

Title (en)  
ROTARY MACHINE

Title (de)  
DREHMASCHINE

Title (fr)  
MACHINE ROTATIVE

Publication  
**EP 3168479 A4 20170823 (EN)**

Application  
**EP 14901462 A 20140908**

Priority  
JP 2014073685 W 20140908

Abstract (en)  
[origin: EP3168479A1] A rotary machine is provided with a plurality of impellers (3) which have a disk (31) rotating with a rotary shaft (2), the impellers being arranged side by side; and a casing (4) in which a casing flow passage (43) is formed to distribute a working medium therein. An impeller (3) disposed farthest away from a second side in the axial direction is disposed in a space communicating with an upstream part of the casing flow passage (43), and a protrusion portion (5) protruding from a back side (311) of the disk (31). The protrusion portion (5) has a sealing surface (51) which is formed to be parallel to an outer surface (21) of the rotary shaft (2) to seal a gap between itself and the casing (4), and a pressure receiving surface (51) which extends from the outer surface (21) to the sealing surface (51).

IPC 8 full level  
**F04D 1/08** (2006.01); **F04D 17/12** (2006.01); **F04D 29/041** (2006.01); **F04D 29/051** (2006.01); **F04D 29/28** (2006.01)

CPC (source: EP US)  
**F04D 1/08** (2013.01 - US); **F04D 17/122** (2013.01 - EP US); **F04D 29/0516** (2013.01 - EP US); **F04D 29/16** (2013.01 - US); **F04D 29/284** (2013.01 - EP US); **F04D 29/52** (2013.01 - US)

Citation (search report)

- [X] CH 488095 A 19700331 - BBC BROWN BOVERI & CIE [CH]
- [X] WO 2014102125 A1 20140703 - THERMODYN SAS [FR]
- [I] GB 2493737 A 20130220 - HANCOCK WILLIAM PAUL [NO]
- [I] US 4472107 A 19840918 - CHANG CHING M [US], et al
- [I] US 3895689 A 19750722 - SWEARINGEN JUDSON S [US]
- See references of WO 2016038661A1

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)  
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DOCDB simple family (publication)  
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DOCDB simple family (application)  
**EP 14901462 A 20140908**; CN 201480081005 A 20140908; JP 2014073685 W 20140908; JP 2016547270 A 20140908; US 201415503237 A 20140908