

Title (en)
Immersion pump

Title (de)
Tauchpumpe

Title (fr)
Pompe submersible

Publication
EP 2348220 A1 20110727 (DE)

Application
EP 09016147 A 20091230

Priority
EP 09016147 A 20091230

Abstract (en)
The pump has an impeller e.g. single channel impeller, arranged in a pump housing (2). A seal is arranged at an end of the impeller and seals the impeller relative to a stationary part of the housing. The end of the impeller is axially placed at a distance from a suction port. The seal includes an impeller sided sealing ring (24) engaging in a pump housing sided sealing ring (26). The pump housing sided sealing ring includes a hole (28) for discharging solid particles from the impeller. The impeller sided sealing ring includes an actuator at an outer side for transporting the solid particles.

Abstract (de)
Eine Tauchpumpe weist ein in einem Pumpengehäuse (2) angeordnetes Laufrad (8) auf. Eine Dichtung (22) dichtet das Laufrad (8) gegenüber einem feststehenden Teil des Pumpengehäuses (2) ab. Diese Dichtung (22) weist einen laufradseitig angeordneten Dichtring (24) auf, der in einen pumpengehäuseseitig angeordneten zweiten Dichtring (26) eingreift. Zur Abfuhr von Feststoffteilchen aus dem Laufrad (8) weist der pumpengehäusesseitige Dichtring (26) mindestens eine Ausnehmung (28) auf. (Fig. 2)

IPC 8 full level
F04D 7/04 (2006.01); **F04D 13/08** (2006.01); **F04D 29/16** (2006.01)

CPC (source: EP US)
F04D 7/04 (2013.01 - US); **F04D 7/045** (2013.01 - EP US); **F04D 13/086** (2013.01 - EP US); **F04D 29/126** (2013.01 - US);
F04D 29/167 (2013.01 - EP US); **F05B 2260/603** (2013.01 - US); **F05B 2260/63** (2013.01 - US); **F05D 2260/607** (2013.01 - EP US)

Citation (applicant)
EP 1300594 B1 20091021 - GRUNDFOS AS [DK]

Citation (search report)

- [XII] WO 2005038260 A1 20050428 - ITT MFG ENTERPRISES INC [US], et al
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CN103857917A; CN105378288A; WO2013050031A1

Designated contracting state (EPC)
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 SE SI SK SM TR

Designated extension state (EPC)
AL BA RS

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EP 2348220 A1 20110727; **EP 2348220 B1 20150708**; CN 102686886 A 20120919; CN 102686886 B 20160323; RU 2012132482 A 20140210; RU 2534193 C2 20141127; US 2013089420 A1 20130411; US 9234523 B2 20160112; WO 2011079892 A1 20110707

DOCDB simple family (application)
EP 09016147 A 20091230; CN 201080060111 A 20101123; EP 2010007100 W 20101123; RU 2012132482 A 20101123; US 201013519983 A 20101123