

Title (en)

IMPROVED HIGH SPEED PROCESS FOR FORMING FULLY DRAWN POLYESTER YARN

Publication

**EP 0140559 B1 19890322 (EN)**

Application

**EP 84306276 A 19840913**

Priority

US 53197683 A 19830914

Abstract (en)

[origin: EP0140559A2] An improved process is provided for producing fully drawn multifilamentary polyethylene terephthalate yarn via a high speed melt spinning process wherein the multifilamentary material following solidification is passed through a heated conditioning zone wherein substantial crystallisation takes place. Such multifilamentary product is withdrawn from the conditioning zone at a speed in excess of 8000 feet (2438 m) per minute and a conventional drawing step is not required. In accordance with the concept of the present invention it surprisingly has been found that the uniformity of the multifilamentary product is enhanced by the inclusion of a minor substantially uniformly dispersed concentration of particulate silicon dioxide (e.g. fumed silica) in the molten polyethylene terephthalate polymer prior to extrusion and such subsequent processing. In a particularly preferred embodiment the particulate silicon dioxide is substantially uniformly dispersed within the polyethylene terephthalate as a result of its prior admixture with the reactants which were polymerised to form the polyethylene terephthalate.

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**D01F 6/62**; **D01F 1/10**; **D01D 5/098**

IPC 8 full level

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CPC (source: EP KR)

**D01D 5/08** (2013.01 - KR); **D01D 5/098** (2013.01 - EP); **D01F 1/10** (2013.01 - EP); **D01F 6/62** (2013.01 - EP)

Cited by

EP1493852A1; CN117512790A; EP1719828A1; US4909976A; US6955854B2; GB2240107A; FR2658840A1; GB2240107B; US5207959A; BE1005347A4; US5336709A; AT399350B; CH685317GA3; WO2010023081A1; WO9201093A1; WO2005001173A3; WO8910988A1

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