

Title (en)  
PERMANENT MAGNETIC MATERIAL AND METHOD FOR PRODUCING THE SAME

Publication  
**EP 0249973 B1 19911106 (EN)**

Application  
**EP 87108724 A 19870616**

Priority  
• JP 8902887 A 19870411  
• JP 13965086 A 19860616

Abstract (en)  
[origin: EP0249973A1] A permanent magnetic material of a desired bulk shape is obtained which comprises a composite microstructure consisting of magnetic particles of Nd<sub>2</sub>Fe<sub>14</sub>B dispersed within a metallic cementing phase of 10% or less by volume of the magnetic material. A magnetic powder is prepared from an alloy comprising Nd<sub>2</sub>Fe<sub>14</sub>B compound and is mixed with an alloy powder having a melting point lower than the peritectic temperature of Nd<sub>2</sub>Fe<sub>14</sub>B, and the mixed powder is sintered at a temperature higher than the melting point but lower than the peritectic temperature, so that the alloy powder melts and forms the cementing phase covering each magnetic particle to thereby realize high coercive force and excellent corrosion resistance. In place of Nd, other rare earth metal or metals can be used. A part of Fe can be replaced by other transition metal or metals. For the cementing metallic element or elements, Al, Zn, Sn, Cu, Pb, S, In, Ga, Ge, and Te can be used.

IPC 1-7  
**H01F 1/08**

IPC 8 full level  
**B22F 1/00** (2006.01); **H01F 1/057** (2006.01)

CPC (source: EP US)  
**B22F 1/09** (2022.01 - EP US); **H01F 1/0577** (2013.01 - EP); **H01F 1/0578** (2013.01 - EP US)

Cited by  
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Designated contracting state (EPC)  
DE FR

DOCDB simple family (publication)  
**EP 0249973 A1 19871223; EP 0249973 B1 19911106**; DE 3774333 D1 19911212

DOCDB simple family (application)  
**EP 87108724 A 19870616**; DE 3774333 T 19870616