

Title (en)

Manufacturing method of polyester fine denier multifilament and polyester fine denier multifilament yarns

Title (de)

Verfahren zur Herstellung von Polyester-Multifilamenten mit niedrigem Denier sowie Polyester-Multifilamentgarne mit niedrigem Denier

Title (fr)

Procédé pour la production de multifilaments en polyester ayant un faible denier et fils multifilaments en polyester ayant un faible denier

Publication

**EP 1491663 A1 20041229 (EN)**

Application

**EP 03013448 A 20030623**

Priority

EP 03013448 A 20030623

Abstract (en)

Manufacture of polyester fine denier multifilament involves spinning polyester melt (1) through multilayer annularly arranged orifices of spinneret (3) having diameter difference of  $\approx 20$  mm between the outermost and innermost layer orifices; and passing spun filament tow (4) through a protective delay shroud with a length of 2 - 20 mm, and a cylindrical quenching air tube (5) of length 15 - 40 cm and diameter difference of 12 - 33 mm between innermost orifice and air tube. The orifice density of spinneret layout is 7 - 21 orifices per square centimeter. The shroud and quenching air tube offers a radial outer-flow quenching air at a wind speed of 0.2 - 0.6 m/second to the filament tow from outer side of the air tube to uniformly cooled to below glass transition point of the polyester polymer for bundling, followed by winding the filament tow at a speed of 1800 - 3000 meter/minute.

IPC 1-7

**D01D 5/088**; **D01F 6/62**

IPC 8 full level

**D01D 5/088** (2006.01); **D01F 6/62** (2006.01)

CPC (source: EP)

**D01D 5/088** (2013.01); **D01F 6/62** (2013.01)

Citation (search report)

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