Title (en)

Method and arrangement to decrease the risk of being caught between automatic doors

Title (de)

Verfahren und Vorrichtung zur Herabsetzung der Einklemmgefahr bei automatischen Türen

Title (fr)

Méthode et arrangement pour réduire le risque de serrage entre des portes automatiques

Publication

EP 0429835 B2 19970326 (DE)

Application

EP 90119947 A 19901018

Priority

CH 424489 A 19891127

Abstract (en)

[origin: EP0429835A1] By means of this method and the arrangement, in the case of an automatic door, especially in the case of lifts with a controlled door drive which moves doors of a cabin door by means of a motor with a reduction gear and a mechanical drive, and moves doors of a shaft door via mechanical coupling elements, protection against being caught, responding up to the last few mm of a door closing movement with constant force levels, is provided. In this case, this is done by a control error dV being continuously compared during the door closing movement with a maximum permissible control error dVmax produced by a nominal value sensor (3.5) and, if this maximum control error is exceeded, the door is stopped with subsequent reversing. The response levels for an external disturbing force (3.9) are kept constant by a calibration trip computer (3.11) determining values for mass compensation (3.12) and values for friction compensation (3.13) during periodic calibration trips and supplying these values as a compensation value Vk to a second comparator (3.2). In consequence, the magnitude of an external disturbing force (3.9) is also known, or can be measured precisely, with a defined gain of the controller (3.8) and a known torque characteristic of the DC motor (2.1), which creates the precondition for safe protection against being caught. <IMAGE>

IPC 1-7

B66B 13/26

IPC 8 full level

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CPC (source: EP US)

B66B 13/26 (2013.01 - EP US); E05Y 2400/504 (2013.01 - EP US); E05Y 2400/564 (2013.01 - EP US); E05Y 2900/104 (2013.01 - EP US)

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