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**Datasheet for the decision
of 26 March 2014**

Case Number: T 0433/10 - 3.2.02

Application Number: 05109461.3

Publication Number: 1774905

IPC: A61B5/0215, A61B5/00

Language of the proceedings: EN

Title of invention:
Sensor wire assembly

Applicant:
RADI MEDICAL SYSTEMS AB

Headword:

Relevant legal provisions:
EPC Art. 84, 123(2), 54, 56

Keyword:
Clarity (yes)
Added subject-matter (no)
Novelty and inventive step (yes)

Decisions cited:

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

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Case Number: T 0433/10 - 3.2.02

D E C I S I O N
of Technical Board of Appeal 3.2.02
of 26 March 2014

Appellant: RADI MEDICAL SYSTEMS AB
(Applicant) Palmbladsgatan 10
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Representative: Brann AB
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted on 15 October 2009 refusing European patent application No. 05109461.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman: E. Dufrasne
Members: M. Stern
C. Körber

Summary of Facts and Submissions

- I. The applicant lodged an appeal against the decision of the Examining Division dispatched on 15 October 2009 refusing European application No. 05 109 461.3.
- II. Notice of appeal was received on 7 December 2009 and the fee for appeal was paid on that same day. The statement setting out the grounds of appeal was received on 3 February 2010.
- III. Oral proceedings took place on 26 March 2014.

The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of claims 1 to 7 filed during the oral proceedings.

- IV. The following document is of importance for the present decision:
- V. D1: US-A-2004/0 082 866.
- VI. Claim 1 reads as follows:

"Sensor wire assembly for measuring a physiological variable in a body, said assembly comprises:

a sensor element (308) for measuring the physiological variable and to generate a sensor signal in response of said variable;

a guide wire (301) having said sensor element at its distal portion, and adapted to be inserted into the body in order to position the sensor element within the body;

a wire connector provided with a guide wire receptacle tubing in which a proximal end of said guide

wire is insertable, a number of connector sockets are arranged along the guide wire receptacle tubing to be electrically connected to electrical connection points along the inserted part of the guide wire, and

a connecting cable (315) adapted to connect said wire connector to an external physiology monitor, the wire connector being arranged at the connecting cable, and that the wire connector comprises a wire connector casing being a body of a female connector (314)

enclosing a circuitry casing that in turn encloses the sensor signal adapting circuitry (312) comprising a programmable sensor conditioning unit, a calibration unit, an energy means and an output amplifying unit,

wherein the body of the female connector is provided with the guide wire receptacle tubing in which the proximal end of said guide wire is insertable such that the number of connector sockets are arranged along the guide wire receptacle tubing provided within the body of the female connector,

wherein the sensor signal is applied to said sensor signal adapting circuitry that is adapted to automatically generate an output signal, related to the sensor signal, in a standardized format such that the measured physiological variable is retrievable by said external physiology monitor,

and wherein said calibration unit is a storage means which contains calibration data of the sensor element of the sensor wire assembly."

Claims 2 to 7 are dependent claims.

Reasons for the Decision

1. The appeal is admissible.
2. Amendments

Claim 1 is clear and adequately based on claim 1 as originally filed in combination with page 8, line 32 to page 9, line 4; page 9, lines 12 to 14; page 10, lines 20 to 30; page 11, lines 16 to 19; and Figure 5 as originally filed. In particular, original page 10, lines 24 to 27 discloses that the wire connector is provided with a guide wire receptacle tubing in which the guide wire is insertable and that a number of connector sockets are arranged along the tubing to be electrically connected to connection points along the inserted part of the guide wire. The wire connector is depicted in Figure 5, showing in particular the wire connector casing, which according to original page 10, lines 20 to 21, is the body of a female connector. Figure 5 therefore reveals that the guide wire receptacle tubing is provided within the body of a female connector.

Moreover, the dependent claims and the description have been adapted to the definition of the invention according to claim 1.

As a consequence, the Board is satisfied that the requirements of Articles 123(2) and 84 EPC are fulfilled.

3. Novelty and inventive step

3.1 The claimed invention refers to a sensor wire assembly for measuring a physiological variable in a body comprising, in essence, a guide wire (301) with a sensor element (308) at its distal portion, and a wire connector (314) with a receptacle tubing with connector sockets along its length in which a proximal end of the guide wire is insertable, the wire connector comprising a wire connector casing being a body of a female connector enclosing (a) a circuitry casing which in turn encloses a sensor signal adapting circuitry (312), and (b) the guide wire receptacle tubing into which the proximal end of the guide wire is insertable.

3.2 Document D1, which is considered as the closest prior art, discloses a sensor wire assembly for measuring a physiological variable in a body comprising a guide wire (56) with a sensor element (60) at its distal portion (Figure 2), and a wire connector (500) in which a proximal end of the guide wire is insertable (paragraph [0046]).

As seen for example in Figure 16, the wire connector (500) comprises a wire connector casing being a body of a female connector enclosing a guide wire receptacle tubing (526, 527) into which the proximal end of the guide wire (502) is insertable and having connector sockets (530) along its length.

The wire connector 500 is attached to a static cable 59 (paragraph [0046]), which in turn is attached to a signal conditioning device 50 (Figure 2) which comprises a circuitry casing that in turn encloses the sensor signal adapting circuitry (shown in Fig. 5). The sensor signal adapting circuitry comprises a

programmable sensor conditioning unit (paragraph [0101]), a calibration unit (paragraph [0096]), an energy means (100; paragraph [0066]) and an output amplifying unit (180; paragraph [0079]).

Thus, in the system of D1, the connector for insertion of the guide wire and the circuitry casing for the sensor signal adapting circuitry are two physically separate components.

- 3.3 The system of claim 1 differs from that of D1 at least in that, in succinct terms, the guide wire receptacle tubing into which the proximal end of the guide wire is insertable is provided within the body of the female connector (or wire connector casing) enclosing the circuitry casing, which in turn encloses the sensor signal adapting circuitry.

Thus, one and the same female connector (or wire connector casing) is provided with the functions of electrically connecting the guide wire to the physiology monitor and of enclosing the sensor element adapting circuitry.

- 3.4 The problem solved by this differentiating feature consists in rendering the interface between sensor guide wire and monitor less bulky and allowing an easier handling of the system, as stated on original page 5, lines 29 to 30.

- 3.5 Even assuming that the skilled person would generally strive to reduce the size of such interfaces and ease their handling, the present solution of incorporating the receptacle tubing for the guide wire and the signal adapting circuitry into one female connector is not immediately obvious from the disclosure of D1. In fact,

as explained above, D1 explicitly and deliberately foresees two clearly separate components (the static cable 59 and the signal conditioning device 50 shown in Figure 2) with the respective functions of electrically connecting the guide wire to the physiology monitor and of pre-processing the signals from the sensor element. Hence, absent the benefit of the knowledge of the present solution, the disclosure of D1 does not lead the skilled person to it. Also the remaining documents cited in the search report and in the application are devoid of any relevant teaching in this respect.

- 3.6 The Board therefore considers that the system defined in claim 1 satisfies the requirements of novelty and inventive step within the meaning of Articles 54 and 56 EPC. This conclusion consequently also applies to the preferred embodiments defined in dependent claims 2 to 7.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to grant a patent on the basis of:
 - claims 1 to 7 filed during the oral proceedings;
 - description pages 1 to 13 filed during the oral proceedings;
 - figure sheets 1/4 to 4/4 as originally filed.

The Registrar:

The Chairman:



D. Hampe

E. Dufrasne

Decision electronically authenticated