

Title (en)

Reciprocating piston pump for transporting a liquid

Title (de)

Hubkolbenpumpe zum Fördern einer Flüssigkeit

Title (fr)

Pompe à piston éleveur destinée à l'acheminement d'un liquide

Publication

**EP 2006539 A3 20110713 (DE)**

Application

**EP 08009795 A 20080529**

Priority

DE 102007028059 A 20070619

Abstract (en)

[origin: EP2006539A2] The pump (16) has an electromagnetically drive reciprocating piston (24) mounted with a restoring spring (26), for feeding liquid. An impact damper (46) damps an impact of the piston at an end of a feed phase. A core flange (50) is situated opposite to the piston with a gap dependent on the position of the piston provided between the piston and the core flange, where a kinetic energy of the piston is absorbed primarily during an early feed interval of the feed phase by the hydraulic damping of the liquid present in the gap.

IPC 8 full level

**F04B 11/00** (2006.01); **F04B 17/04** (2006.01)

CPC (source: EP US)

**F04B 11/0016** (2013.01 - EP US); **F04B 11/0033** (2013.01 - EP US); **F04B 17/046** (2013.01 - EP US); **F04B 19/006** (2013.01 - EP US)

Citation (search report)

- [XY] DE 4205290 A1 19930826 - THOMAS TECHNIK KG GES FUER MAG [DE]
- [XY] DE 9312752 U1 19931223 - THOMAS MAGNETE GMBH [DE]
- [Y] DE 10227659 A1 20040122 - WEBASTO THERMOSYSTEME GMBH [DE]

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 MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

**EP 2006539 A2 20081224**; **EP 2006539 A3 20110713**; CN 101328875 A 20081224; CN 101328875 B 20100901;  
DE 102007028059 A1 20090305; DE 102007028059 B4 20090820; JP 2009002343 A 20090108; RU 2008124939 A 20091227;  
RU 2380571 C1 20100127; US 2008314238 A1 20081225; US 8342078 B2 20130101

DOCDB simple family (application)

**EP 08009795 A 20080529**; CN 200810128504 A 20080619; DE 102007028059 A 20070619; JP 2008158839 A 20080618;  
RU 2008124939 A 20080618; US 13310708 A 20080604