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**Datasheet for the decision  
of 10 October 2006**

**Case Number:** T 1210/04 - 3.2.02

**Application Number:** 98961572.9

**Publication Number:** 1046403

**IPC:** A61M 1/10

**Language of the proceedings:** EN

**Title of invention:**

Blood circulation auxiliary device using continuous blood flow pump and diagnosis device for blood circulation state in organism

**Applicant:**

JMS Co., Ltd.

**Opponent:**

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**Headword:**

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**Relevant legal provisions:**

EPC Art. 113(2), 123(2)

**Keyword:**

"Extension of subject-matter (no, after amendments)"

**Decisions cited:**

-

**Catchword:**

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Case Number: T 1210/04 - 3.2.02

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.02  
of 10 October 2006

**Appellant:** JMS Co., Ltd.  
12-17, Kakomachi, Naka-ku  
Hiroshima-shi, Hiroshima 730-8652 (JP)

**Representative:** Schwarzensteiner, Marie-Luise  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 21 May 2004  
refusing European application No. 98961572.9  
pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** T. Kriner  
**Members:** M. Noel  
A. Pignatelli

## Summary of Facts and Submissions

- I. European patent application No 98 961 572.9 was refused by decision of the examining division dated 21 May 2004 on the ground that there was no version approved by the applicant in the sense of Article 113(2) EPC on which a patent could be granted, in violation of the requirements of Article 78(1) EPC.
- II. The appellant (applicant) lodged an appeal against this decision, by notice received on 8 July 2004 and paid the appeal fee on the same day. A statement setting out the grounds of appeal was filed on 16 September 2004 along with amended claims.
- III. As a result of a communication of the Board dated 7 August 2006, the appellant submitted with letter of 1 September 2006 new claims 1 to 2.
- IV. The claims at issue read as follows, identifying letters (a) to (j) having been introduced by the Board for the ease of reference:
- "1. A blood circulation assisting device comprising:
- (a) a continuous flow blood pump (1) made of a non-displacement-type pump for blood feeding assistance,
- (b) a motor (4) for driving said continuous flow blood pump (1),
- (c) a blood removing pipe (2) having one end attachable to a blood removal site in an organism

and the other end connected to an inflow portion of said continuous flow blood pump (1),

- (d) a blood feeding pipe (3) having one end attachable to a blood feed site in the organism and the other end connected to an outflow portion of said continuous flow blood pump (1),
- (e) a flow rate detection means (7) for directly or indirectly obtaining data corresponding to a blood flow rate flowing through said continuous flow blood pump (1), and
- (f) control means (5) for controlling a motor speed,
- (g) wherein blood is removable via said blood removing pipe (2) and drivable out via said blood feeding pipe (3) by said continuous flow blood pump (2) so as to attain a predetermined flow rate,  
  
characterized in that
- (h) said flow rate detection means (7) is configured so that an output corresponding to the flow rate is obtained by measuring a current consumption or a power consumption value of the motor (4),
- (i) the blood circulation assisting device further comprises a flow rate amplitude detection means (8) for obtaining, from an output of said flow rate detection means (7), data corresponding to a fluctuation amplitude of the flow rate, the flow rate amplitude detection means (8) detecting a mean output and an output fluctuation amplitude of

said flow rate detection means (7) at predetermined time intervals and outputs an amplitude index that is obtained by dividing the fluctuation amplitude with the mean output and

- (j) said control means (5) controls the motor speed according to the output of said flow rate amplitude detection means (8) to a speed at a t-point, at an s-point or substantially between the t-point and the s-point, the t-point and the s-point being a starting point and an end point, respectively, of a range where the amplitude index shows a negative correlation with a speed of the motor.

2. The blood circulation assisting device according to claim 1, wherein said control means (5) is capable of identifying the t-point or s-point by forcing the motor (4) to change temporarily its speed so as to cause the amplitude index to vary and detecting the correlation between the amplitude index and the speed of the motor (4) based on the change of the amplitude index."

### **Reasons for the decision**

1. The appeal is admissible.
2. *Amendments*

In the preamble of claim 1, features (a), (c), (d), (e) and (g) are taken from claim 1 as originally filed.

Feature (b) is taken from the original claim 2.

Feature (f) is taken from the original claim 8 and further supported by the application as filed (version as published) on column 11, lines 26-28.

In the characterizing portion of claim 1, feature (h) is supported by claim 2 as filed.

Feature (i) is formed by a combination of features drawn up from the original claims 1 and 6, supplemented by features taken from the application as filed. In particular, the expression "fluctuation amplitude" (of the flow rate) referred to at the end of feature (i) is supported by the application on column 11, lines 23-28; lines 35-39 and lines 46-50, taking account of the correspondence between the current value detected in the motor and the flow rate of the pump driven by the motor.

Feature (j) is formed by a combination of features from the original claims 9 and 15. The remaining features, which relate to the t-point and the s-point, are supported by the application as filed on column 12, lines 6-11 and lines 22-27, in connection with Figure 1.

The content of claim 2 is supported by the application as filed, from column 11, line 57 to column 12, line 2; and column 12, lines 12-17 and lines 31-39.

It results therefrom that the amendments made to the claims submitted for appeal meet the requirements of Article 123(2) EPC, thus removing the grounds for the

refusal of the claims cited in the examining division's decision.

3. *Remittal*

Since the decision under appeal was exclusively based on formal grounds, now removed, and since the claims presently on file have been substantially amended, the Board finds it appropriate to remit the case to the first instance for further prosecution on the substantive issues, as set out in the Board's communication of 7 August 2006.

**Order**

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

1. The decision under appeal is set aside.
2. The case is remitted to the first instance for further prosecution on the basis of claims 1 and 2 filed with the appellant's letter of 1 September 2006.

The Registrar

The Chairman

V. Commare

T. Kriner