

Title (en)

Thermoplastic last stage blade and method for manufacturing

Title (de)

Thermoplastenendstufenschaufel und Verfahren zur Herstellung

Title (fr)

Aube thermoplastique de dernier étage et procédé de fabrication

Publication

EP 2287447 A2 20110223 (DE)

Application

EP 10169024 A 20100709

Priority

DE 102009036018 A 20090804

Abstract (en)

The blade (100) has a damping zone (101) including a damping layer (103) with a fiber matrix system (109), where the system includes a thermoplastic matrix with reinforcing fibers e.g. carbon fibers. The fibers are embedded in the matrix at an angle between 1 degree and 90 degrees to each other. The zone includes fiber layers (104, 105), where the fiber layers together with the damping layer form laminar structures (106, 107). A blade region (102) comprises a set of fiber layers. The fibers include a hybrid yarn, where the yarn comprises thermoplastic material and carbon fiber material. An independent claim is also included for a method for manufacturing a damping zone of a turbine blade.

Abstract (de)

Die vorliegende Erfindung beschreibt eine Turbinenschaufel (100). Die Turbinenschaufel (100) weist einen Dämpfungsbereich (101) mit einer Dämpfungslage (103) auf, wobei die Dämpfungslage (103) ein Faser-Matrix-System (200) aufweist. Das Faser-Matrix-System (200) weist eine thermoplastische Matrix (201) auf, in welcher thermoplastischen Matrix (201) Verstärkungsfasern (202) eingebettet sind.

IPC 8 full level

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CPC (source: EP US)

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