Title (en)

MAGNETODYNAMIC MOTOR

Title (de)

MAGNETODYNAMISCHER MOTOR

Title (fr)

MOTEUR MAGNETODYNAMIQUE

Publication

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Application

EP 01921090 A 20010420

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Abstract (en)

[origin: WO0227902A1] The invention relates to a novel, magnetodynamic motor, comprising a static part or stator and a part that can rotate about a shaft (16) or rotor. One of the parts is provided with excitation magnets (18; 19) that are alternately polarised and have an air gap, or distance between the pole faces and the other part is provided with magnetic drive means or working magnets (21, 22). Each drive unit, consisting of excitation magnets (18, 19) and drive means (21, 22) that are magnetically interactive along a pole division, is composed of at least two subsystems which are arranged at unequal radial distances in relation to the rotor shaft (16). The pole arc lengths of the excitation magnets (18, 19) and the magnetic drive means (21, 22) correspond at least approximately to the difference between the radii of the subsystems. In addition, means are provided for the synchronous polarity reversal of the magnetic drive means (21, 22) during the pole passage of the excitation magnets (18, 19). The excitation magnets and the magnetic drive means are proportioned with regard to field strengths and dimensions in such a way that the magnetic interactions which occur during a polarity reversal change at least partially counterbalance each other in a radial direction, whereas in an azimuthal direction the effect of the external system exceeds the opposite effect of the internal system in proportion to the difference between their radii, so that an equidirectional torque is produced.

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