

Title (en)
Centrifugal pump with free flow wheel

Title (de)
Kreispumpe mit Freistromlaufrad

Title (fr)
Pompe centrifuge dotée d'un rotor de courant libre

Publication
EP 2138723 A3 20100728 (DE)

Application
EP 09007443 A 20090605

Priority
DE 102008030112 A 20080627

Abstract (en)
[origin: EP2138723A2] The pump (1) has a free-flow impeller (3) rotatably arranged in a housing (2). A blade-less space (7) is arranged between a suction-side housing wall (6) and the impeller. An avoidance unit is provided for avoidance of separation of a flow. A single or multi-part flow influencing unit (10) is arranged at the suction-side housing and projects into the blade-less space. The flow influencing unit is provided with tearing units in the form of sharp edges and/or hardened edges. The housing wall and the influencing unit are formed as a component part of a housing cover (11).

IPC 8 full level
F04D 1/00 (2006.01); **F04D 7/04** (2006.01); **F04D 29/22** (2006.01); **F04D 29/68** (2006.01)

CPC (source: EP)
F04D 1/00 (2013.01); **F04D 7/045** (2013.01); **F04D 29/2244** (2013.01); **F04D 29/688** (2013.01)

Citation (search report)

- [XA] DE 1453735 A1 19690123 - ETA CORP
- [A] FR 2385921 A1 19781027 - KLEIN SCHANZLIN & BECKER AG [DE]
- [XD] EP 1840379 A2 20071003 - KSB AG [DE]
- [XD] DE 7636700 U1 19771006
- [A] DE 1528651 A1 19690710 - BLUM ALBERT

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 TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
EP 2138723 A2 20091230; EP 2138723 A3 20100728; EP 2138723 B1 20170913; CN 101614209 A 20091230; CN 101614209 B 20141210; DE 102008030112 A1 20091231

DOCDB simple family (application)
EP 09007443 A 20090605; CN 200910158420 A 20090626; DE 102008030112 A 20080627