

Title (en)
TWIN-SCREW LIQUID PUMP

Title (de)
DOPPELSCHNECKENFLÜSSIGKEITSPUMPE

Title (fr)
POMPE À LIQUIDE À VIS JUMELÉE

Publication
EP 2642125 A1 20130925 (EN)

Application
EP 10859796 A 20101130

Priority
• CN 201010548653 A 20101116
• CN 2010079291 W 20101130

Abstract (en)
A double-screw liquid pump is provided, which is applicable to an Organic Rankin Cycle (ORC). The double-screw liquid pump includes a semi-sealed or fully sealed shell, and the shell includes a first cavity and a second cavity isolated from each other. A motor is disposed in the first cavity, and a main body part of a double-screw is disposed in the second cavity. At least one rotor of the double-screw is fixedly connected to a rotor of the motor, and the double-screw rotates through driving of the motor. A liquid refrigerant injection inlet and a refrigerant outlet are disposed on the first cavity, and the motor is cooled through evaporation of a liquid refrigerant; a liquid inlet and a liquid outlet are disposed on the second cavity. In the double-screw liquid pump applied to the ORC provided in the present invention, since a resistance torque of the female rotor is very small, the liquid pump does not wear even when the liquid viscosity is very low, contributing to good reliability, and thereby improving power generation efficiency of the ORC. In addition, the semi-sealed or fully sealed shell can effectively prevent leakage of the refrigerant.

IPC 8 full level
F04C 2/16 (2006.01)

CPC (source: EP US)
F01C 21/10 (2013.01 - EP US); **F04C 2/16** (2013.01 - EP US); **F04C 13/00** (2013.01 - EP US); **F04C 15/008** (2013.01 - EP US); **F04C 15/0096** (2013.01 - EP US); **F04C 23/008** (2013.01 - EP US); **F04C 29/045** (2013.01 - EP US); **F04C 15/0038** (2013.01 - EP US); **F04C 2240/30** (2013.01 - EP US)

Cited by
WO2020109553A1

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 2642125 A1 20130925; **EP 2642125 A4 20161116**; CN 101975160 A 20110216; CN 101975160 B 20141203; US 2013236334 A1 20130912; WO 2012065320 A1 20120524

DOCDB simple family (application)
EP 10859796 A 20101130; CN 2010079291 W 20101130; CN 201010548653 A 20101116; US 201013885158 A 20101130