

Title (en)
Process and apparatus for spinning and crimping of a multifilament yarn

Title (de)
Verfahren und Vorrichtung zum Spinnen und Kräuseln eines multifilen Fadens

Title (fr)
Procédé et dispositif de filage et de frisage d'un fil multifilamentaire

Publication
EP 1146151 B1 20060719 (DE)

Application
EP 01107822 A 20010406

Priority
DE 10017916 A 20000411

Abstract (en)
[origin: EP1146151A2] In the production of texturized filaments, the bundle of melt spun thermoplastic filaments is divided into part-bundles before texturizing. The part-bundles are texturized separately, and then combined into a filament yarn. In the production of a melt-spun and texturized filament yarn, the part-bundles have an equal number of filaments. Each part-bundle is texturized under identical conditions. Each part-bundle passes through a texturizing jet, to be crammed into a plug. Each filament plug is drawn out separately into texturized part-bundles, to be combined into a yarn. The filament part-bundles are heated at the texturizing jets, and the filament plugs are cooled away from the jets. The part-bundles are processed between the cooling and the texturizing stages, and after texturizing before forming the yarn. The extruded melt-spun filament bundle is divided into two equal part-bundles during or after or before the initial cooling stage. The part-bundles are eddied together to form the filament yarn. An Independent claim is included for a filament melt spinning and texturizing assembly, where the extruded bundle (5) of melt-spun filaments is divided (6) into part-bundles (7.1,7.2) at the cooling shaft (4), before they reach the texturizing station (8). The texturizing station has two parallel texturizing units (9) to take the separate filament part-bundles. The texturized part-bundles are brought together (13) into a yarn (16) before winding (17) on a bobbin. Preferred Features: The filament bundle divider has guides (20.1,20.2) within the cooling shaft to form part-bundles of filaments, or they are between the cooling shaft and the texturizing station. The filament bundles can be divided by a jet assembly within the spinneret (1). The texturizing units have a guide channel (10.1,10.2) for each filament part-bundle, and a compression chamber (11.1,11.2) to form parallel filament plugs (12.1,12.2). A cooling drum can be after the texturizing jets, with a running track around the circumference for the texturized filaments drawn from each filament plug. The unit to combine the part-bundles into a yarn has an eddy chamber (14) to give an air stream through a yarn take-off channel (15).

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