

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 B1 19971022 (DE)**

Application  
**EP 95101482 A 19950203**

Priority  
DE 4403501 A 19940204

Abstract (en)  
[origin: EP0666366A1] 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.

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)

Cited by  
US9085852B2; WO2014159378A1; US10689796B2; US10689807B2; US11619001B2; WO2014159400A1; WO2013004474A1; WO2008122471A1

Designated contracting state (EPC)  
AT BE CH DE ES FR GB IT LI NL SE

DOCDB simple family (publication)  
**EP 0666366 A1 19950809; EP 0666366 B1 19971022**; AT E159555 T1 19971115; BR 9500435 A 19951017; CA 2141706 A1 19950805; CA 2141706 C 19981124; DE 4403501 A1 19950810; DE 59500817 D1 19971127; FI 105938 B 20001031; FI 950500 A0 19950203; FI 950500 A 19950805; US 5514456 A 19960507

DOCDB simple family (application)  
**EP 95101482 A 19950203**; AT 95101482 T 19950203; BR 9500435 A 19950203; CA 2141706 A 19950202; DE 4403501 A 19940204; DE 59500817 T 19950203; FI 950500 A 19950203; US 38343395 A 19950203