

Title (en)

CARBON FIBER BUNDLE AND METHOD FOR PRODUCING SAME

Title (de)

KOHLENSTOFFFASERBÜNDL UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)

FAISCEAU DE FIBRES DE CARBONE ET PROCÉDÉ POUR SA PRODUCTION

Publication

EP 3705610 A1 20200909 (EN)

Application

EP 18874618 A 20181016

Priority

- JP 2017210053 A 20171031
- JP 2018038478 W 20181016

Abstract (en)

The purpose of the present invention is to provide: a carbon fiber bundle which exhibits excellent filament shape stability when forming a composite material, and from which it is possible to obtain a carbon fiber composite material which exhibits high tensile strength; and a method for producing the same. To achieve this purpose, the provided carbon fiber bundle exhibits a tensile elasticity as a resin-impregnated strand of 265-300 GPa, a tensile strength as a resin-impregnated strand of 6.0 GPa or more, a knot strength of 820 N/mm² or more, a filament number of 30,000 or more, and an average tear distance of 600-850 mm, wherein the rate of change in filament width is 8% or less when the carbon fiber bundle is unraveled under the conditions stipulated in the description, and there are four or fewer sections per 1,000 m which exhibit a filament width equal to or less than 75% of the average filament width when the carbon fiber bundle is unraveled under the conditions stipulated in the description.

IPC 8 full level

D01F 9/22 (2006.01)

CPC (source: EP KR US)

B65H 51/015 (2013.01 - EP); **D01F 9/225** (2013.01 - EP KR US); **D01F 9/32** (2013.01 - US); **D01F 11/10** (2013.01 - US);
D02J 1/18 (2013.01 - EP); **B65H 2701/314** (2013.01 - EP); **D10B 2401/063** (2013.01 - US)

Cited by

WO2022030854A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3705610 A1 20200909; EP 3705610 A4 20220105; CN 111263834 A 20200609; CN 111263834 B 20210212; JP 6575696 B1 20190918;
JP WO2019087766 A1 20191114; KR 102142368 B1 20200807; KR 20200040797 A 20200420; TW 201923183 A 20190616;
US 2020385892 A1 20201210; WO 2019087766 A1 20190509

DOCDB simple family (application)

EP 18874618 A 20181016; CN 201880068523 A 20181016; JP 2018038478 W 20181016; JP 2018557967 A 20181016;
KR 20207006680 A 20181016; TW 107137436 A 20181024; US 201816757568 A 20181016