

Title (en)

SPINNING MACHINE AND CONVERSION PROCESS

Title (de)

SPINNMASCHINE UND VERFAHREN ZUR UMWANDLUNG

Title (fr)

MACHINE A FILER ET PROCEDE DE CONVERSION ASSOCIE

Publication

EP 0941374 A1 19990915 (EN)

Application

EP 97951492 A 19971125

Priority

- GB 9624683 A 19961127
- US 9721903 W 19971125

Abstract (en)

[origin: GB2319745A] A process for making a first and a second plurality of fully oriented multifilament yarns on a fully oriented yarn spinning machine comprises spinning a plurality of filaments from a spin pack 32 containing a spinneret plate; cooling the filaments in a quench chimney 25 applying finish 20 on the filaments and converging the filaments into a first and a second plurality of multifilament yarns; and drawing the first plurality of the multifilament yarns with a first stepped roll assembly 90 and drawing the second plurality of the multifilament yarns with a second stepped roll assembly 90 to increase their length by a fixed amount. The multifilament yarns from the unheated rotatable stepped feed and draw roll assemblies are heated by applying steam to the multifilament yarns from a steam relax unit (not shown) between the first and the second unheated rotatable stepped feed and draw roll assemblies 90; the separation is maintained and the multifilament yarns are directed; and the first and the second plurality of the multifilament yarns are wound on a first and a second windup assembly 70 into a first and a second plurality of packages. The invention includes apparatus for carrying out this process wherein a partially oriented yarn spinning machine is converted to a fully oriented yarn spinning machine.

IPC 1-7

D01D 5/16; D01F 6/60

IPC 8 full level

D01D 5/098 (2006.01); **D01D 5/16** (2006.01); **D01D 11/00** (2006.01); **D01F 6/60** (2006.01); **D02J 1/22** (2006.01)

CPC (source: EP KR)

D01D 5/16 (2013.01 - EP KR); **D01D 13/02** (2013.01 - EP); **D01F 6/60** (2013.01 - EP)

Citation (search report)

See references of WO 9823797A1

Cited by

WO2013013968A1

Designated contracting state (EPC)

DE ES FR IT

DOCDB simple family (publication)

GB 2319745 A 19980603; GB 2319745 B 20010110; GB 9624683 D0 19970115; AR 010663 A1 20000628; AR 018018 A2 20011031; AR 018019 A2 20011031; BR 9712965 A 20000201; DE 69707299 D1 20011115; DE 69707299 T2 20020704; EP 0941374 A1 19990915; EP 0941374 B1 20011010; ES 2164375 T3 20020216; JP 2001506709 A 20010522; JP 3869018 B2 20070117; KR 100497102 B1 20050629; KR 20000057288 A 20000915; WO 9823797 A1 19980604; ZA 9710191 B 19990512

DOCDB simple family (application)

GB 9624683 A 19961127; AR P970105582 A 19971127; AR P980105818 A 19981117; AR P980105819 A 19981117; BR 9712965 A 19971125; DE 69707299 T 19971125; EP 97951492 A 19971125; ES 97951492 T 19971125; JP 52675298 A 19971125; KR 19997004696 A 19990527; US 9721903 W 19971125; ZA 9710191 A 19971112