

Title (en)

METHOD FOR RECYCLING MAGNETS OF NDFEB TYPE, ANISOTROPIC POWDER RESULTING FROM THE RECYCLING, AND METHOD FOR PRODUCING A PERMANENT MAGNET FROM SAID POWDER

Title (de)

VERFAHREN ZUM RECYCELN VON NDFEB-MAGNETEN, AUS DEM RECYCELN RESULTIERENDES ANISOTROPES PULVER UND VERFAHREN ZUR HERSTELLUNG EINES PERMANENTMAGNETEN AUS DEM PULVER

Title (fr)

PROCEDE DE RECYCLAGE D'AIMANTS DE TYPE NDFEB, POUDRE ANISOTROPE ISSUE DU RECYCLAGE ET PROCEDE D'ELABORATION D'UN AIMANT PERMANENT A PARTIR DE LADITE POUDRE

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Application

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Abstract (en)

[origin: WO2022238642A1] The invention relates to a method for recycling NdFeB magnets, comprising the following steps: a) recovering waste containing solid NdFeB magnets to be recycled; b) preheating the waste to a preheat temperature of between 300°C and 500°C under an inert atmosphere, in a first chamber raised to the preheat temperature in a first station equipped with heating means; c) decrepitating using hydrogen, this operation being applied to the hot waste from step b), in a second chamber positioned in a second station distinct from the first station and equipped with a source of hydrogen and with pumping means, the decrepitation being performed at a temperature of between 200°C and 500°C, said temperature in the second chamber being maintained in this temperature range as a result of the exothermal nature of the reaction of hydriding the NdFeB magnets, the step c) leading to the formation of a first powder with particles containing a main phase consisting of Nd₂Fe₁₄B and/or an inter-granule a secondary phase, and having a particle size less than or equal to 5 mm.

IPC 8 full level

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