

Title (en)

An apparatus, process and an array of nozzles for extruding cellulose fibers

Title (de)

Apparatur, Verfahren und Düsenanordnung zur Extrusion von Cellulosefasern

Title (fr)

Un appareil, procédé et réseau de buses pour extruder des fibres de cellulose

Publication

**EP 2108719 A1 20091014 (EN)**

Application

**EP 09005315 A 20090414**

Priority

- US 8250208 A 20080411
- US 8250308 A 20080411
- US 8250408 A 20080411

Abstract (en)

An apparatus is disclosed for extruding cellulose fibers. The apparatus includes a first member, a second member and a third member all secured together. Multiple nozzles extend outward from the first member and each is designed to direct an aqueous cellulose solution therethrough. As the aqueous solution is extruded, it is accentuated and accelerated by pressurized gas flowing through the first member and the second member and out through first openings formed in the third member. The pressurized gas at least partially surrounds each nozzle and shelters the molten filaments extruded therefrom. The third member also has multiple second openings formed therethrough which are also connected to a source of pressurized gas. The pressurized gas streams exiting each of the second openings function to keep each of the molten filaments from contacting an adjacent molten filament.

IPC 8 full level

**D01D 4/02** (2006.01); **D01D 5/06** (2006.01); **D01D 5/12** (2006.01); **D04H 3/00** (2006.01)

CPC (source: EP)

**D01D 4/025** (2013.01); **D01D 5/14** (2013.01); **D01F 2/00** (2013.01)

Citation (applicant)

- US 5409532 A 19950425 - ASTEGGER STEPHAN [AT], et al
- US 4246221 A 19810120 - MCCORSLEY III CLARENCE C
- US 5330567 A 19940719 - ZIKELI STEFAN [AT], et al
- US 5534113 A 19960709 - QUIGLEY MICHAEL C [GB], et al
- US 6306334 B1 20011023 - LUO MENGKUI [US], et al

Citation (search report)

- [X] WO 2005106085 A1 20051110 - BIAx FIBERFILM CORP [US], et al
- [A] US 6197230 B1 20010306 - PIERRE MICHEL [FR], et al
- [A] US 5476616 A 19951219 - SCHWARZ ECKHARD C A [US]

Cited by

CN103882535A; CN111607829A; WO2017103314A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

**EP 2108719 A1 20091014**; **EP 2108719 B1 20120620**; DK 2108719 T3 20121001; ES 2387729 T3 20121001; PL 2108719 T3 20121130; PT 2108719 E 20120809

DOCDB simple family (application)

**EP 09005315 A 20090414**; DK 09005315 T 20090414; ES 09005315 T 20090414; PL 09005315 T 20090414; PT 09005315 T 20090414