Title (en)

Spiral fabric with low air permeability and process for making the same.

Title (de)

Spiralgliederband niedriger Luftdurchlässigkeit und Verfahren zu seiner Herstellung.

Title (fr)

Tissu à hélices ayant une faible perméabilité et son procédé de fabrication.

Publication

EP 0666366 A1 19950809 (DE)

Application

EP 95101482 A 19950203

Priority

DE 4403501 A 19940204

Abstract (en)

A linked strip comprises many interlocking synthetic spirals (10) where each winding has a flat shank (12) and a sharp bend (11). The bends of one spiral interlock like a zip with the bends (11', 11") of neighbouring spirals to form channels for securing wires (14) so to connect the spirals. Here, flat wires (15) in the spirals for reduction of linked strip air permeability are tilted w.r.t. the strip plane. A process for strip prodn. entails inter-positioning the spiral windings (11) to overlap, insertion of the securing wires (14) in the channels so formed transverse to the strip path, and insertion of the flat wires (15) into the spirals. Here, it is just after this sequence that the linked strip is thermally locked. The flat wire (15) in the spiral (10) interior is wider than the smallest distance between the two adjacent spirals, runs above one and under the other spiral securing wire (14), is clamped between the spiral inner surface and the outer surfaces of the two adjacent spirals and tapers to a point along its lengthwise edge where the edge angle is less than the wire tilt. The spirals can be formed in the cross-sectional shape of a parallelogram with different diagonals where the securing wires (14) are laid in the angles of the longer diagonal and the flat wires (15) in those of the shorter. The flat wires shrink in their longitudinal direction and expand transversely when thermal fixing occurs and so are inserted with an extra length so that after thermal fixing their length coincides with the breadth of the spiral linked ribbon.

Abstract (de)

Das Spiralgliederband weist eine Vielzahl miteinander verbundener Kunststoff-Spiralen (10) auf, die reißverschlußartig mit benachbarten Spiralen (10',10") ineinandergreifen, wobei die sich überlappenden Windungsbögen (11,11',11") einen Kanal bilden, sowie Steckdrähte (14), die durch diese Kanäle verlaufen und dadurch die Spiralen (10,10',10") verbinden, und Flachdrähte (15) in den Spiralen (10) zur Verringerung der Luftdurchlässigkeit des Spiralgliederbandes. Die Flachdrähte (15) sind gegenüber der Ebene des Spiralgliederbandes gekippt. Der innerhalb einer Spirale (10) verlaufende Flachdraht (15) kann breiter sein als der kleinste Abstand der beiden mit dieser Spirale (10) verbunden Spiralen (10', 10"). Bei der Herstellung wird das Spiralgliederband erst nach dem Einlegen des Flachdrahtes (15) thermofixiert. <IMAGE>

IPC 1-7

D21F 1/00

IPC 8 full level

D21F 1/00 (2006.01)

CPC (source: EP US)

D21F 1/0072 (2013.01 - EP US); Y10S 162/90 (2013.01 - EP US); Y10S 162/902 (2013.01 - EP US); Y10T 428/249922 (2015.04 - EP US); Y10T 428/249923 (2015.04 - EP US)

Citation (applicant)

- EP 0050374 A1 19820428 - SITEG SIEBTECH GMBH [DE]
- EP 0101575 A2 19840229 - SITEG SIEBTECH GMBH [DE]
- US 4381612 A 19830503 - SHANK SAMUEL E

Citation (search report)

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