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**Datasheet for the decision
of 8 September 2014**

Case Number: T 0916/10 - 3.4.02

Application Number: 98912882.2

Publication Number: 0972173

IPC: G01F11/00

Language of the proceedings: EN

Title of invention:

LIQUID CHEMICAL DISPENSING SYSTEM WITH SENSOR

Applicant:

ADVANCED TECHNOLOGY MATERIALS, INC.

Headword:

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - (no)

Decisions cited:

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

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Case Number: T 0916/10 - 3.4.02

**D E C I S I O N
of Technical Board of Appeal 3.4.02
of 8 September 2014**

Appellant: ADVANCED TECHNOLOGY MATERIALS, INC.
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted on 27 November 2009 refusing European patent application No. 98912882.2 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman A. G. Klein
Members: F. Maaswinkel
D. Rogers

Summary of Facts and Submissions

- I. European patent application No. 98912882.2 relating to a liquid handling system was refused in a decision of the examining division, dispatched on 27 November 2009, on the ground that the subject-matter of independent claims 1 and 10 did not meet the requirement of inventive step (Art. 52(1) and 56 EPC) in view of the disclosure in document D1 (FR-A-2 502 134) and general knowledge or combined with document D2 (US-A-5 102 010).
- II. Against this decision the applicant (appellant) lodged an appeal. In its grounds of appeal the appellant requested to set aside the decision under appeal and to grant a patent on the basis of the new claims filed with the grounds. Furthermore the appellant filed an auxiliary request for oral proceedings.
- III. The wording of claim 1 submitted on appeal reads as follows:
- " A liquid handling system (10) comprising:
a container (12) having a mouth (34);
a cap (30) for coupling with the mouth (34), the cap (30) including a first key element (40);
a connector (14) for coupling with the cap (30), the connector (14) further comprising:
a connector head (54);
a probe (46) extending from the connector head (54) and insertable through a center of the cap (30) and into the mouth (34), the probe (46) having a flow passage therein; and
a second key element (52) configured to mate with the first key element (40);

pump means (18) coupled with the probe (46) and with the flow passage for pumping fluid through the probe (46) and the flow passage;

sensor means (20) for sensing when the first (40) and second (52) key elements are properly mated and for sensing when the first (40) and second (52) key elements are not properly mated: and

controller means (16) coupled with the sensor means (20) and the pump means (18) and adapted to enable the pump means (18) when the sensor means (20) senses that the first (40) and second (52) key elements are property mated and to disable the pump means (18) when the sensor means (20) senses that the first (40) and second (52) key elements are not properly mated".

The wording of the other claims is not relevant for the purpose of the present decision.

IV. In support of its request the appellant developed the following arguments in its grounds of appeal:

Claim 1 has been amended by inserting the term "properly" to clarify that the first and second key elements are "properly mated" or "not properly mated". This amendment finds a basis at page 4, lines 7-15 as well as in claim 10 of the published specification.

The present patent application was refused on the ground that the subject-matter of the claims would lack an inventive step in view of document D1 taken alone or in combination with document D2. However, document D1 and the patent application address different problems and disclose different solutions. In document D1 the problem of error and fraud is addressed, whereas the present patent application is related to the problem of

improper connection. Also the respective solutions are different: In particular D1 does not disclose a "sensor means for sensing when the key elements are properly mated". The only function of the system of D1 is to interrupt the identification of the receiver when the separation between the discs is larger than 3 mm. In order to achieve this purpose document D1 discloses a simple mechanical positioning system using a male guide pin arranged on the first disc and a hole machined in the second disc. This document does not address improper connections, but is only concerned with identification of the receiver. In contrast, the system of the present invention discloses a particular combination of mating key elements and a sensor for determining proper mating of the key elements to assure proper coupling of the connector member to a container for proper and safe transfer of liquid chemicals.

Reference D1 does not disclose "a cap... including a first key element... a connector for coupling with the cap, the connector further comprising... a second key element configured to mate with the first key element" and particularly does not disclose a "sensor means for sensing when the first and second key elements are properly mated and for sensing when the first and second key elements are not properly mated". In section 2.2a of the decision it was argued that D1 discloses "sensor means... for sensing when the first and second key elements are mated and for sensing when the first and second key elements are not mated", referring to page 1, lines 28-33 and page 1, line 40 - page 2, line 49 of D1. However, the appellant asserts that the decision credits document D1 with teaching much more than it discloses, and that the examining division made its interpretation based solely on a hindsight analysis

of D1 using the teachings of the present patent specification.

In summary, since document D1 addresses a different technical problem (*avoidance of fraud*) than the present patent application (*improper connections*) and since it does not disclose a "sensor means for sensing when the first and second key elements are properly mated and for sensing when these elements are not properly mated" the subject-matter of claim 1 clearly involves an inventive step.

V. In a communication pursuant to Article 15(1) RPBA, accompanying the summons to oral proceedings, the board expressed the following provisional opinion concerning claim 1:

"1. Amendments

1.1 According to the appellant in point 1 of the appeal brief of 24 March 2010, claim 1 has been amended by inserting the term "properly" to clarify that the first and second key elements are "properly mated" or "not properly mated". For the basis of this amendment reference is made to method claim 10 and page 4, lines 7 - 15 of the published patent application.

1.2 In this passage at page 4 it is disclosed that the sensor sends a first signal indicative of a proper connection and a second signal indicative of an improper connection. Therefore the expression "properly mated" and "not properly mated" in the claims is to be understood to mean that the key elements are "properly connected" or "not properly connected".

1.3 In point 2.2a of the decision, in the arrangement

disclosed in document D1 the feature "sensor means" was identified (*magnetic relay switches (2) cooperating with permanent magnets (11)*), for sensing when the first and second key elements (*guide pin (4) and hole (15)*) are mated, respectively are not mated. Reference was made to the passages at page 1, lines 28-33; and page 1, line 40 - page 2, line 49. The board observes in particular at page 2, lines 43 and 44, the sentence: "Dès que les deux parties sont emboîtées, les relais magnétiques sont actionnés ...fournissant ainsi l'identification du receveur". The verb "emboîter" implies "to fit together". Furthermore, according to page 1, lines 27 - 31, the sensor only issues an acknowledgement signal in case the separation between the discs (*respectively, the relay switch 2 and the permanent magnet 11*) is less than 3 - 5mm. In the preliminary opinion of the board, this condition corresponds to the situation in which the sensor switch is activated if, and only if, the key elements are "properly mated".

1.4 Therefore, provisionally, the board does not concur with the appellant's argument that document D1 does not address "improper connections" (*page 2, first full para of the letter of 24 March 2010*). Rather, the board tends to agree with the position of the examining division in point 2.3 of the decision, that the subject-matter of claim 1 differs from the liquid handling system in document D1 by the feature that the transferring means is a pump means.

2. Thus the board is presently minded to dismiss the appeal."

VI. The appellant announced that it would not attend the scheduled oral proceedings. Furthermore it requested a

written decision based on the current state of the file.

Reasons for the Decision

1. The appeal is admissible.
2. In the communication of the board, the appellant was informed in detail of the reasons that the subject-matter of claim 1 did not involve an inventive step in view of the prior art in document D1.
3. The appellant made no substantive response to the board's communication. Having again considered its own reasoned objections as set out in that communication and making express reference thereto, the board sees no reason to deviate from the examining division's conclusion and from its own earlier assessment. Consequently, the appellant's request must be refused

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



D. Magliano

A. G. Klein

Decision electronically authenticated