Title (en)

Method and device for the preparation of carbon fibre semi-finished products

Title (de)

Verfahren und Vorrichtung zur Herstellung von Carbonfaserhalbzeugen

Title (fr)

Procédé et dispositif de fabrication de semi-produits en fibre de carbone

Publication

**EP 3015576 A1 20160504 (DE)**

Application

**EP 14190488 A 20141027**

Priority

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Abstract (en)

[origin: WO2016066621A1] The present invention relates to a method for preparing fibre entanglements for producing carbon fibre semi-finished products, comprising the following steps: a) preparing of fibre entanglements at least containing carbon fibres and/or carbon fibre bundles in a spinal region; b) at least partial separating of the fibre entanglements in a turbulent flow in the spinal region to obtain separated carbon fibres and/or carbon fibre bundles; c) optionally, air separation of separated carbon fibres and/or carbon fibre bundles in the spinal region to obtain fractioned carbon fibres and/or carbon fibre bundles; d) discharging of the separated carbon fibres and/or carbon fibre bundle obtained in step b) and/or fractionated carbon fibres and/or carbon fibre bundles obtained in step c) from the spinal region into an alignment region, wherein the carbon fibre semi-finished products are obtained in or subsequently to step d). The method according to the invention further comprises at least one of the following steps: e) aligning of the carbon fibres and/or carbon fibre bundles discharged in step d) in the flow direction of a laminar flow in the alignment region, wherein the carbon fibres and/or carbon fibre bundles are stretched along the longitudinal axes thereof; f) outflow of the carbon fibres and/or carbon fibre bundles discharged in step d) and, optionally, aligned in the flow direction of the laminar flow in step e); g) depositing of the carbon fibres and/or carbon fibre bundles discharged in step d) and, optionally, aligned in the flow direction of the laminar flow in step e) and/or, optionally, obtained outflowing in step f) as a carbon fibre strip in a depositing region.

Abstract (de)

Die vorliegende Erfindung betrifft ein Verfahren zur Aufbereitung von Fasergewirren zur Herstellung von Carbonfaserhalbzeugen, das folgende Schritte umfasst: a) Bereitstellen von Fasergewirren wenigstens enthaltend Carbonfasern und/oder Carbonfaserbündel in einem Wirbelbereich; b) wenigstens teilweises Vereinzeln der Fasergewirre in einer turbulenten Strömung im Wirbelbereich unter Erhalt vereinzelter Carbonfasern und/oder Carbonfaserbündel; c) gegebenenfalls Windssichten der vereinzelten Carbonfasern und/oder Carbonfaserbündel im Wirbelbereich unter Erhalt fraktionierter Carbonfasern und/oder Carbonfaserbündel; d) Austragen der in Schritt b) erhaltenen vereinzelten und/oder in Schritt c) fraktionierten Carbonfasern und/oder Carbonfaserbündel aus dem Wirbelbereich in einen Ausrichtungsbereich, wobei die Carbonfaserhalbzeuge in oder im Anschluss an Schritt d) erhalten werden.

IPC 8 full level

**D01G 9/08** (2006.01); **D04H 1/4242** (2012.01)

CPC (source: EP)

**D01G 9/08** (2013.01); **D04H 1/4242** (2013.01)

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