

Title (en)

PILE PRODUCT WITH UNIDIRECTIONALLY INCREASED STRENGTH FOR PRODUCING CFRP COMPONENTS

Title (de)

FLORPRODUKT MIT UNIDIREKTIONAL ERHÖHTER FESTIGKEIT ZUR HERSTELLUNG VON CFK-BAUTEILEN

Title (fr)

PRODUIT FORMANT VOILE À SOLIDITÉ RENFORCÉE DE MANIÈRE UNIDIRECTIONNELLE UTILISÉ POUR PRODUIRE DES COMPOSANTS EN MATIÈRE PLASTIQUE RENFORCÉE DE FIBRES DE CARBONE (CFK)

Publication

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Application

EP 17754276 A 20170726

Priority

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Abstract (en)

[origin: WO2018019886A1] The invention relates to a web-shaped semi-finished product for manufacturing fiber-reinforced composite materials, to a method for producing the semi-finished product, and to a corresponding production system. The semi-finished product comprises a partly reinforced assembly (11) of at least one pile layer (12, 13, 14, 15) made of a non-woven fiber pile (16) and at least one additional web-shaped fiber layer (21, 22) stacked face-to-face. The at least one pile layer (12, 13, 14, 15) is predominantly or completely made of carbon fibers, aramid fibers, or mineral fibers such as glass fibers or basalt fibers, and the fibers (17) contained in the pile layer (12, 13) have a preferred orientation (VR). The assembly stacked face-to-face is produced solely by means of a layering process, and the at least one pile layer and the at least one fiber layer are free of additional macro proppants. The additional fiber layer (21, 22) is made of a web-shaped thread group (23, 24) of individual threads arranged next to one another. Furthermore, the fiber layer is predominately or completely made of carbon fibers, aramid fibers, or mineral fibers such as glass fibers or basalt fibers and has an exclusive fiber orientation (FA). The pile product is partly reinforced by local connection points between the fibers of the different layers such that the semi-finished product has a high directional strength and a high maximum drapability at the same time.

IPC 8 full level

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Citation (search report)

See references of WO 2018019886A1

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