

Title (en)  
Pump and protector for a pump

Title (de)  
Pumpe und Protektor für Pumpe

Title (fr)  
Pompe et protection pour pompe

Publication  
**EP 2706239 A3 20170726 (DE)**

Application  
**EP 13180052 A 20130812**

Priority  
DE 102012108354 A 20120907

Abstract (en)  
[origin: EP2706239A2] The pump i.e. centrifugal pump (1), has a pump housing (2), and a motor shaft (5) connected with a pump impeller (6) that is arranged in the housing. The motor shaft extends through a shaft passage (4) in a rear wall (3) of the housing. The motor shaft is provided with a sliding ring sealing arrangement (8) in the rear wall. A sealing seat (9) of the sealing arrangement is arranged in a ring-shaped protector that is made from corrosion-resistant material i.e. bronze material, where the protector is fixedly arranged in the shaft passage. The housing is designed as a grey cast iron part.

IPC 8 full level  
**F04D 29/02** (2006.01); **F04D 29/12** (2006.01); **F04D 1/00** (2006.01)

CPC (source: EP US)  
**F04D 1/00** (2013.01 - EP US); **F04D 29/026** (2013.01 - EP US); **F04D 29/12** (2013.01 - US); **F04D 29/126** (2013.01 - EP US); **F05D 2260/95** (2013.01 - EP US); **F05D 2300/111** (2013.01 - EP US)

Citation (search report)

- [X] EP 1471261 A2 20041027 - GEN MOTORS CORP [US]
- [X] WO 2006008843 A1 20060126 - EBARA CORP [JP], et al
- [X] US 3604098 A 19710914 - GOLDBERG IRWIN C
- [X] EP 2145123 A1 20100120 - ROPLAN INTERNAT AB [SE]
- [A] EP 2455616 A2 20120523 - DESARROLLOS EMPRESARIALES VALAR S L [ES]

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)  
**EP 2706239 A2 20140312; EP 2706239 A3 20170726; EP 2706239 B1 20190619**; CA 2826219 A1 20140307; CA 2826219 C 20200818; DE 102012108354 A1 20140313; DE 102012108354 B4 20160512; DK 2706239 T3 20190916; ES 2744253 T3 20200224; PL 2706239 T3 20191231; US 2014072409 A1 20140313; US 9482238 B2 20161101

DOCDB simple family (application)  
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