

Title (en)
ROTARY FLUID MACHINE

Title (de)
ROTATIONSFLUIDMASCHINE

Title (fr)
MACHINE A FLUIDE ROTATIVE

Publication
EP 1428977 A1 20040616 (EN)

Application
EP 02772879 A 20020920

Priority
• JP 0209719 W 20020920
• JP 2001289387 A 20010921

Abstract (en)
A rotary fluid machine is provided that includes a rotor rotatably housed within a casing, a hollow rotating shaft (113) that rotates integrally with the rotor, and a fixed shaft (102) that is relatively rotatably fitted into the inner periphery of the rotating shaft (113); wherein the fixed shaft (102) is floatingly supported in the casing via a fixed shaft support spring (95) having an alignment action. When rotational runout of the rotor is transmitted to the fixed shaft (102) via the rotating shaft (113), the alignment action of the fixed shaft support spring (95) suppresses the rotational runout of the rotor, and any increase in the frictional resistance in a sliding section between the rotating shaft (113) and the fixed shaft (102) and the occurrence of abnormal wear can be prevented effectively, and the leakage of steam from a rotary valve (V) provided on the sliding surfaces of the rotating shaft (113) and the fixed shaft (102) can be reduced. <IMAGE>

IPC 1-7
F01C 1/344; **F01B 13/06**; **F04C 18/344**; **F04B 27/06**

IPC 8 full level
F01L 33/02 (2006.01); **F01B 13/06** (2006.01); **F01C 1/344** (2006.01); **F01C 11/00** (2006.01); **F01C 20/14** (2006.01); **F01C 21/02** (2006.01); **F01C 21/08** (2006.01); **F01C 21/18** (2006.01); **F01K 7/00** (2006.01); **F04B 1/047** (2006.01); **F04B 53/00** (2006.01); **F04B 53/10** (2006.01); **F04C 18/344** (2006.01); **F02B 53/00** (2006.01)

CPC (source: EP US)
F01B 13/061 (2013.01 - EP US); **F01B 13/068** (2013.01 - EP US); **F01C 1/3446** (2013.01 - EP US); **F01C 11/006** (2013.01 - EP US); **F01C 21/08** (2013.01 - EP US); **F01C 21/18** (2013.01 - EP US); **F04B 1/047** (2013.01 - EP US); **F02B 53/00** (2013.01 - EP US); **F04C 2230/602** (2013.01 - EP US); **F04C 2240/601** (2013.01 - EP US); **F04C 2240/605** (2013.01 - EP US)

Citation (search report)
See references of WO 03027439A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)
EP 1428977 A1 20040616; JP 2003097211 A 20030403; US 2005019161 A1 20050127; WO 03027439 A1 20030403

DOCDB simple family (application)
EP 02772879 A 20020920; JP 0209719 W 20020920; JP 2001289387 A 20010921; US 48964104 A 20040922