

Title (en)

Process and apparatus for the meltspinning of filament yarns

Title (de)

Verfahren und Vorrichtung zur Herstellung von Filamentgarne mittels Schmelzspinnen

Title (fr)

Procédé et dispositif pour le filage au fondu de fils

Publication

EP 1762644 A1 20070314 (DE)

Application

EP 06018300 A 20060901

Priority

DE 102005042634 A 20050907

Abstract (en)

After emerging from the spinneret, the filaments are cooled by a flow of air in the blowing section (10) and then proceed through the chimney (12B) to the wind-up. The walls (26, 28) of the chimney converge towards the exit. A section (32) is porous e.g. less than 50 % in length and having a porosity of 20 to 40 %, to allow air to escape. With a rectangular chimney only one wall need be porous and additional controlled suction can be provided to assist the flow. Independent claims are included for the following: (1) A chimney in which the access doors have a porosity of less than 20 %, preferably 4 to 8 %; (2) A melt spinning process using such a chimney in which the boundary layer on the inner chimney walls is maintained without interruption along its whole length; (3) A melt spinning process of this kind in which some air can escape from the chimney prior to the exit.

IPC 8 full level

D01D 5/092 (2006.01)

CPC (source: EP KR)

D01D 5/08 (2013.01 - KR); **D01D 5/088** (2013.01 - KR); **D01D 5/092** (2013.01 - EP KR)

Citation (applicant)

- DE 4104404 A1 19910829 - BARMAG BARMER MASCHF [DE]
- DE 19514866 A1 19951109 - BARMAG BARMER MASCHF [DE]
- EP 1173634 B1 20040602 - ZIMMER AG [DE]
- DE 10323532 A1 20041209 - SAURER GMBH & CO KG [DE]
- EP 1173634 A1 20020123 - ZIMMER AG [DE]
- "SYNTHETISCHE FASERN", CARL HANSER VERLAG, pages: 273 - 455
- "ZEITSCHRIFT CHEMIEFA- SERN/TEXTILINDUSTRIE", April 1978, article "Fadenkühlung beim Schmelzspinnen", pages: 315 - 323
- "CHEMIEFASERN/TEXTILINDUSTRIE", June 1987, article "Blasschächte - Stand der Technik", pages: 542 - 550
- "TECHNISCHE STRÖMUNGSLEHRE", vol. I, 1988, SPRINGER VERLAG, pages: 127

Citation (search report)

- [X] JP 2004323989 A 20041118 - TORAY INDUSTRIES
- [X] EP 0456496 A2 19911113 - HOECHST CELANESE CORP [US]
- [X] GB 1034166 A 19660629 - DU PONT

Designated contracting state (EPC)

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

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

EP 1762644 A1 20070314; **EP 1762644 B1 20110518**; AT E510050 T1 20110615; CN 1928168 A 20070314; DE 102005042634 A1 20070308; KR 20070028257 A 20070312; WO 2007028269 A1 20070315

DOCDB simple family (application)

EP 06018300 A 20060901; AT 06018300 T 20060901; CH 2006000479 W 20060907; CN 200610128182 A 20060906; DE 102005042634 A 20050907; KR 20060085971 A 20060907