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(71) Applicant: **Nippon Steel Corporation**  
**6-3, 2-chome, Ote-machi**

**Chiyoda-ku Tokyo 100(JP)**

(72) Inventor: **Nishida, Tokuhiko, c/o Nippon Steel Corporation**  
**R & D Laboratories-I, 1618, Ida, Nakahara-ku**  
**Kawasaki City, Kanagawa Prefecture(JP)**  
Inventor: **Yamamiya, Masao, c/o Nippon Steel Corporation**  
**R & D Laboratories-I, 1618, Ida, Nakahara-ku**  
**Kawasaki City, Kanagawa Prefecture(JP)**

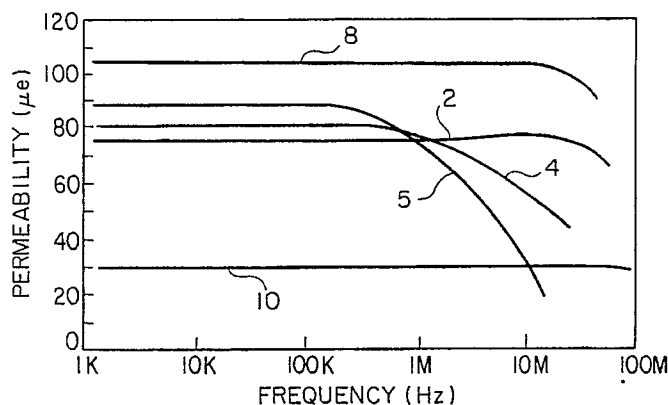
(74) Representative: **Vossius & Partner**  
**Siebertstrasse 4 P.O. Box 86 07 67**  
**W-8000 München 86(DE)**

(54) **Iron-silicon alloy powder magnetic cores and method of manufacturing the same.**

(57) An Fe-Si alloy powder magnetic core comprises an alloy powder of an average particle diameter of 10-100  $\mu\text{m}$ , produced by water atomization, in which the composition by weight of the alloy powder is 2-

12% silicon and 0.05-0.95% oxygen with the balance being essentially iron. The process of manufacturing the powder magnetic core is also disclosed.

**FIG. 1**



No. 2 AND 8 ARE THE PRESENT INVENTION.  
No. 4, 5 AND 10 ARE FOR COMPARISON.  
No. 4; SENDUST, No. 5; PURE IRON, No. 10 IRON CARBONYL

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## EUROPEAN SEARCH REPORT

Application Number

EP 90 10 0930

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
Y,A	EP-A-0 088 992 (ASEA AB) * claim 1 ** page 3, lines 13 - 21 * - - -	1,2	H 01 F 1/20 H 01 F 1/26
Y	PATENT ABSTRACTS OF JAPAN vol. 9, no. 212 (E-339) 29 August 1985, & JP-A-60 074602 (NIHON FERRITE KK) 26 April 1985, * the whole document * - - -	1	
A	PATENT ABSTRACTS OF JAPAN vol. 9, no. 212 (E-339) 29 August 1985, & JP-A-60 074603 (NIHON FERRITE KK) 26 April 1985, * the whole document * - - -	1	
A	EP-A-0 135 980 (CRUCIBLE MATERIALS CORP.) * claims 1, 5, 8, 9 * - - -	1,2	
A	EP-A-0 087 781 (TOKYO SHIBAURA DENKI K.K.) * claims 1, 4, 6 ** page 6, lines 21 - 29 ** page 7, lines 1 - 11 * - - - - -	1,3,5	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			H 01 F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of search 17 April 91	Examiner DECANNIERE L.J.
<div>CATEGORY OF CITED DOCUMENTS</div> <div>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention</div> <div>E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- &amp; : member of the same patent family, corresponding document</div>			