

Title (en)

MULTIPHASE MULTIPOLE HIGH SPEED LINEAR OR ROTATIONAL SYNCHRONOUS MOTOR

Title (de)

MEHRPHASIGER, VIELPOLIGER, SCHNELLLAUFENDER LINEAR- ODER ROTATIONSSYNCHRONMOTOR

Title (fr)

MOTEUR SYNCHRONE ROTATIF OU LINEAIRE POLYPHASE, MULTIPOLAIRE ET A GRANDE VITESSE

Publication

**EP 1618646 A1 20060125 (DE)**

Application

**EP 04763714 A 20040802**

Priority

- EP 2004008645 W 20040802
- DE 10335792 A 20030805

Abstract (en)

[origin: WO2005018073A1] The invention relates to a multiphase, multipole, high speed, linear, or rotating synchronous motor with a primary piece, comprising a preferably laminated yoke with a number of teeth with teeth crowns and slots, located between the same, with pole or armature windings, or corresponding winding packets located in the slots, a secondary piece, embodied essentially opposite the primary piece and a number of permanent magnets of alternating polarity arranged on a common return plate. The slot outlets have an essentially uniform slot distribution  $T_n$  and the permanent magnet poles have an essentially uniform pole distribution  $T_p$  and several windings running in adjacent grooves are connected to the same supply. According to the invention, several windings running in adjacent slots are connected with the same electrical motor phase and flow and the windings corresponding to the same motor phase are connected in series. Also, the winding direction and the flow direction alternate from slot to slot. Each winding is embodied as a tooth winding enclosing a tooth and has  $n$  windings. The ratio between slot distribution  $T_n$  and pole distribution  $T_p$  is selected to be approximately 1 and the same arrangement of teeth and permanent magnets is first repeated over a number of teeth.

IPC 1-7

**H02K 21/16**; **H02K 29/03**

IPC 8 full level

**H02K 21/16** (2006.01); **H02K 41/03** (2006.01)

CPC (source: EP)

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Citation (search report)

See references of WO 2005018073A1

Citation (examination)

WO 0211268 A1 20020207 - VON ROLL ISOLA WINDING SYSTEMS [DE], et al

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