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**Datasheet for the decision  
of 15 June 2023**

**Case Number:** T 2085/19 - 3.2.02

**Application Number:** 14808712.5

**Publication Number:** 3021748

**IPC:** A61B5/06, A61B34/00

**Language of the proceedings:** EN

**Title of invention:**

MAGNETIC FIELD GENERATOR WITH MINIMAL IMAGE OCCLUSION AND  
MINIMAL IMPACT ON DIMENSIONS IN C-ARM X-RAY ENVIRONMENTS

**Applicant:**

St. Jude Medical International Holding S.à r.l.

**Headword:**

**Relevant legal provisions:**

EPC Art. 54, 111(1)  
RPBA 2020 Art. 11, 13(2)

**Keyword:**

Novelty - (yes)  
Remittal to the department of first instance - (yes)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
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Case Number: T 2085/19 - 3.2.02

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.02**  
**of 15 June 2023**

**Appellant:** St. Jude Medical International Holding S.à r.l.  
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**Representative:** Kramer Barske Schmidtchen  
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**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 15 February  
2019 refusing European patent application No.  
14808712.5 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chair** M. Alvazzi Delfrate  
**Members:** A. Martinez Möller  
Y. Podbielski

## Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division refusing European patent application No. 14808712.5.
- II. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request or the first auxiliary request, both filed with letter of 13 June 2023, or on the basis of the second to sixth auxiliary requests filed with letter of 3 May 2023. The appellant requested oral proceedings in the event that the Board would not remit the case for further prosecution.
- III. Claim 1 of the main request reads as follows.

"A magnetic field generating assembly (44), configured to be associated with a table (20) supporting a body (16), the assembly (44) comprising:

a plurality of elongate conductive elements (57C) arranged in a first plane, wherein each conductive element (57C) winds in a spiral around a central axis thereof for forming a coil having a first layer and a second layer lying in separate planes, each central axis extending perpendicular to the first plane, each successive turn of the spiral being located at an increased distance from the central axis to an outer periphery of the conductive element;

wherein the plurality of conductive elements forms the first layer of the assembly, the first layer lies in the first plane, the plurality of conductive elements further forms a second layer of the assembly, and the second layer lies in a second plane;

wherein for each conductive element, the first layer comprises a first inner perimeter and a first outer perimeter, the first outer perimeter defining a first exit point (58A) of the conductive element; wherein, for each conductive element, the second layer comprises a second inner perimeter and a second outer perimeter, the second outer perimeter defining a second exit point (58B) of the conductive element; and wherein the first exit point (58A) and the second exit point (58B) are adjacent to each other, so that a single thread of the conductive element begins at the first exit point (58A) and forms the first layer, then at the center begins the second layer retracing the path of the first layer, and finally ends at the second exit point (58B), wherein the first and second layers spun in the same direction so as to transmit the magnetic field in a single direction."

IV. Reference is made to D2 (US 2003/0233042 A1).

V. The appellant's arguments, where relevant to the decision, can be summarised as follows.

*Main request - Admittance*

The main request is based on the main request filed with the statement of grounds of appeal and amended in reaction to the new objections raised by the board.

*Main request - Novelty over D2*

The person skilled in the art understood the term "single thread" as a wire or a conductive element made in one piece. D2 did not disclose a single thread, it instead disclosed two coils connected by a feed

connection. Hence, the subject-matter of claim 1 was novel over D2.

## **Reasons for the Decision**

### **1. The application**

There are different techniques available to track the position of medical devices such as catheters as they are moved within the body. One conventional technique is fluoroscopic imaging, which has the disadvantage of subjecting the patient and physician to electromagnetic radiation.

Medical navigation systems have been developed which instead rely on the generation of electrical or magnetic fields and the detection of induced voltages and currents on position sensors attached to the medical device and/or external to the body. Magnetic field transmitters may be used in conjunction with such medical navigation systems.

It is desirable to minimise the obstruction that magnetic field transmitters cause on X-ray radiation so as to reduce their impact on fluoroscopic image quality. The application addresses this issue with a magnetic field generating assembly configured to be associated with a table supporting a body. The assembly comprises a plurality of elongate conductive elements, each of them winding in a spiral. The plurality of conductive elements form a first layer and a second layer. The first and second layers lie respectively in a first and in a second plane and both layers are spun in the same direction so as to transmit the magnetic field in a single direction.

2. Main request

2.1 Admittance

The main request was filed after notification of a summons to oral proceedings. Its admittance is subject to Article 13(2) RPBA.

The main request corresponds to the main request filed with the statement of grounds of appeal with amendments to overcome the objections of clarity and added subject-matter raised for the first time in the Board's communications. There are thus exceptional circumstances which have been justified with cogent reasons by the appellant. The board thus admitted the main request into the proceedings.

2.2 Article 123(2) EPC

In the appealed decision (points 1.3 to 1.8) the examining division found that the feature "a single conductive element forms the first layer and the second layer" of claim 1 of the main request then on file had no basis in the application as originally filed. This feature is no longer present in claim 1 of the present main request.

The subject-matter of present claim 1 is based on claims 1, 4 and 5 as well as paragraph [0028] of the application as filed. Hence, claim 1 does not comprise added subject-matter.

The contested decision did not raise any objection of added subject-matter against the dependent claims, nor has the board assessed them in that respect.

### 2.3 Novelty over D2

D2 deals with spiral magnetic transmitters for use in a position measurement system. D2 discloses in the embodiment of Figures 4-6 (see paragraphs [0033]-[0039]) coils 21, 23 and 25 mounted on a substrate 27, with each of the coils electrically connected by a respective feed through at the center to a corresponding coil mounted beneath the substrate 27 (see paragraph [0034], last sentence in view of paragraph [0032], last sentence).

The examining division interpreted the feature of the conductive element forming a single thread in claim 1 of the then first auxiliary request as referring to a continuous conductive path, irrespective of whether or not this conductive path is formed in one piece or by a plurality of structures with different properties (see appealed decision, point 4.2 in view of points 2.1, 1.4 and 1.7). Based on this interpretation, the examining division concluded that in D2 each pair of coils connected at their center by a feed through constituted a conductive element forming a single thread.

Claim 1 of the main request uses a wording different from that of claim 1 of the then first auxiliary request but a similar issue of claim interpretation applies. The board cannot follow the reasoning in point 1.7 of the appealed decision that the use of single quotes surrounding the term thread in the application as filed would lead to a different meaning and indicate that a single conductive path is meant. The embodiment in paragraph [0029] cannot support this claim interpretation either, because it is a different embodiment dealing with a single-layer coil.

Although the term "thread" is not common in the art, in the context of claim 1 a "single thread" refers to a single, undivided elongate element (e.g. a single wire) which stretches between two points. Accordingly, a plurality of different structures electrically connected to each other, such as the two coils connected by a feed through in D2, do not define a single thread within the meaning of claim 1.

It follows that D2 does not anticipate the feature "so that a single thread of the conductive element begins at ... and finally ends at the second exit point". The subject-matter of claim 1 is thus novel over D2 (Article 52(1) EPC in view of Article 54 EPC).

#### 2.4 Remittal

The examining division concluded on novelty based on a different claim interpretation. It is not possible to infer from the contested decision whether there are any other outstanding objections or whether the subject-matter of claim 1, as interpreted above, involves an inventive step. Hence, the board is not in a position to review this issue or to order that a patent be granted. There are thus special reasons within the meaning of Article 11(1) RPBA for remitting the case to the examining division under Article 111(1), second sentence, EPC.

### **Order**

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

1. The decision under appeal is set aside.

2. The case is remitted to the examining division for further prosecution.

The Registrar:

The Chair:



A. Chavinier-Tomsic

M. Alvazzi Delfrate

Decision electronically authenticated