 99106975 A 19990409

Priority
• DE 19819051 A 19980429
• DE 19912754 A 19990322

Abstract (en)
Tubular knitted fabric, with an elastomer and natural fiber content, is relaxed while spread out into a tube. It is heated below the softening temp. of the elastomer and moved through at an initial speed. It is then fixed longitudinally and laterally at a different speed at a temp. which softens the elastomer fibers. The fabric is cooled at a temp. below the softening point of the elastomer. The speed of fabric movement during fixing is faster than the first speed. The fabric is fixed with simultaneous stretching of the material across the dia. and along its length within a thermal fixing chamber using a circular spreader. The fabric is drawn out of the chamber at the second speed level by a rotating roller assembly. The relaxation temp. is 80-110 degrees C. The thermal fixing temperature is ≥ 200 degrees C while the material is moved at a speed of ≥ 18 m/min. The fixing temp. is ≤ 200 degrees C at a fabric movement speed of ≤ 18 m/min. The heat is delivered by a high temperature medium, and the cooling is through a low temperature medium. The heating during relaxation is preferably through high temperature steam. The fabric, held out by a circular spreader, is at least affected for its length during the relaxation phase. The circular spreader is within the relaxation and/or thermal fixing chamber. The fabric length is affected by rotating roller assemblies upstream and downstream of the circular spreader. The speeds of the roller assemblies are set independently of each other. An Independent claim is included for an assembly with a relaxation chamber (7) fitted with an inlet (6) and outlet (13) opening, and a heater (12). The circular spreader (9) in the relaxation chamber (7) is flanked by upstream and downstream rotating roller units (5,15). A thermal fixing chamber (18), separated from the relaxation chamber (7), has an inlet (21) and outlet (22) opening and has a circular spreader (19) occupying most of it, flanked by upstream and downstream rotating roller assemblies (16,35). A heating unit (24) generates a high temp. medium, to be blown into the chamber (18) by a fan (28). A cooling chamber is after the outlet opening (22), with the circular spreader (19) extending at least partially into the cooling chamber.

Abstract (de)
Die Erfindung betrifft ein Verfahren und eine Vorrichtung zum Behandeln elastomerhaltiger Maschenware (2). Bisher bestand das Problem, dass schlauchförmige Maschenware (2) nicht effektiv fixiert werden konnte. Um dieses Problem zu lösen, sieht die Erfindung vor, dass die Maschenware (2) kontinuierlich einem Thermofixierprozess zugeführt wird und dabei die Maschenware (2) durch geeignete Einrichtungen und Mittel (16, 18, 19, 21, 22, 24, 28, 35) in ihrer Länge und Breite gedehnt wird, wobei die Temperatur in der Thermofixierkammer (18) über 200 °C und die Transportgeschwindigkeit der schlauchförmigen Maschenware (2) größer als 18 m/min ist. <IMAGE>

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