

Title (en)

FLOW GUIDING RING STRUCTURE, AXIAL FLOW FAN AND AIR-CONDITIONER

Title (de)

STRÖMUNGSFÜHRENDE RINGSTRUKTUR, AXIALLÜFTER UND KLIMAAANLAGE

Title (fr)

STRUCTURE ANNULAIRE DE GUIDAGE D'ÉCOULEMENT, VENTILATEUR À FLUX AXIAL ET CLIMATISEUR

Publication

**EP 3530961 B1 20240103 (EN)**

Application

**EP 17862279 A 20171016**

Priority

- CN 201610917189 A 20161020
- CN 2017106279 W 20171016

Abstract (en)

[origin: EP3530961A1] Disclosed are a flow guiding ring structure, an axial flow fan and an air conditioner, relating to the field of noise reduction, and used for reducing the pneumatic noise of the axial flow fan during use on the premise of guaranteeing the air outflow amount of the fan. The flow guiding ring structure includes a ring body (1). The ring body (1) includes a closed cavity (11) and a through hole (12). A minimum diameter position of the ring body (1) is provided with an opening (13). The cavity (11) communicates with the through hole (12) via the opening (13). A fluid in the through hole (12) is able to enter the cavity (11) through the opening (13). According to the above technical solutions, on the premise of guaranteeing the Venturi tube effect of the flow guiding ring structure, an opening structure is added on a surface, and turbulent energy of a blade top airflow is transmitted out of a fan area in a radial direction, so that the aim of noise reduction is achieved.

IPC 8 full level

**F04D 29/54** (2006.01); **F04D 29/66** (2006.01)

CPC (source: CN EP)

**F04D 29/541** (2013.01 - CN EP); **F04D 29/661** (2013.01 - CN EP); **F04D 29/665** (2013.01 - EP)

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

DOCDB simple family (publication)

**EP 3530961 A1 20190828**; **EP 3530961 A4 20200610**; **EP 3530961 B1 20240103**; CN 106321520 A 20170111; CN 106321520 B 20181123; WO 2018072664 A1 20180426

DOCDB simple family (application)

**EP 17862279 A 20171016**; CN 201610917189 A 20161020; CN 2017106279 W 20171016