Title (en)

PROCESS FOR DIMENSIONALLY STABLE POLYESTER YARN

Publication

EP 0452405 B1 19920916 (EN)

Application

EP 90902093 A 19891117

Priority

US 29286489 A 19890103

Abstract (en)

[origin: WO9007592A1] The invention is directed to a process for production of a dimensionally stable drawn polyethylene terephthalate multifilament yarn having filaments of at least 2.5 denier per filament comprising the steps of: a) extruding a polyethylene terephthalate polymer melt through a spinnerette having a plurality of extrusion orifices to form filaments; b) advancing the extruded multifilament yarn first through a delay zone then through a quenching zone to solidify the filaments in a controlled manner; c) withdrawing the solidified multifilament yarn from the quenching zone at a desired spinning speed V; whereby steps a) through c) are performed under conditions to form a partially-oriented multifilament yarn having an undrawn birefringence (DELTA nu) of at least 0.020 and wherein DELTA nu = Rf V<2.0> IV<2.4> where IV is the intrinsic viscosity of the undrawn yarn and is at least 0.80 and Rf is at least 9.0 x 10<-3>; then d) hot drawing the partially-oriented multifilament yarn. The process permits production of high undrawn birefringence yarns at lower speeds and lower IV's than previously demonstrated in the prior art.

IPC 1-7

D01D 5/08; D01F 6/62

IPC 8 full level

D01F 6/62 (2006.01)

CPC (source: EP KR)

D01D 5/08 (2013.01 - KR); **D01F 6/62** (2013.01 - EP KR)

Designated contracting state (EPC)

CH DE ES FR GB IT LI NL

DOCDB simple family (publication)

WO 9007592 A1 19900712; AU 4969690 A 19900801; AU 635241 B2 19930318; BR 8907870 A 19911022; CA 2004942 A1 19900703; CA 2004942 C 19991005; CN 1021919 C 19930825; CN 1043965 A 19900718; EP 0452405 A1 19911023; EP 0452405 B1 19920916; ES 2034855 T3 19930401; ID 1015 B 19961017; KR 0140230 B1 19980701; KR 910700365 A 19910315; MX 170066 B 19930805; TR 25058 A 19921101

DOCDB simple family (application)

US 8905081 W 19891117; AU 4969690 A 19891117; BR 8907870 A 19891117; CA 2004942 A 19891208; CN 89108756 A 19891120; EP 90902093 A 19891117; ES 90902093 T 19891117; ID 910387 A 19910927; KR 900701964 A 19900903; MX 1878889 A 19891220; TR 7390 A 19891227