

Title (en)

CONTINUOUS PROCESS FOR THE MANUFACTURE OF POLYACRYLONITRILE FIBRES AND YARNS

Publication

**EP 0119521 B2 19921014 (DE)**

Application

**EP 84102121 A 19840229**

Priority

DE 3308657 A 19830311

Abstract (en)

[origin: US4622195A] Polyacrylonitrile filaments and fibers may be obtained without interruption by spinning the spinning solution into a hot-air spinning duct, washing, drawing, crimping, preparing, steaming, drying cooling and, optionally, cutting at a take-off rate kept at 150 to 400 m/minute and for a tow weight of from 10 to 100 g/m when (a) the washing process is carried out in several stages on the countercurrent principle and a vibrating duct is used for transporting the spun tow through the washing process, (b) drawing is carried out before and/or after washing in a steam atmosphere at 100 DEG to 120 DEG C., (c) crimping is carried out in an aerodynamic crimping unit using a hot, gaseous medium under a pressure of from 5 to 16 bars and at a temperature in the range from 50 DEG to 210 DEG C., (d) the preparation is continuously applied to the tow before, during or after crimping, (e) for steaming, the tow is transported through a steaming apparatus in folded form and in the absence of tension on a vibrating duct and, at the same time, treated with steam at 100 DEG to 120 DEG C., (f) finally, the tow is dried in folded form on a belt dryer using hot air at 60 DEG to 180 DEG C., subsequently cooled with cold air to temperatures below 50 DEG C. and, optionally, delivered to a cutting machine.

IPC 1-7

**D01F 6/18**; D01D 5/04; D02G 1/16

IPC 8 full level

**D01D 5/04** (2006.01); **D01F 6/18** (2006.01); **D01F 6/38** (2006.01); **D02G 1/12** (2006.01); **D02G 1/16** (2006.01); **D02J 1/00** (2006.01)

CPC (source: EP US)

**D01F 6/18** (2013.01 - EP US); **D02G 1/122** (2013.01 - EP US)

Cited by

DE3832872A1; EP0624666A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**EP 0119521 A2 19840926**; **EP 0119521 A3 19870610**; **EP 0119521 B1 19890125**; **EP 0119521 B2 19921014**; DE 3308657 A1 19840920; DE 3476429 D1 19890302; JP S59168117 A 19840921; JP S6256242 B2 19871125; US 4622195 A 19861111

DOCDB simple family (application)

**EP 84102121 A 19840229**; DE 3308657 A 19830311; DE 3476429 T 19840229; JP 4417484 A 19840309; US 58657884 A 19840306