

Title (en)  
Direct current electromagnetic actuator

Title (de)  
Gleichstrom-Hubmagnet

Title (fr)  
Electro-aimant de commande à courant continu

Publication  
**EP 0644561 B1 19971126 (DE)**

Application  
**EP 94114477 A 19940914**

Priority  
• DE 4331495 A 19930916  
• DE 4416500 A 19940510

Abstract (en)  
[origin: EP0644561A1] The magnet system for lifting equipment contains a cylindrical armature, which can be moved along an axis, an exciter coil (field coil) and a magnet core system for magnetic field guidance. The magnet core system is provided with an increased cross-section, in comparison with the armature cross-section, at its points which divert the magnetic field and at which a deflection angle of the lines of magnetic force has to occur as a result of a change in direction, the purpose of this provision being to reduce the magnetic flux density at these points of the magnet core system. Furthermore, the magnet system is advantageously given a symmetrical structure such that the lifting path of the armature is situated at least approximately at the inductive centre of the exciter winding and also coincides congruently with the plane of symmetry of the magnetic energy content of the two ferromagnetic housing halves, which are of virtually the same size. Advantage: Increase in the lines of lifting force within the lifting path with the same power requirement and the same dimensions as previous magnet systems; improved efficiency both in the case of current surge operation and continuous operation. <IMAGE>

IPC 1-7  
**H01F 7/16**; **H01F 7/13**

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

CPC (source: EP)  
**H01F 7/13** (2013.01); **H01F 7/1607** (2013.01)

Citation (examination)  
EP 0296983 A1 19881228 - LEDEX INC [US]

Cited by  
US6188151B1; WO9935656A3

Designated contracting state (EPC)  
CH DE FR GB IT LI

DOCDB simple family (publication)  
**EP 0644561 A1 19950322**; **EP 0644561 B1 19971126**; DE 59404663 D1 19980108

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