

Title (en)

Manufacturing method of fine hollow polyester filaments, and fine hollow polyester yarns

Title (de)

Verfahren zur Herstellung von dünnen Polyester-Hohlfasern sowie dünne Polyester-Hohlfasergarne

Title (fr)

Procédé pour la production de filaments fins et creux en polyester, et fils fins et creux en polyester

Publication

EP 1491664 A1 20041229 (EN)

Application

EP 03013449 A 20030623

Priority

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- US 60263403 A 20030625

Abstract (en)

Manufacture of fine hollow polyester filaments involves spinning polyester melt (1) through multilayer annularly arranged orifices of spinneret (3) having diameter difference of ≈ 20 mm between the outermost and innermost layer orifices; and passing spun filament tow (4) through a protective delay shroud of specific length, and a cylindrical quenching air tube (5) of length 15 - 40 cm and diameter difference of 12 - 33 mm between the innermost orifice and air tube. The orifice density of spinneret layout is 7 - 15 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 - 4000 meter/minute.

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Citation (search report)

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