

Title (en)

IMPELLER FOR A ROTOR OF A TURBOMACHINE, AND ROTOR AND TURBOMACHINE HAVING AN IMPELLER OF SAID TYPE

Title (de)

LAUFRAD FÜR EINEN ROTOR EINER TURBOMASCHINE SOWIE ROTOR UND TURBOMASCHINE MIT EINEM SOLCHEN LAUFRAD

Title (fr)

ROUE À AUBES POUR UN ROTOR D'UNE TURBOMACHINE AINSI QUE ROTOR ET TURBOMACHINE COMPRENANT UNE TELLE ROUE À AUBES

Publication

EP 2823153 A1 20150114 (DE)

Application

EP 13706262 A 20130225

Priority

- DE 102012203606 A 20120307
- EP 2013053738 W 20130225

Abstract (en)

[origin: WO2013131774A1] An impeller (20) for a rotor (10) of a turbomachine (1), and rotor and turbomachine having an impeller of said type, the impeller comprising: a wheel disc (30) for mounting on the rotor, which wheel disc has multiple grooves (32) which are arranged along a circumference (31) of the wheel disc and which extend in the thickness direction of the wheel disc, wherein in each case one toothed profile (33) is formed on two sides of each groove; a plurality of impeller blades (40) which have in each case one root (41) with two sides on which in each case one toothed profile (43) is formed, wherein each blade is inserted into a groove so as to form a blade-groove combination such that the toothed profiles of the root and of the groove are in engagement, and wherein each combination has a fixing device (50) which fixes the blade in the groove in the thickness direction and in the radial direction (RR) of the wheel disc. To be able to quickly mount/dismount the blades and fix said blades in the grooves with a defined radial clamping action, each fixing device has a recess (51), which is closed on two sides, in an underside (44), which faces toward a groove base (32a), of the blade and has a bar (52) which is movably received in the groove base so as to be radially adjustable between an unlocked position, in which it does not engage into the recess, and a locked position, in which it engages into the recess so as to push the blade radially outward.

IPC 8 full level

F01D 5/32 (2006.01)

CPC (source: EP US)

F01D 5/025 (2013.01 - US); **F01D 5/326** (2013.01 - EP US)

Citation (search report)

See references of WO 2013131774A1

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)

DE 102012203606 A1 20130912; CN 104160113 A 20141119; CN 104160113 B 20160302; EP 2823153 A1 20150114; EP 2823153 B1 20180725; JP 2015513032 A 20150430; JP 6121455 B2 20170426; US 2015030456 A1 20150129; US 9903205 B2 20180227; WO 2013131774 A1 20130912

DOCDB simple family (application)

DE 102012203606 A 20120307; CN 201380012928 A 20130225; EP 13706262 A 20130225; EP 2013053738 W 20130225; JP 2014560303 A 20130225; US 201314383369 A 20130225