

Title (en)

Turbocharger wheel and associated method of design

Title (de)

Turboladerlaufrad und zugehöriges Designverfahren

Title (fr)

Roue de turbocompresseur et procédé de conception associé

Publication

EP 2770163 A1 20140827 (EN)

Application

EP 14153874 A 20140204

Priority

US 201313815373 A 20130225

Abstract (en)

A turbocharger turbine wheel (10; 20; 30; 40) includes a hub (13; 23; 33; 43) and a plurality of blades (12; 22; 32; 42). Both the center of mass of the hub and the center of mass of the plurality of blades are on an axis of rotation. The blades are circumferentially spaced such that they are rotationally asymmetric. Each consecutive pair of blades is characterized by a spacing angle (301). A line that intersects with and is normal to the axis of rotation defines a plane of symmetry, and the spacing angles are symmetric across the plane of symmetry.

IPC 8 full level

F01D 5/04 (2006.01); **F02C 6/12** (2006.01); **F04D 29/28** (2006.01); **F04D 29/66** (2006.01)

CPC (source: EP US)

F01D 5/048 (2013.01 - EP US); **F04D 25/024** (2013.01 - EP US); **F04D 29/284** (2013.01 - EP US); **F04D 29/666** (2013.01 - EP US); **F05D 2220/40** (2013.01 - EP US); **F05D 2260/961** (2013.01 - EP US); **Y10T 29/49236** (2015.01 - EP US)

Citation (search report)

[X1] US 4253800 A 19810303 - SEGAWA YORIHIDE, et al

Cited by

CN114636197A

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 2770163 A1 20140827; **EP 2770163 B1 20160622**; CN 104018886 A 20140903; CN 104018886 B 20170711; KR 20140106406 A 20140903; US 2014241866 A1 20140828

DOCDB simple family (application)

EP 14153874 A 20140204; CN 201410061139 A 20140224; KR 20140018867 A 20140219; US 201313815373 A 20130225