

Title (en)

Fuel pump operated by means of a shape memory material

Title (de)

Kraftstoffpumpe betätigt mittels eines Materials mit Formgedächtnis

Title (fr)

Pompe à carburant entraîné par un matériau à mémoire de forme

Publication

**EP 1813803 A1 20070801 (EN)**

Application

**EP 06425042 A 20060130**

Priority

EP 06425042 A 20060130

Abstract (en)

A fuel pump (1) for an internal combustion engine; the fuel pump (1) is equipped with at least one pumping chamber (2) with variable volume; with at least one inlet valve (3) communicating with the pumping chamber (2); with at least one outlet valve (4) communicating with the pumping chamber (2); with at least one flexible membrane (6) that delimits the pumping chamber (2); and with an actuating device (7) that acts on the flexible membrane (6) to cyclically vary the volume of the pumping chamber (2); the actuating device (7) presents at least one shape memory material (8) that modifies its geometry upon application of an external influence of a physical nature and is mechanically coupled with the flexible membrane (6), and a piloting device (9) to cyclically apply an external influence of a physical nature to the shape memory material (8).

IPC 8 full level

**F02M 59/14** (2006.01); **F02M 37/04** (2006.01); **F04B 43/00** (2006.01)

CPC (source: EP)

**F02M 37/046** (2013.01); **F04B 43/0054** (2013.01); **F05C 2251/08** (2013.01)

Citation (search report)

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- [A] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 20 10 July 2001 (2001-07-10)
- [A] PATENT ABSTRACTS OF JAPAN vol. 2002, no. 04 4 August 2002 (2002-08-04)
- [A] PATENT ABSTRACTS OF JAPAN vol. 013, no. 446 (M - 877) 6 October 1989 (1989-10-06)

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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

**EP 1813803 A1 20070801**

DOCDB simple family (application)

**EP 06425042 A 20060130**