

Title (en)

RECYCLING METHOD FOR PRODUCING MAGNETIC ISOTROPIC POWDERS

Title (de)

RECYCLINGVERFAHREN ZUR HERSTELLUNG ISOTROPER, MAGNETISCHER PULVER

Title (fr)

PROCÉDÉ DE RECYCLAGE POUR LA FABRICATION DE POUDRE ISOTROPE MAGNÉTIQUE

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Application

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Abstract (en)

[origin: WO2018041776A1] The invention relates to a recycling method for producing magnetic isotropic powders, having the following steps: a) providing a magnetic alloy which comprises a1) at least one rare-earth metal, a2) at least one transition metal, and a3) boron; b) hydrogenating the alloy from step a) in a hydrogen-containing atmosphere at temperatures ranging from 0 to 600 °C and at a hydrogen partial pressure ranging from 10,000 to 15,000,000 Pa, thereby forming monocrystalline particles; c) disproportioning the particles from step b) in a hydrogen-containing atmosphere at temperatures ranging from more than 600 to 1,000 °C at a hydrogen partial pressure ranging from 30,000 to 1,000,000 Pa; and d) desorbing and subsequently recombining the hydrogen, thereby forming isotropic powder particles; wherein the alloy provided in step a) is partly or completely scrap magnetic material. The invention additionally relates to the powders which can be produced using said method and to the use thereof.

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