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Datasheet for the decision of 10 July 2018

Case Number: T 2235/13 - 3.3.05

Application Number: 11005769.2

Publication Number: 2378519

IPC: G11B5/706, C01G49/00, C01G51/00, H01F1/113, C04B35/26

Language of the proceedings: EN

Title of invention:
Oxide magnetic material

Applicant:
Hitachi Metals, Ltd.

Headword:
Sintered magnet/HITACHI

Relevant legal provisions:
EPC Art. 123(2)

Keyword:
Amendments - extension beyond the content of the application as filed (yes)

Decisions cited:
G 0002/12

Catchword:

Europäisches Patentamt
European Patent Office
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Beschwerdekammern

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Case Number: T 2235/13 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 10 July 2018

Appellant: (Applicant)	Hitachi Metals, Ltd. 2-1 Shibaura 1-chome Minato-ku Tokyo 105-8614 (JP)
Representative:	Grünecker Patent- und Rechtsanwälte PartG mbB Leopoldstraße 4 80802 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 7 June 2013 refusing European patent application No. 11005769.2 pursuant to Article 97(2) EPC**

Composition of the Board:

Chairman	E. Bendl
Members:	J.-M. Schwaller
	S. Fernández de Córdoba

Summary of Facts and Submissions

I. This appeal lies from the decision of the examining division to refuse European patent application No. 11 005 769.2 on the ground that claim 1 of both requests then on file did not meet the requirements of Article 123(2) EPC.

II. In a communication expressing its preliminary opinion, the board confirmed the opposition division's findings.

III. By letter of 22 November 2017, the appellant filed three sets of amended claims as new main, first and second auxiliary requests.

Claim 1 of the main request reads as follows:

"1. A sintered magnet including a ferrite with a hexagonal structure as its main phase, wherein metallic elements included in the sintered magnet are represented by the formula:
$Ca_{1-x-x'}La_xSr_{x'}Fe_{2n-y}Co_y$, where atomic ratios x, x' and y and a molar ratio n satisfy
$0.32 \leq x \leq 0.6$,
$0.008 \leq x' \leq 0.33$,
$0.16 \leq y \leq 0.45$, and
$4.3 \leq n \leq 5.8$, respectively
wherein the sintered magnet is obtainable from an oxide magnetic material including a ferrite with a hexagonal structure as its main phase, wherein metallic elements included in the oxide magnetic material are represented by the formula:
$Ca_{1-x-x'}La_xSr_{x'}Fe_{2n-y}Co_y$, where atomic ratios x, x' and y and a molar ratio n satisfy
$0.4 \leq x \leq 0.6$,
$0.01 \leq x' \leq 0.3$,

0.2 ≤ y ≤ 0.45,
x/y ≥ 1.3, and
5.2 ≤ n ≤ 5.8, respectively,
wherein Ca/Sr ≥ 1, and
with a proviso for the sintered magnet that, if x is equal to or greater than 0.47, the range in which 0.17 x' ≥ -0.25 x + 0.1367 is satisfied, is excluded."

Claim 1 of the first auxiliary request differs from the above claim in that "*the oxide magnetic material is a Ca-dominant oxide magnetic material with regard to the portions of Ca and Sr*" replaces "Ca/Sr ≥ 1".

Claim 1 of the second auxiliary request reads as follows (amendments with regard to claim 1 of the main request highlighted by the board):

"1. A sintered magnet including a ferrite with a hexagonal structure as its main phase, wherein metallic elements included in the sintered magnet are represented by the formula:
$Ca_{1-x-x'}La_xSr_{x'}Fe_{2n-y}Co_y$*, where atomic ratios x, x' and y and a molar ratio n satisfy*
0.32 ≤ x ≤ 0.6,
0.008 ≤ x' ≤ 0.33,
0.16 ≤ y ≤ 0.45, and
4.3 ≤ n ≤ 5.8, respectively,
wherein the sintered magnet is obtainable from an oxide magnetic material including a ferrite with a hexagonal structure as its main phase, wherein metallic elements included in the oxide magnetic material are represented by the formula:
$Ca_{1-x-x'}La_xSr_{x'}Fe_{2n-y}Co_y$*, where atomic ratios x, x' and y and a molar ratio n satisfy*
*0.4**5*** ≤ x ≤ 0.***58***,*
*0.01 ≤ x' ≤ 0.***2***,*

0.2 ≤ y ≤ 0.45,
x/y ≥ 1.3, and
5.2 ≤ n ≤ 5.8, respectively,
~~*wherein Ca/Sr ≥ 1, and*~~
with a proviso that, if x is equal to or greater than 0.47, the range in which 0.17 x' ≥ -0.25 x + 0.1367 is satisfied, is excluded."

IV. At the oral proceedings, the discussion focused on issues relating to Articles 123(2) and 84 EPC (clarity regarding the expression "is obtainable from").

V. The appellant's final request was that the decision under appeal be set aside and that a patent be granted on the basis of the main request or, alternatively, of the first or second auxiliary request filed by letter of 22 November 2017.

Reasons for the Decision

1. Main request - amendments

1.1 Claim 1 is defined as a product-by-process claim, which thus defines a product in terms of the method (manipulative steps) used to manufacture that product (see also G 2/12, Reasons IV(4)).

1.2 The wording of current claim 1 in essence corresponds to a combination of several distinct embodiments, more specifically to a combination of embodiment 18 as originally filed (directed to the sintered magnet), embodiment 1 as originally filed (directed to the oxide magnetic material) and embodiment 7 as originally filed (defining the specific ratio x/y ≥ 1.3), and of the

feature "Ca/Sr ≥ 1" disclosed inter alia in paragraph [0040] of the application as originally filed.

1.3 However, the amendment by which these individual embodiments are linked together, namely the feature "wherein the sintered magnet is obtainable from an oxide magnetic material ...", has no basis as such - i.e. in these broad terms - in the application documents as filed, as will be explained below.

1.4 In the case at hand, the atomic ratios x, x' and y of the starting material (the oxide magnetic material) and the final product (the sintered magnet) are different. Therefore it is clear that a material was added before the final sintered magnet was obtained. The only elements influencing the x, x' and y values are Ca, La and Sr (see the formula $Ca_{1-x-x'}La_xSr_{x'}Fe_{2n-y}Co_y$). Embodiments 1 and 18 mentioned above describe two distinct preparations, which may for instance both be sintered magnets (see embodiments 10 and 18). Thus, it cannot be concluded that one of the embodiments necessarily forms the starting material while the other represents the final product.

1.5 Paragraph [0075], the only passage describing a possible link between the oxide magnetic material and the final sintered magnet as claimed, specifies that if $CaCO_3$ and $SrCO_3$ are used as additives, they have to be added in specific amounts to result in the final claimed product: the sintered magnet is made by adding at least one of 1.8 mass% or less of $CaCO_3$, 0.5 mass% or less of $SrCO_3$ and 1.0 mass% or less of SiO_2 to the calcined body. However, such a restriction with regard to $CaCO_3$ and $SrCO_3$ is not included in claim 1.

Since at least these features at issue, which are inextricably linked to the preparation of the claimed sintered magnet, have been omitted from the newly proposed claims, the subject-matter of claim 1 at issue is broader than the content of the application as filed, since it includes embodiments which were not disclosed in the application documents as filed, contrary to the requirements of Article 123(2) EPC.

2. Auxiliary requests 1 and 2 - amendments

As claim 1 of both these requests includes the amendment that "the sintered magnet is obtainable from an oxide magnetic material ...", the same remarks as above apply to these requests, which therefore likewise infringe the requirements of Article 123(2) EPC.

3. As none of the sets of claims underlying the proposed requests meets the requirements of the EPC, the appeal cannot succeed and the decision to refuse the application is upheld.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

D. Magliano E. Bendl

Decision electronically authenticated