Title (en)

MINIMIZING CLOSING REBOUNDING OF AN ARMATURE BY A DELAY ELEMENT IN THE RESIDUAL AIR GAP

Title (de)

MINIMIERUNG DES ANKERSCHLIEßPRELLENS DURCH EIN VERZÖGERUNGSGLIED IM RESTLUFTSPALT

Title (fr)

RÉDUCTION AU MAXIMUM DU REBONDISSEMENT LORS DE LA FERMETURE D'UNE ARMATURE PAR L'INTERMÉDIAIRE D'UN ÉLÉMENT DE TEMPORISATION DANS L'INTERSTICE D'AIR RÉSIDUEL

Publication

EP 2586042 B1 20180815 (DE)

Application

EP 11721305 A 20110524

Priority

• DE 102010030600 A 20100628
• EP 2011058405 W 20110524

Abstract (en)

[origin: WO2012000721A1] The invention relates to a solenoid valve 1 having a group 2 of magnets, a magnet coil 5 and a magnet core comprising a magnet core internal pole 3 and a magnet core external pole 4, and having an armature plate 7, 7' and also an armature pin, and also having a stop, which is formed by a residual air gap, in the region of an end face of the magnet core, wherein there is also a residual air gap between the armature and the group of magnets. According to the invention, closing rebounding of the armature is minimized in the solenoid valve 1. This is achieved by the residual air gap 18 between the magnet core external pole 4 and the outside diameter of the armature plate 7 being closed in the radial direction.

IPC 8 full level

H01F 7/16 (2006.01); **F02M 63/00** (2006.01); **F16K 31/06** (2006.01)

CPC (source: EP)

F02M 63/0017 (2013.01); **F02M 63/0021** (2013.01); **F02M 63/0073** (2013.01); **F02M 63/0075** (2013.01); **H01F 7/1638** (2013.01); F02M 2200/02 (2013.01); F02M 2200/03 (2013.01); F02M 2200/31 (2013.01); H01F 2007/1661 (2013.01)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

DE 102010030600 A1 20111229; CN 102959649 A 20130306; CN 102959649 B 20160817; EP 2586042 A1 20130501; EP 2586042 B1 20180815; JP 2013536376 A 20130919; JP 5638130 B2 20141210; RU 2013103421 A 20140910; RU 2592637 C2 20160727; WO 2012000721 A1 20120105

DOCDB simple family (application)

DE 102010030600 A 20100628; CN 201180031853 A 20110524; EP 11721305 A 20110524; EP 2011058405 W 20110524; JP 2013517125 A 20110524; RU 2013103421 A 20110524