

Title (en)
AXIAL TURBINE WITH RADIAL VNT VANES

Title (de)
AXIALTURBINE MIT RADIALEN VNT-SCHAUFELN

Title (fr)
Turbine axiale avec aubes vnt radiales

Publication
EP 2881540 A1 20150610 (EN)

Application
EP 14192930 A 20141112

Priority
US 201314099793 A 20131206

Abstract (en)
A turbocharger including a turbine wheel having a hub-to-tip ratio of no more than 60% and blades with a high turning angle, a turbine housing forming an inwardly spiraling primary-scroll passageway that significantly converges to produce highly accelerated airflow into the turbine at high circumferential angles, and a two-sided parallel compressor. The compressor and turbine each produce substantially no axial force, allowing the use of minimal axial thrust bearings.

IPC 8 full level
F01D 5/14 (2006.01); **F01D 9/02** (2006.01); **F01D 17/16** (2006.01)

CPC (source: EP US)
F01D 5/021 (2013.01 - EP US); **F01D 9/026** (2013.01 - EP US); **F01D 17/165** (2013.01 - EP US); **F04D 25/04** (2013.01 - US); **F05D 2220/40** (2013.01 - EP US)

Citation (applicant)

- US 4850820 A 19890725 - GUTKNECHT DANIEL A [US]
- US 2011171009 A1 20110714 - ESPASA OLIVIER [US], et al

Citation (search report)

- [X] US 4648790 A 19870310 - HOERLER HANSULRICH [CH]
- [X] US 2005056015 A1 20050317 - FLEDERSBACHER PETER [DE], et al
- [X] US 6220031 B1 20010424 - DAUDEL HELMUT [DE], et al
- [X] US 2013219884 A1 20130829 - WILLIAMS THOMAS J [US], et al
- [A] EP 2378130 A2 20111019 - HONEYWELL INT INC [US]

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CN108625904A

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 2881540 A1 20150610; US 2015159660 A1 20150611

DOCDB simple family (application)
EP 14192930 A 20141112; US 201314099793 A 20131206