

Title (en)

Electromagnetically driven valve and driving method of the same

Title (de)

Elektromagnetisch angetriebenes Ventil und dessen Ansteuerungsverfahren

Title (fr)

Soupape à commande électromagnétique et son procédé de commande

Publication

**EP 1752624 A1 20070214 (EN)**

Application

**EP 06015546 A 20060726**

Priority

JP 2005229605 A 20050808

Abstract (en)

An electromagnetically driven valve includes a valve element (14) that has a valve stem (12) and moves in reciprocating motion in a direction in which the valve stem (12) extends; a disc (30) that is interlocked with the valve element (14) at a driving end (32), extending to a pivoting end (33), from which a central axis(35) extends and around which the disc (30) oscillates; a coil (62) that oscillates the disc (30); a power supply (200) that supplies electric current to the coil (62); and an ECU (100) that controls the flow of current from the power supply (200) to the coil (62). During the initial period of operation of the disc, the ECU (100) controls the current so that it is supplied from the power supply (200) to the coil (62) in cycles, and in accordance with the voltage and temperature, controls the number of current cycles, the cycle length, and the value of the current.

IPC 8 full level

**F01L 9/04** (2006.01); **F01L 9/20** (2021.01)

CPC (source: EP US)

**F01L 9/20** (2021.01 - EP US); **F01L 2009/2109** (2021.01 - EP)

Citation (search report)

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- [Y] EP 1098072 A1 20010509 - MAGNETI MARELLI SPA [IT]
- [Y] US 6216653 B1 20010417 - HARA SEINOSUKE [JP], et al
- [Y] DE 19651846 A1 19980618 - FEV MOTORENTECH GMBH & CO KG [DE]
- [Y] EP 1010866 A2 20000621 - TOYOTA MOTOR CO LTD [JP]

Designated contracting state (EPC)

DE FR GB

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

**EP 1752624 A1 20070214**; CN 1912357 A 20070214; DE 602006004303 D1 20090129; EP 1840341 A2 20071003; EP 1840341 A3 20071219; EP 1840341 B1 20081217; JP 2007046499 A 20070222; US 2007028873 A1 20070208

DOCDB simple family (application)

**EP 06015546 A 20060726**; CN 200610107572 A 20060726; DE 602006004303 T 20060726; EP 07013997 A 20060726; JP 2005229605 A 20050808; US 49295006 A 20060726