

Title (en)

METHODS OF MAKING STRETCHED FILTERING MEMBRANES AND MEMBRANE MODULES

Title (de)

VERFAHREN ZUM HERSTELLEN VON GESTRECKTEN FILTRATIONSMEMBRANEN UND MEMBRANMODULEN

Title (fr)

PROCEDE DE FABRICATION DE MEMBRANES FILTRANTES ALLONGEES ET MODULES A MEMBRANES

Publication

EP 1453594 A1 20040908 (EN)

Application

EP 02782579 A 20021209

Priority

- CA 0201881 W 20021209
- CA 2365817 A 20011221
- US 33867601 P 20011211

Abstract (en)

[origin: WO03053553A1] A method for stretching a hollow fibre while making a stretched filtering membrane from a precursor involves wrapping the hollow fibre around a structure and modifying the structure such that at least portions of the hollow fibre are forced to elongated. For example, the hollow fibre may be wrapped around two or more supports and the distance between adjacent supports increased. This produces first portions of the hollow fibre stretched to a first elongation and porous to a first porosity and second portions of the hollow fibre that are not stretched or are stretched to a second elongation less than the first elongation and that remain non-porous or become porous to a second porosity which is less than the first porosity. The membrane may be made into a module with second portions of the membranes located at points where the membranes exit the potting material or at turns in loops of the fibres, if any. In various embodiments, the fibre is potted into modules before or after it is stretched. Some methods of potting involve applying a hot melt adhesive to the second portions. Some embodiments are made entirely of thermoplastic material and can be easily recycled.

IPC 1-7

B01D 67/00; **B01D 69/08**; **D01D 5/24**; **B29C 55/00**; **B01D 69/02**; **B29C 55/08**

IPC 8 full level

B01D 63/02 (2006.01); **B01D 67/00** (2006.01); **B01D 69/02** (2006.01); **B01D 69/08** (2006.01); **B29C 55/06** (2006.01); **D01D 5/24** (2006.01)

CPC (source: EP US)

B01D 63/022 (2013.01 - EP US); **B01D 63/0233** (2022.08 - EP US); **B01D 63/024** (2013.01 - EP US); **B01D 67/0027** (2013.01 - EP); **B01D 69/02** (2013.01 - EP); **B01D 69/08** (2013.01 - EP); **B29C 55/06** (2013.01 - EP); **D01D 5/24** (2013.01 - EP); **B01D 2323/50** (2013.01 - EP); **B29K 2105/04** (2013.01 - EP)

Citation (examination)

- US 5470659 A 19951128 - BAUMGART RUDOLF [DE], et al
- EP 0116155 A2 19840822 - AKZO GMBH [DE]
- JP H05220357 A 19930831 - SANKI ENG CO LTD
- See also references of WO 03053553A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SI SK TR

DOCDB simple family (publication)

WO 03053553 A1 20030703; AU 2002347161 A1 20030709; EP 1453594 A1 20040908

DOCDB simple family (application)

CA 0201881 W 20021209; AU 2002347161 A 20021209; EP 02782579 A 20021209