

Title (en)

STATOR FRAME FOR MEDIUM AND LARGE ROTATING ELECTRICAL MACHINES FOR NOISE REDUCTION

Title (de)

STÄNDERGEHÄUSE FÜR MITTLERE UND GROßE ROTIERENDE ELEKTRISCHE MASCHINEN ZUR SCHALLREDUKTION

Title (fr)

BOÎTIER PORTEUR DE RÉDUCTION DU BRUIT POUR MOYENNES ET GRANDES MACHINES ÉLECTRIQUES TOURNANTES

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Application

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Abstract (en)

[origin: WO2017157384A1] The invention relates to a stator frame for a medium or large electrical machine for noise reduction. The problem to be solved by the invention is the creating of a stator frame (1) for a medium or large rotating electrical machine for noise reduction that enables both very high mechanical stiffness and a certain elasticity, is simple in design, inexpensive to produce, and can be used universally in electrical machines of different sizes. In the stator frame (1), specially designed elastic elements are arranged in the partition walls (4) of the thereby reinforced stator frame (1) for noise reduction, as vibration-reducing elements. Open slots (4f) are arranged in the partition walls (4) of the stator frame (2) on a radius, distributed regularly or irregularly in a circular shape, such that a certain number of directed webs (4c) are formed between an inner ring (4a) and an outer region of the partition wall (4e). Said directed webs (4c) have effect as elastic elements by means of the open slots (4f) in the radial direction; that is, they dampen or decouple vibrations, while the directed webs (4c), in contrast, considered in the circumferential direction, i.e. in the tangential or nearly tangential direction, transfer the tensile stress waves and torque oscillations coming from the stator plate pack to the outside, to the outer, more stable parts, i.e. to the outer region of the partition wall (4e) of the solid stator frame (1). Furthermore, the partition walls in the outer regions (4e) are reinforced by material, or additional, supplemented masses are arranged. The invention can be used for medium and large rotating electrical machines in the power range greater than 200 KW.

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Citation (search report)

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