Title (en)
POSITIVE-DISPLACEMENT ROTARY MACHINE

Title (de)
ROTATIONSVERDRÄNGUNGSMASCHINE

Title (fr)
MACHINE VOLUMIQUE ROTATIVE

Publication
EP 2530241 A1 20121205 (EN)

Application
EP 11734926 A 20110124

Priority
• RU 2010102009 A 20100125
• RU 2011000031 W 20110124

Abstract (en)
The positive-displacement rotary machine comprises a body, a rotor, a separator having a guiding part with an opening below the rotor, a piston which is mounted in a rotor groove so as to be able to carry out rotational oscillations relative to the rotor about an axis which intersects the axis of rotation of the rotor primarily at a right angle and has at least one slot into which the guiding part of the separator penetrates, and a spherical working cavity which is formed around the rotor and which is divided by the guiding part of the separator, upon interaction of the opening with the rotor, into chamber-forming cavities of variable cross section, each of which is divided by the piston into working chambers. A passage for a working fluid is provided in the minimum cross section of the chamber-forming cavity, and/or a duct permitting the working fluid to bypass the minimum cross section of the chamber-forming cavity is provided in the rotor. This makes it possible to change the character of the load and reduce wear of the piston and of the sealing synchronizing element, thus increasing the lifetime of the machine. Furthermore, said solution makes it possible to produce controllable variant embodiments of said machine.

IPC 8 full level
F01C 3/06 (2006.01); **F04C 3/06** (2006.01)

CPC (source: EP US)
F01C 9/005 (2013.01 - EP US); **F01C 11/002** (2013.01 - EP US); **F01C 20/18** (2013.01 - EP US); **F04C 9/005** (2013.01 - EP US); F04C 2270/16 (2013.01 - EP US)

Citation (search report)
See references of WO 2011090408A1

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

DOCDB simple family (publication)
EP 2530241 A1 20121205; CA 2788321 A1 20110728; CN 102782254 A 20121114; EA 201100089 A1 20110830; RU 2010102009 A 20110727; UA 103721 C2 20131111; US 2013202469 A1 20130808; WO 2011090408 A1 20110728

DOCDB simple family (application)
EP 11734926 A 20110124; CA 2788321 A 20110124; CN 201180011461 A 20110124; EA 201100089 A 20110124; RU 2010102009 A 20100125; RU 2011000031 W 20110124; UA A201210054 A 20110124; US 201113575188 A 20110124