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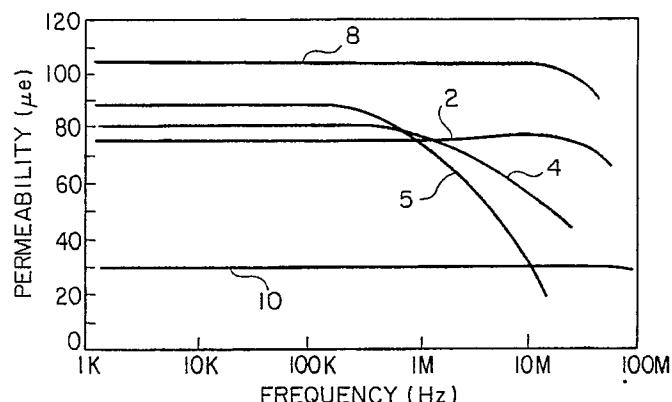
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### (54) Iron-silicon alloy powder magnetic cores and method of manufacturing the same.

(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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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	Date of completion of search	Examiner
The Hague	17 April 91	DECANNIERE L.J.
CATEGORY OF CITED DOCUMENTS		
X: particularly relevant if taken alone		E: earlier patent document, but published on, or after the filing date
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T: theory or principle underlying the invention		&: member of the same patent family, corresponding document