

Title (en)
A UNI-AXIAL SCREW PUMP

Title (de)
UNIAXIALE SCHRAUBENPUMPE

Title (fr)
POMPE A VIS UNIAXIALE

Publication
EP 1969231 A1 20080917 (EN)

Application
EP 06768463 A 20060807

Priority
• KP 2006000009 W 20060807
• KP 17905 A 20051223

Abstract (en)
[origin: WO2007073009A1] The present invention describes a uni-axial screw pump (1) to convey various viscous fluids with high pump efficiency wherein restraining devices restrain the fluid' s tendency to rotate around the axis (6) as the rotor (3) rotates. As a result all the fluid trapped between the helical thread (5) and inner surface of inner cylindrical casing (10) is forced in the axial direction towards the discharge end. It is simple in structure and small in external dimension. It can also be employed as hydraulic turbine, thermo motor, liquid motor, extruder, molder and etc. The said screw pump is characterized in that the thread (5) of the screw rotor (3) is disconnected perpendicularly to the axis to make a plurality of thread sections, a plurality of annular restraining devices (7) being inserted in the annular gaps formed between said disconnected thread sections (5), the said annular restraining devices (7) having restraining elements (9) and openings (8) for the fluid to be conveyed through, inner cylindrical sections (10) being axially disposed between the said inserted annular restraining devices (7) to enclose the screw rotor (3).

IPC 8 full level
F04B 19/12 (2006.01); **F04C 18/107** (2006.01)

CPC (source: EP US)
F04B 19/12 (2013.01 - EP US)

Citation (search report)
See references of WO 2007073009A1

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

DOCDB simple family (publication)
WO 2007073009 A1 20070628; AU 2006328261 A1 20070628; CA 2640143 A1 20070628; CN 101384821 A 20090311;
EP 1969231 A1 20080917; IL 192384 A0 20081229; RU 2008130390 A 20100127; US 2009041574 A1 20090212; ZA 200806417 B 20091028

DOCDB simple family (application)
KP 2006000009 W 20060807; AU 2006328261 A 20060807; CA 2640143 A 20060807; CN 200680053291 A 20060807;
EP 06768463 A 20060807; IL 19238408 A 20080622; RU 2008130390 A 20060807; US 15897206 A 20060807; ZA 200806417 A 20080721