

Title (en)  
Multi-layer circulation pump aggregate

Title (de)  
Mehrstufiges Kreiselpumpenaggregat

Title (fr)  
Agrégat de pompe centrifuge à plusieurs niveaux

Publication  
**EP 2228538 A1 20100915 (DE)**

Application  
**EP 09003452 A 20090310**

Priority  
EP 09003452 A 20090310

Abstract (en)  
The multi-level centrifugal pumping device has a crankshaft housing (2) and a bearing carrier (13) connected to a pump housing. The bearing carrier supports a bearing of a shaft (3). The shaft carries a rotor (4) at an engine side and a propeller (7) at the pump side. The rotor and the propeller are arranged in a pump chamber (8). The bearing carrier is formed for supporting a cast housing unit (12) with a pressure connection (11) of the pump or a lining unit made from sheet metal.

Abstract (de)  
Ein mehrstufiges Kreiselpumpenaggregat, das in gleicher Bauart mit Gussbauteilen einerseits und mit aus Blech gebildeter Edelstahlauskleidung andererseits hergestellt wird, weist einen Lagerträger (13) auf, der sowohl zum Anschluss eines Gussgehäusebauteils (12) als auch zur Aufnahme einer aus Edelstahl bestehenden Blechauskleidung ausgebildet und geeignet ist.

IPC 8 full level  
**F04D 1/06** (2006.01); **F04D 13/06** (2006.01); **F04D 29/02** (2006.01); **F04D 29/046** (2006.01); **F04D 29/42** (2006.01); **F04D 29/62** (2006.01)

CPC (source: EP US)  
**F04D 1/063** (2013.01 - EP US); **F04D 29/026** (2013.01 - EP US); **F04D 29/046** (2013.01 - EP US); **F04D 29/426** (2013.01 - EP US); **F04D 29/4266** (2013.01 - EP US); **F05D 2230/21** (2013.01 - EP US); **F05D 2230/51** (2013.01 - EP US); **F05D 2230/54** (2013.01 - EP US)

Citation (search report)

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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 2228538 A1 20100915**; **EP 2228538 B1 20150916**; CN 101832272 A 20100915; CN 101832272 B 20140409; TW 201033477 A 20100916; TW I495798 B 20150811; US 2010232951 A1 20100916; US 8568093 B2 20131029

DOCDB simple family (application)  
**EP 09003452 A 20090310**; CN 201010135622 A 20100310; TW 98121126 A 20090624; US 72086010 A 20100310