

Title (en)  
CORROSION-RESISTANT SINTERED NEODYMIUM-IRON-BORON MAGNET RICH IN LANTHANUM AND CERIUM, AND MANUFACTURING METHOD

Title (de)  
KORROSIONSBESTÄNDIGER GESINTERTER NEODYM-EISEN-BOR-MAGNET MIT HOHEM LANTHAN- UND CER-GEHALT SOWIE HERSTELLUNGSVERFAHREN

Title (fr)  
AIMANT NÉODYME-FER-BORE FRITTÉ RÉSISTANT À LA CORROSION RICHE EN LANTHANE ET EN CÉRIUM, ET PROCÉDÉ DE FABRICATION

Publication  
**EP 3355319 A1 20180801 (EN)**

Application  
**EP 16874635 A 20161013**

Priority  
• CN 201510943615 A 20151216  
• CN 2016101950 W 20161013

Abstract (en)  
The present invention discloses a corrosion-resistant sintered NdFeB magnet and a manufacturing method. The method comprises the following operation steps: preparing a NdFeB rare earth permanent magnet material alloy; preparing an alloy material rich in Co; breaking the NdFeB rare earth permanent magnet material alloy; uniformly mixing the prepared alloy material rich in Co into NdFeB rare earth permanent magnet material alloy powder according to a certain mass percentage; pressing and molding the mixed alloy powder into a blank in an oriented magnetic field # ¥1.5T under the protection of a nitrogen atmosphere; placing the molded blank in a high-vacuum sintering furnace for high-temperature sintering, and performing a two-stage tempering process to obtain the corrosion-resistant sintered NdFeB magnet. The present invention has the beneficial effects that more Co elements in the magnet are distributed on a grain boundary of the magnet through the innovation of the manufacturing method, and the corrosion resistance of the magnet is improved on the basis of ensuring the magnetic property of the magnet.

IPC 8 full level  
**H01F 1/057** (2006.01); **B22F 3/02** (2006.01); **B22F 3/10** (2006.01); **H01F 41/02** (2006.01)

CPC (source: CN EP)  
**B22F 3/02** (2013.01 - CN EP); **B22F 3/10** (2013.01 - CN EP); **H01F 1/0571** (2013.01 - CN); **H01F 1/0575** (2013.01 - CN); **H01F 1/0577** (2013.01 - EP); **H01F 41/0253** (2013.01 - EP); **H01F 41/0266** (2013.01 - CN)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3355319 A1 20180801**; **EP 3355319 A4 20190522**; **EP 3355319 B1 20220223**; CN 105427994 A 20160323; CN 105427994 B 20180406; WO 2017101577 A1 20170622

DOCDB simple family (application)  
**EP 16874635 A 20161013**; CN 201510943615 A 20151216; CN 2016101950 W 20161013