

Title (en)

REINFORCING ELEMENT FOR USE WITH A VENTILATOR HUB

Title (de)

VERSTÄRKUNGSELEMENT ZUR VERWENDUNG MIT EINER VENTILATORNABE

Title (fr)

ÉLÉMENT DE RENFORCEMENT POUR MOYEU DE VENTILATEUR

Publication

EP 2417360 A1 20120215 (DE)

Application

EP 10713430 A 20100409

Priority

- EP 2010002222 W 20100409
- DE 102009017307 A 20090411

Abstract (en)

[origin: WO2010115637A1] In order to provide a ventilator hub (1) having means (2, 3) for connecting to a ventilator shaft and a substantially cylindrical fastening section (4) having radial receptacles (6) for a number of ventilator blades, the fastening section (4) comprising an inner lateral surface (5), wherein said hub ensures fastening of ventilator blades with sufficient tensile force even at high temperatures as those that can occur during tunnel fires, without having a undesirable high mass, it is proposed to provide the ventilator hub with a substantially ring-shaped closed reinforcing element (7) which is designed substantially separately from the fastening section (4) and has means (10) for the high-tensile fastening of the ventilator blades.

IPC 8 full level

F04D 29/02 (2006.01); **F04D 29/32** (2006.01)

CPC (source: EP KR US)

F04D 29/023 (2013.01 - EP KR US); **F04D 29/32** (2013.01 - KR); **F04D 29/329** (2013.01 - EP KR US); **F04D 29/648** (2013.01 - KR); **F05D 2300/171** (2013.01 - EP US); **F05D 2300/702** (2013.01 - EP US); **Y10T 29/49245** (2015.01 - EP US)

Citation (search report)

See references of WO 2010115637A1

Designated contracting state (EPC)

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 SE SI SK SM TR

DOCDB simple family (publication)

DE 102009017307 A1 20101014; AU 2010234251 A1 20111110; AU 2010234251 B2 20150129; AU 2010234251 B9 20150430; CN 102362075 A 20120222; CN 102362075 B 20150204; DK 2417360 T3 20191007; EP 2417360 A1 20120215; EP 2417360 B1 20190626; ES 2745856 T3 20200303; KR 101812812 B1 20171227; KR 101941391 B1 20190122; KR 20120013356 A 20120214; KR 20170092616 A 20170811; PL 2417360 T3 20191231; PT 2417360 T 20190830; US 2012034099 A1 20120209; US 8876480 B2 20141104; WO 2010115637 A1 20101014; WO 2010115637 A8 20111013

DOCDB simple family (application)

DE 102009017307 A 20090411; AU 2010234251 A 20100409; CN 201080013458 A 20100409; DK 10713430 T 20100409; EP 10713430 A 20100409; EP 2010002222 W 20100409; ES 10713430 T 20100409; KR 20117025812 A 20100409; KR 20177017907 A 20100409; PL 10713430 T 20100409; PT 10713430 T 20100409; US 201013256826 A 20100411