

Title (en)  
Electromagnet with control cone

Title (de)  
Elektromagnet mit Steuerkonus

Title (fr)  
Électroaimant avec cône de contrôle

Publication  
**EP 1734541 A3 20070912 (DE)**

Application  
**EP 06012192 A 20060613**

Priority  
DE 102005027779 A 20050615

Abstract (en)  
[origin: EP1734541A2] The electromagnet has an anchor (2) and a coil generating a magnetic field for moving the anchor in an anchor space. The anchor is moved in the direction of a control cone (3) and a front anchor area of the anchor is immersed in the cone, where a center air gap width between the anchor and the cone changes with the immersion length of the anchor in the cone. The cone and/or the anchor has inner and mantle surfaces that are oriented parallel to a moving direction of the anchor. An independent claim is also included for a pressure control valve comprising a electromagnet.

IPC 8 full level  
**H01F 7/16** (2006.01); **H01F 7/13** (2006.01)

CPC (source: EP US)  
**H01F 7/1607** (2013.01 - EP US); **H01F 7/081** (2013.01 - EP US); **Y10T 137/86622** (2015.04 - EP US); **Y10T 137/86678** (2015.04 - EP US)

Citation (search report)

- [X] US 2005099256 A1 20050512 - SUBRAMANIAN VISWANATHAN [US], et al
- [X] EP 1507271 A2 20050216 - JAPAN AE POWER SYSTEMS CORP [JP], et al
- [A] EP 1522757 A1 20050413 - MITSUBISHI ELECTRIC CORP [JP]
- [A] US 3018035 A 19620123 - PINTON PIERRE C

Cited by  
WO2010060687A1

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 1734541 A2 20061220; EP 1734541 A3 20070912**; DE 102005027779 A1 20061228; US 2006289822 A1 20061228;  
US 7647943 B2 20100119

DOCDB simple family (application)  
**EP 06012192 A 20060613**; DE 102005027779 A 20050615; US 45230806 A 20060614