

Title (en)

SOFT MAGNETIC POWDER COMPOSITE MATERIAL, METHOD FOR THE PRODUCTION THEREOF AND USE OF THE SAME

Title (de)

WEICHMAGNETISCHER PULVERVERBUNDWERKSTOFF; VERFAHREN ZU DESSEN HERSTELLUNG UND DESSEN VERWENDUNG

Title (fr)

MATIERE COMPOSITE EN POUDRE MAGNETIQUE DOUCE, SES PROCEDES DE PRODUCTION ET D'UTILISATION

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Application

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Abstract (en)

[origin: WO03105161A1] The invention relates to a soft magnetic powder composite material consisting of at least 99.4 mass % of a pure iron powder, a phosphated iron powder or an iron alloy powder and between 0.05 mass % and 0.6 mass % of a soft ferrite powder. Said soft magnetic powder composite material is especially suitable for using in rapidly switching electrovalves in the engines of motor vehicles. The invention also relates to a method for producing one such powder composite material, comprising the following steps: a) a starting mixture is prepared, consisting of a pure iron powder, a phosphated iron powder or an iron alloy powder and a soft ferrite powder, b) the starting mixture is mixed, c) the starting mixture is compressed in a press under high pressure, d) the compressed starting mixture is released in an inert gas atmosphere or a gas atmosphere containing oxygen, and e) the compressed starting mixture is subjected to heat treatment in an oxidising gas atmosphere at a temperature of between 410 DEG C and 500 C.

IPC 8 full level

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