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**D E C I S I O N**  
**of 10 April 2003**

**Case Number:** T 0364/01 - 3.4.1

**Application Number:** 90307445.8

**Publication Number:** 0407227

**IPC:** G01R 33/38

**Language of the proceedings:** EN

**Title of invention:**

Magnetic field generating device for MRI

**Applicant:**

SUMITOMO SPECIAL METAL CO., LTD.

**Opponent:**

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**Headword:**

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**Relevant legal provisions:**

EPC Art. 111(1), 123(2)

**Keyword:**

"EPC Art. 123(2) Amendments - added subject-matter (yes)"

**Decisions cited:**

-

**Catchword:**

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Case Number: T 0364/01 - 3.4.1

**D E C I S I O N**  
**of the Technical Board of Appeal 3.4.1**  
**of 10 April 2003**

**Appellant:** SUMITOMO SPECIAL METAL CO., LTD.  
7-19, 4-chome, Kitahama  
Chuo-ku  
Osaka City,  
Osaka (JP)

**Representative:** Butler, Lance  
Barker Brettell  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 31 October 2000  
refusing European patent application  
No. 90 307 445.8 pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** G. Davies  
**Members:** G. Assi  
M. G. L. Rognoni

## Summary of Facts and Submissions

I. The appellant (applicant) lodged an appeal, received on 27 December 2000, against the decision of the examining division, dispatched on 31 October 2000, refusing the European patent application No. 90 307 445.8 (publication number 0 407 227). The fee for the appeal was paid on 28 December 2000. The statement setting out the grounds of appeal was received on 27 February 2001.

In its decision, the examining division had held that the application did not meet the requirements of Articles 123(2), 83, 54 and 56 EPC.

II. Oral proceedings were held on 10 April 2003.

At the oral proceedings, the appellant requested that the decision under appeal be set aside and the case be remitted to the examining division for further prosecution on the basis of claim 1 submitted at the oral proceedings and claims 2 to 5 filed with letter of 15 March 1995 and for granting a patent.

Moreover, with the notice of appeal, the appellant requested the reimbursement of the appeal fee.

III. The wording of claim 1 reads as follows:

*"A method of adjusting the field intensity in the working gap of a magnetic field generating device for MRI, the device having a pair of permanent magnet assemblies (1) having the same magnetizing direction and different magnetic pole pieces (2) being arranged oppositely to each other, the assemblies (1) being disposed opposite one another to form a working gap (7)*

therebetween, yokes (4, 5, 6) for magnetically linking the pair of assemblies (1), and the magnetic pole pieces (2) being fixed to air gap confronting surfaces of the assemblies (1) to generate magnetic fields within the air gap (7), said opposed pole pieces being circular and in symmetry on either side of the air gap (7) so that they together define a polar axis (Z), and a plurality of magnetic field intensity modifiers comprising segments (8) of magnetic material or permanent magnet segments (9, 9'), each capable of influencing the magnetic field intensity in the gap (7), are selected and placed at chosen sites on the surfaces of each of the pole pieces (2) for the purpose of making more uniform the magnetic field intensity within the gap (7), **characterised by** the steps of:

- I. defining: (a) a notional sphere sharing the polar axis (Z) in the air gap (7), (b) a plurality of circles of latitude in planes (Pa - Pg) at the surface of that sphere, and (c) a plurality of points equi-spaced around each circle of latitude,
- II. initially measuring the magnetic field at every such point on each such circle of latitude at the surface of the notional sphere in order to acquire a chart of the magnetic field intensity in the gap (7),
- III. placing said magnetic field intensity modifiers at selected locations on the circumference of a plurality of circles having different diameters on a surface of said pair of pole pieces, the circles being concentric with said polar axis;
- IV. taking measurements at such measurement points on the surface of the notional sphere in order to obtain a chart of the magnetic field intensity to

*determine the effect of such placement, and **characterised by** the steps of adjusting the magnetic field strength in accordance with the measurements carried out in IV by placing selected magnetic field intensity modifiers at the selected locations as defined in III on the surfaces of the said pair of pole pieces on circles concentric with the polar axis (Z) and concentric with or of the same diameter as the circles defined by the latitudinal planes on the notional sphere."*

### **Reasons for the Decision**

1. The appeal is admissible.
2. *Remittal of the case to the first instance*

With the statement setting out the grounds of appeal, the appellant filed an amended claim 1 and requested that the case be remitted to the examining division for further prosecution. The new claim was filed "*in an endeavour to clarify the invention further*" (see the grounds of appeal, page 16, lines 12 to 15) in view of the objections raised in the decision under appeal. At the oral proceedings, the appellant filed a further amended claim 1 and confirmed the request to remit the case.

In general, a case should be remitted for further prosecution pursuant to Article 111(1) EPC (second sentence, second alternative) if amended claims are filed, which appear to be admissible under Article 123(2) EPC and include features defining the

invention in a new way which could not have been considered by the examining division. As regards the former condition, it would not be expedient to remit the case with claims which the Board does not consider to be admissible, because this would unduly lengthen the procedure. The latter condition derives from the applicant's right to have the application examined in two instances.

In the present case, the appellant submitted that the amendments of claim 1 simply aimed at further clarifying the invention.

The Board notes that they do not involve subject-matter which is essentially different from the one already considered by the examining division. Moreover, as it results from point 3 below, they do not comply with Article 123(2) EPC which was one reason for refusing the application (see the decision under appeal, point III.1).

Thus, for these reasons and also in view of the fact that, in the course of the procedure, the case has already been remitted once to the first instance, the Board considers it appropriate to make use of the discretionary power to examine the application conferred by Article 111(1) EPC (second sentence, first alternative).

3. *Admissibility of the amendments*

3.1 The method according to claim 1 essentially includes the steps of:

- defining a plurality of measurement points on

latitudinal circles of a notional sphere in the air gap of the magnetic field generating device, the sphere having a polar axis Z (see step I),

- acquiring a chart of the magnetic field intensity at these measurement points (see step II),
- placing magnetic field intensity modifiers at locations on circles on the surface of magnetic pole pieces, the circles being concentric with the polar axis Z (see step III), and
- acquiring a new chart of the magnetic field intensity at said measurement points (see step IV).

3.2 At the oral proceedings, the appellant acknowledged that an essential aspect of the invention consisted in placing the field intensity modifiers on the surface of the pole pieces not at random but on circles concentric with the polar axis Z and "*corresponding*" to the latitudinal circles of the notional sphere. This aspect of the invention was recited in steps I, II and III of claim 1.

The appellant also acknowledged that a further aspect of the invention concerned a repetition of the steps III and IV of claim 1 as long as necessary until the desired level of field uniformity was achieved. Such an aspect resulted from the features recited in the last six lines of the claim. In the appellant's opinion, these features, although not explicitly disclosed in the application as filed, did not offend against Article 123(2) EPC because a skilled person, reading the application as filed, would "*obviously*"

understand that the method of the invention should be carried out in an iterative manner.

- 3.3 The application as filed discloses the former aspect of the invention as the solution to the problem of achieving field uniformity (see page 4, penultimate line, to page 7, line 11; page 11, penultimate line, to page 13, line 14; page 15, lines 11 to 23; Figures 1a, 1b and 2) and proposes to increase the number of the latitudinal planes for obtaining a more precise adjustment (see page 16, lines 11 to 16).

As regards the latter aspect of the invention concerning the iterative nature of the adjusting process in relation to the aim of improving field uniformity, the question to be examined is whether the features recited in the last six lines of claim 1 could be considered as implicitly disclosed, as implied by the appellant's submissions.

- 3.4 A feature belongs to the implicit disclosure of a document if the skilled person can derive it directly and unambiguously from the explicit teaching of the document. For the purpose of Article 123(2) EPC, the document is the application as filed.

In the present case, this condition is not met. The application as filed merely discloses a device, in which, for adjusting the field, a correspondence is established between the latitudinal circles of the notional sphere and the circles on the surface of the pole pieces (see, in particular, page 5, last paragraph, and page 6, first paragraph). The original disclosure, however, does not concern an adjusting method nor does it define any step directed to



achieving the final desired result. It is left to the initiative of the skilled person to decide whether the field adjustment should be obtained by a method based on trial-and-error or iterative mathematical calculations or a combination thereof or something else.

- 3.5 The appellant submitted that the skilled person reading the application as filed would "obviously" understand that the method of the invention was iterative.

This argument is not convincing because it appears to rely on the alleged obviousness of an aspect of the claimed solution rather than to show its support in the original disclosure.

Moreover, the appellant's argument appears to shift the support for claimed features from the original disclosure to the skilled person's knowledge. Article 123(2) EPC, however, requires that, in order to be admissible, amendments must be supported by the content of the application as filed and not by the technical knowledge of the skilled person. This knowledge is indeed needed for understanding what is disclosed but cannot be added to the original disclosure so as to enlarge it with the effect of including features which, although known to the skilled person, were not contemplated by the applicant when drafting the application.

The iterative nature of the adjusting process cannot be regarded as an obvious and thus admissible clarification either, since it pertains to features which were not originally disclosed.

3.6 Where the amendments are by way of addition, as in the present case, a test for compliance with Article 123(2) EPC is a novelty test. According to it, no new subject-matter may be generated by the amendments.

This test shows that the amendments concerning the iterative character of the claimed adjusting method generate new subject-matter which was not disclosed by the application as filed.

3.7 In conclusion, the amendments in the last six lines of claim 1 offend against Article 123(2) EPC.

4. Therefore, the appellant's request for granting a patent on the basis of such a claim is not allowable.

5. *Appeal fee*

5.1 Although the appellant has requested the reimbursement of the appeal fee, he has not produced any reason in support of the request.

5.2 Pursuant to Rule 67 EPC, a condition for the reimbursement of the appeal fee is the allowability of the appeal. This condition being not met in the present case, the fee cannot be reimbursed.

## **Order**

### **For these reasons it is decided that:**

1. The appeal is dismissed.
2. The request for reimbursement of the appeal fee is

refused.

The Registrar:

The Chairman:

R. Schumacher

G. Davies