

Title (en)  
Flow engine

Title (de)  
Strömungsmaschine

Title (fr)  
Turbomachine

Publication  
**EP 2514975 A3 20140611 (DE)**

Application  
**EP 12164964 A 20120420**

Priority  
DE 102011007767 A 20110420

Abstract (en)  
[origin: EP2514975A2] The fluid-flow machine has rotors (11,21,31) having a rotary element with multiple rotor blades (12,22,32) arranged on the rotary element, and the circumferential casings (15,25) having a central axis (2) and surrounding the rotor. The circumferential casing or a part has the annular space surfaces (16,26). The annular space surface has a structuring at least in one area adjoining a rotor on the circumferential side. The structuring of the annular space surface has, relative to the central axis of the circumferential casing, a circumferentially asymmetrical design.

IPC 8 full level  
**F01D 25/04** (2006.01); **F04D 29/16** (2006.01); **F04D 29/52** (2006.01); **F04D 29/66** (2006.01); **F04D 29/68** (2006.01)

CPC (source: EP US)  
**F01D 11/08** (2013.01 - EP US); **F01D 25/06** (2013.01 - EP US); **F04D 29/164** (2013.01 - EP US); **F04D 29/526** (2013.01 - EP US);  
**F04D 29/661** (2013.01 - EP US); **F04D 29/685** (2013.01 - EP US)

Citation (search report)  
• [X] EP 1783346 A2 20070509 - UNITED TECHNOLOGIES CORP [US]  
• [XA] GB 2408546 A 20050601 - ROLLS ROYCE PLC [GB]  
• [XA] GB 2245312 A 19920102 - ROLLS ROYCE PLC [GB]  
• [XA] US 2007160459 A1 20070712 - TUDOR DAVID J [GB]  
• [A] US 4531362 A 19850730 - BARRY BRIAN [GB], et al  
• [A] EP 2180195 A2 20100428 - ROLLS ROYCE DEUTSCHLAND [DE]

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EP3591237A1; US11131322B2

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 2514975 A2 20121024; EP 2514975 A3 20140611; EP 2514975 B1 20170802**; DE 102011007767 A1 20121025;  
US 2012269619 A1 20121025; US 9816528 B2 20171114

DOCDB simple family (application)  
**EP 12164964 A 20120420**; DE 102011007767 A 20110420; US 201213451657 A 20120420