

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: **87310200.8**

(51) Int. Cl.⁵: **H01F 1/04**

(22) Date of filing: **19.11.87**

(30) Priority: **04.02.87 US 10738**

(43) Date of publication of application:
10.08.88 Bulletin 88/32

(84) Designated Contracting States:
AT BE CH DE ES FR GB GR IT LI LU NL SE

(88) Date of deferred publication of the search report:
16.05.90 Bulletin 90/20

(71) Applicant: **CRUCIBLE MATERIALS CORPORATION**
P.O. Box 88 Parkway West & Route 60
Pittsburgh Pennsylvania 15230(US)

(72) Inventor: **Ma, Bao-Min**
2000 Westpointe Drive
Homestead Pennsylvania 15205(US)
Inventor: **Narasimhan, K.S.V.L.**
131 Mayberry Drive
Monroeville Pennsylvania 15146(US)

(74) Representative: **Sheader, Brian N. et al**
ERIC POTTER & CLARKSON 27 South Street
Reading Berkshire, RG1 4QU(GB)

(54) **Permanent magnet alloy for elevated temperature applications.**

(57) A permanent magnet alloy comprises $R_2Fe_{14}B$, wherein, R is a combination of rare earth elements consisting essentially of, in atomic percent, neodymium 1 to 11 and balance holmium. The alloy may include optional additions of the rare earth elements gadolinium up to 10%, perbium up to 15%, dysprosium up to 16%, erbium up to 18% and thulium up to 13%.

EP 0 277 416 A3



EP 87 31 0200

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.4)
A	EP-A-0 134 305 (SUMITOMO SPECIAL METALS CO., LTD) * Claim 1; page 6, paragraph 4 - page 7, paragraph 1; page 15, paragraph 2; page 21, table 1, no. 9; page 22, table 2, no. 9 *	1-4	H 01 F 1/04
A	EP-A-0 185 439 (CRUCIBLE MATERIALS CORP.)		
A	PATENT ABSTRACTS OF JAPAN, vol. 10, no. 367 (E-462)[2424], 9th December 1986; & JP-A-61 164 206 (SEIKO INSTR. & ELECTRONICS LTD) 24-07-1986		
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			H 01 F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 16-02-1990	Examiner DECANNIERE L.J.
CATEGORY OF CITED DOCUMENTS 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 E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			