Title (en)

METHOD FOR ADAPTING AN ELECTRICAL RESISTANCE VALUE OF A MAGNETIC BEARING AND FOR DETERMINING THE POSITION OF AN OBJECT MOUNTED IN A MAGNETIC BEARING IN A SENSORLESS MANNER

Title (de)

VERFAHREN ZUR ADAPTION EINES ELEKTRISCHEN WIDERSTANDSWERTES EINES MAGNETLAGERS UND ZUR SENSORLOSEN POSITIONSERMITTLUNG EINES IM MAGNETLAGER GELAGERTEN OBJEKTS

Title (fr)

PROCÉDÉ D'ADAPTATION D'UNE VALEUR DE RÉSISTANCE ÉLECTRIQUE D'UN PALIER MAGNÉTIQUE ET DE DÉTERMINATION SANS CAPTEUR DE LA POSITION D'UN OBJET LOGÉ DANS LE PALIER MAGNÉTIQUE

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Application

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Abstract (en)

[origin: WO2011120764A1] The invention relates to sensorless position determination for magnetic mounting. Magnetic mounting is used to mount an object with the aid of a magnetic field which is generally produced by an electromagnet. The position of the object relative to the bearing is of interest for controlling the bearing. The object position can be determined by estimating the inductance. The inductance is estimated with the aid of a least-squares method, wherein the electrical resistance of the bearing should be taken into account. The resistance is subject to certain variations, for example on account of temperature fluctuations. However, an incorrect resistance value is reflected in the estimated inductance error (I). A method which can be used to adapt the resistance is therefore proposed. The electrical resistance can be estimated by controlling the inductance error ?L^ to zero. In this case, the resistance adaption consists of a low-pass filter and an I controller.

IPC 8 full level

F16C 32/04 (2006.01)

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Citation (search report)

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