

Title (en)

METHOD FOR DETERMINING VIBRATION BEHAVIOR OF AN ELECTRIC MOTOR AND/OR OF ITS INSTALLATION ENVIRONMENT, AND CORRESPONDING ELECTRIC MOTOR AND FAN

Title (de)

VERFAHREN ZUM BESTIMMEN EINES SCHWINGUNGSVERHALTENS EINES ELEKTROMOTORS UND/ODER DESSEN EINBAUUMGEBUNG, SOWIE ENTSPRECHENDER ELEKTROMOTOR UND VENTILATOR

Title (fr)

PROCÉDÉ DE DÉTERMINATION DU COMPORTEMENT VIBRATOIRE D'UN MOTEUR ÉLECTRIQUE ET/OU DE SON ENVIRONNEMENT D'INSTALLATION, MOTEUR ÉLECTRIQUE ET VENTILATEUR CORRESPONDANTS

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Abstract (en)

[origin: WO2022233373A1] The invention relates to a method for determining vibration behavior of an electric motor (1), more particularly an electric motor of a fan, and/or of its installation environment, wherein rotational motion of a rotor of the electric motor can be braked in a braking operation. The method comprises the steps of: • producing a jerk by triggering a braking operation or an accelerating operation or by changing a braking operation or an accelerating operation, • producing (S3) sensed vibration values by sensing vibrations of at least one part of the electric motor by means of at least one vibration sensor (9), • determining (S4) spectral components by means of a frequency analysis of the sensed vibration values, and • determining (S5) vibration behavior of the electric motor and/or of its installation environment by evaluating the spectral components. The invention also relates to a corresponding electric motor (1), to a fan, and to a system, which can each be designed to carry out the method.

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