Title (en)

MOTOR DEVICE WITH THERMOSIPHON COOLING OF ITS SUPERCONDUCTIVE ROTOR WINDING

Title (de)

MASCHINENEINRICHTUNG MIT THERMOSYPHON-KÜHLUNG IHRER SUPRALEITENDEN ROTORWICKLUNG

Title (fr)

DISPOSITIF MECANIQUE A REFROIDISSEMENT DE SON ENROULEMENT ROTORIQUE SUPRACONDUCTEUR PAR THERMOSIPHON

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2006082138A1] The motor device comprises a motor (2) with a rotor (5) rotating about an axis (A), the superconductive winding (10) of which is coupled to a central refrigerant cavity (12) via a winding support (9) in a thermally conductive manner. The rotor cavity (12) forms a tube system, together with the line sections (22) laterally connected thereto and a condenser chamber (18) of a refrigeration unit (15), located outside the motor (2), in which a refrigerant (k, k') circulates as result of a thermosiphon effect. According to the invention, the refrigerant supply to the central rotor cavity (12) is maintained, even with inclined positions (d) of the rotor (5), when the rotor cavity (12) is provided with a lining (25) from a porous material, preferably a sintered metal, of high thermal conductivity.

IPC 8 full level

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CPC (source: EP KR US)

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