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(54) **Permanent magnet containing rare earth metal, boron and iron.****EP 0 632 471 A3**

(57) A permanent magnet is obtained by pulverizing, molding and sintering a starting material containing an alloy ingot. The alloy ingot contains not less than 90% by volume of prismatic crystals each having a prismatic crystal grain size of 0.1 to 50 μm along a short axis thereof and a prismatic crystal grain size of larger than 100 μm and not larger than 300 μm along a long axis thereof, and is obtained by uniformly solidifying by a single roll method a molten alloy containing 25 to 31% by weight of a rare earth metal, 0.5 to 1.5% by weight of boron and iron under cooling conditions of a cooling rate of higher than 500 °C/sec. and not higher than 10,000 °C/sec. and a

supercooling degree of 50 to 500 °C.



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EUROPEAN SEARCH REPORT

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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	IEEE TRANSACTIONS ON MAGNETICS., vol.23, no.5, September 1987, NEW YORK US pages 3605 - 3606 D.DADON ET AL * the whole document * ---	1,2,5,6	H01F1/053
Y	PATENT ABSTRACTS OF JAPAN vol. 16, no. 423 (E-1260) 7 September 1992 & JP-A-04 147 605 (HITACHI METALS LTD.) 21 May 1992 * abstract *	1,2,5,6	
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A	PATENT ABSTRACTS OF JAPAN vol. 14, no. 326 (C-740) 12 July 1990 & JP-A-02 118 054 (SEIKO EPSON CORP.) 2 May 1990 * abstract *	1,3,4	
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A	PATENT ABSTRACTS OF JAPAN vol. 12, no. 362 (E-663) 28 September 1988 & JP-A-63 115 304 (TDK CORP) 19 May 1988 * abstract *		TECHNICAL FIELDS SEARCHED (Int.Cl.5)
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A	APPLIED PHYSICS LETTERS, vol.59, no.16, 14 August 1991, NEW YORK US pages 2046 - 2048 T-S.CHIN ET AL ---		
P,X	EP-A-0 556 751 (SANTOKU METAL INDUSTRY CO.) * page 4, line 2 - line 29 * * page 5, line 2 - line 8; claims 1,2,4,5 * -----	1	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 8 December 1994	Examiner DECANNIERE, L
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	