

Title (en)

Method and apparatus for producing a composite yarn

Title (de)

Verfahren und Vorrichtung zur Herstellung eines Verbundgarnes

Title (fr)

Procédé et dispositif de formation d'un fil composite

Publication

**EP 0616055 B1 19970806 (FR)**

Application

**EP 94400498 A 19940308**

Priority

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Abstract (en)

[origin: EP0616055A1] The invention relates to a method and an apparatus for manufacturing a composite yarn formed by combining continuous glass filaments with continuous filaments of a thermoplastic organic material. According to the invention, the thermoplastic filaments, in the form of a web (sheet) (10), are intermingled with a bundle (2) or web of glass filaments after they have been heated to a temperature above their conversion temperature, stretched and then cooled. <IMAGE>

IPC 1-7

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Cited by

DE102007028373A1; EP0768158A1; FR2877941A1; FR2899243A1; DE112004002105B4; DE102007028373B4; US5626643A; CN1057804C; CZ300848B6; FR2758340A1; US5891284A; EP4169860A1; FR2815046A1; KR100770381B1; CZ301727B6; US8470218B2; US8882019B2; WO2007113431A1; WO9610660A1; WO9831857A1; WO2006054025A1; WO0231235A1; US7465418B2; US8137094B2; FR2793186A1; US6254816B1; US6438935B2; US6440558B2

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