

Title (en)  
TURBOCHARGER HAVING VARIABLE NOZZLE DEVICE

Title (de)  
ABGASTURBOLADER MIT VARIABLEN LEITSCHAUFEL

Title (fr)  
TURBOCOMPRESSEUR POSSEDANT UN DISPOSITIF DE BUSE VARIABLE

Publication  
**EP 1540142 A1 20050615 (EN)**

Application  
**EP 02807832 A 20020918**

Priority  
IB 0203835 W 20020918

Abstract (en)  
[origin: WO2004027218A1] A turbocharger comprises a vane area formed between a nozzle element (21) and a floating insert (17) supported on the exhaust housing (7), wherein the floating insert (17) is urged against the vanes (27) located in the vane area by a biasing member (43). By means of this arrangement the turbine efficiency is increased and the risk of vane sticking is avoided to a large extent.

IPC 1-7  
**F01D 17/16**; F01D 11/00; F02C 6/12

IPC 8 full level  
**F01D 17/16** (2006.01)

CPC (source: EP US)  
**F01D 17/165** (2013.01 - EP US); **F05D 2220/40** (2013.01 - EP US); **F05D 2260/30** (2013.01 - EP US)

Citation (search report)  
See references of WO 2004027218A1

Cited by  
EP3150806A1; DE102011005151A1

Designated contracting state (EPC)  
DE FR GB SE

DOCDB simple family (publication)  
**WO 2004027218 A1 20040401**; AU 2002334286 A1 20040408; AU 2002334286 A8 20040408; EP 1540142 A1 20050615; EP 1540142 B1 20161109; EP 3150806 A1 20170405; JP 2006504021 A 20060202; US 2006062663 A1 20060323

DOCDB simple family (application)  
**IB 0203835 W 20020918**; AU 2002334286 A 20020918; EP 02807832 A 20020918; EP 16196537 A 20020918; JP 2004537343 A 20020918; US 52864205 A 20051108