

Title (en)
SELF-PRIMING PUMP ASSEMBLY

Title (de)
SELBSTANSAUGENDE PUMPENAGGREGATION

Title (fr)
ENSEMBLE DE POMPES À AMORÇAGE AUTOMATIQUE

Publication
EP 3303845 A1 20180411 (DE)

Application
EP 16726880 A 20160603

Priority
• DE 102015007100 A 20150608
• EP 2016062665 W 20160603

Abstract (en)
[origin: WO2016198334A1] The invention relates to a self-priming pump assembly which is a series connection of a liquid ring pump which operates as a rotating positive-displacement pump and a non-self-priming centrifugal pump, according to the preamble of claim 1. The invention develops the self-priming pump assembly of the generic type in such a way that the flow conditions for the flow of fluids to and in the return line are improved. This is achieved by virtue of the fact • that the first connector opening (9a) has, in the meridian plane of the centrifugal pump (2), a bulge (33) which sectorally encloses a longitudinal axis (a3) of the first connector opening (9a), • that the bulge (33) is oriented on one side and towards a rotational axis (a-i) of the pump assembly (1), • that the bulge (33) continuously widens the first connector opening (9a) towards the impeller plane directly or indirectly, • and that the bulge (33) merges, at its end section which faces the impeller plane, by way of a transition surface (34) continuously into the lateral boundary surface (2.2b) or into an inner circumferential wall (30) of the ring duct (3*; 3**) which adjoins the latter.

IPC 8 full level
F04D 9/00 (2006.01); **F04D 9/04** (2006.01); **F04D 29/42** (2006.01)

CPC (source: CN EP US)
F04D 9/005 (2013.01 - CN EP US); **F04D 9/041** (2013.01 - CN EP US); **F04D 29/426** (2013.01 - CN EP); **F04D 29/428** (2013.01 - US); **F05D 2250/52** (2013.01 - CN EP US)

Citation (search report)
See references of WO 2016198334A1

Cited by
DE202020100267U1

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
DE 102015007100 A1 20161208; CN 107820544 A 20180320; CN 107820544 B 20190910; EP 3303845 A1 20180411; EP 3303845 B1 20190731; ES 2748809 T3 20200318; PL 3303845 T3 20200228; US 10634145 B2 20200428; US 2018340523 A1 20181129; WO 2016198334 A1 20161215

DOCDB simple family (application)
DE 102015007100 A 20150608; CN 201680033474 A 20160603; EP 16726880 A 20160603; EP 2016062665 W 20160603; ES 16726880 T 20160603; PL 16726880 T 20160603; US 201615580788 A 20160603