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# Datasheet for the decision of 15 December 2009

**Case Number:** T 0201/08 - 3.2.04

**Application Number:** 01918087.6

**Publication Number:** 1267607

**IPC:** A01J 5/04

**Language of the proceedings:** EN

**Title of invention:**
Milk sampling apparatus and method

**Patentee:**
DeLaval Holding AB

**Opponent:**
Octrooibureau Van der Lely N.V.

**Headword:**
-

**Relevant legal provisions:**
RPBA Art. 13(1)

**Relevant legal provisions (EPC 1973):**
EPC Art. 100(a)

**Keyword:**
"Main request - novelty (no)"
"Auxiliary request 1 to 5 - inventive step (no)"
"Auxiliary request 6 filed at the oral proceedings - not admitted"

**Decisions cited:**
-

**Catchword:**
-

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**Case Number:** T 0201/08 - 3.2.04

# D E C I S I O N
**of the Technical Board of Appeal 3.2.04**
**of 15 December 2009**

**Appellant**: (Patent Proprietor)
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**Respondent**: (Opponent)
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**Decision under appeal:**
**Decision of the Opposition Division of the European Patent Office posted 23 November 2007 revoking European patent No. 1267607 pursuant to Article 102(1) EPC.**

**Composition of the Board:**

**Chairman:** M. Ceyte
**Members:** C. Scheibling
C. Heath

## Summary of Facts and Submissions

I. By its decision dated 23 November 2007 the Opposition Division revoked the European patent 1 267 607. On 23 January 2008 the Appellant (patentee) filed an appeal and paid the appeal fee simultaneously. The statement setting out the grounds of appeal was received on 1 April 2008.

II. The patent was opposed on the grounds based on Article 100a) and b) EPC 1973. The Opposition division considered that claim 1 lacked novelty with respect to D2: US-A-4 140 018. A further document which plays a role in the present proceedings is D15: an article from the newspaper "Agrarisch Dagblad" of 24 November 1994 and its translation into English.

III. Oral proceedings took place on 15 December 2009 before the Board of Appeal.

The Appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the claims as granted (main request), in the alternative that the patent be maintained on the basis of one of the auxiliary requests 1 to 5 filed with letter dated 13 November 2009 or of auxiliary request 6 filed during the oral proceedings.

He mainly argued as follows:
D2 does not relate to a milk sampling apparatus suitable for use with an automated milking system and a person skilled in the technical field of collecting representative milk samples taken from milk yielded during milking of animals would never consider employing

the apparatus of D2 for such a purpose. Furthermore, the sample head in D2 is not moved to position above a selected sample collecting element by first and second drive means responding to signal values or number of pulses provided thereto. Consequently, an apparatus having all the essential features recited in claim 1 as granted is not directly and unambiguously derivable from D2. D15 does not disclose a filling member capable of being placed above a selected one of a number of milk sample collecting elements by means of a positioning system. In particular D15 does not disclose an arm extending in a first direction (Y) and being movable by a first drive means in a second direction (X).
Accordingly, even if a skilled person starting from the milk sampling method according to D15 had taken into consideration the teaching of D2, he would not have arrived at the claimed method.
Auxiliary request 6 has been filed to further specify how the features relating to the positioning control technique of claim 1 as granted should be understood.

The Respondent (opponent) mainly submitted that D2 discloses a sampling apparatus suitable for use with an automated milking system. Furthermore, D2 teaches that anyone of the sample collecting elements can be addressed such as to position the filling element above it on the basis of the X and Y coordinates.
D15 discloses a method for sampling milk samples in a milk sampling apparatus on the basis of the X and Y coordinates of the selected sample collecting element. D15 does not indicate how to implement an apparatus which can position a filling element above a selected sample collecting element on the basis of the X and Y coordinates. This problem is solved by D2.

Auxiliary request 6 should not be admitted into the proceedings, because it is late filed and not prima facie allowable.

The Respondent requested that the appeal be dismissed, in the alternative that the case be remitted to the department of first instance for further prosecution.

V. Claims 1 as granted reads as follows:

"1. A milk sampling apparatus for use with an automated milking system, said apparatus comprising a cassette (7) wherein milk sample collecting elements (9) are placed, and at least one filling member (27) capable of being placed above a selected one of said milk sample collecting elements (9) by means of a positioning system, and capable of bringing a milk sample, representatively taken from milk yielded during a milking of an animal by means of said automated milking system, into said selected one of said milk sample collecting elements (9),wherein said positioning system comprises
- an arm (34, 44, 56, 51, 55) extending in a first direction (Y) in a plane (XY) above said milk sample collecting elements (9) and being movable in a second direction (X) in said plane (XY), said first (Y) and second (X) directions being orthogonal;
- a first runner (32, 46, 54, 57) holding said filling member (27) and being movable along said arm (34); and characterized in that
- first (29) and a second (31) drive means, wherein
- said first drive means is effective to move said arm in said second direction (X) in response to a first provided signal value or a first provided number of pulses and said second drive means is effective to move

said first runner along said arm (Y direction) in response to a second provided signal value or a second provided number of pulses to position said filling member (27) above said selected one of said milk sample collecting elements (9)."

"22. A method for milk sampling in a milk sampling apparatus comprising a cassette (7) wherein milk sample collecting elements (9) are placed, and at least one filling member (27) movable above said milk sample collecting elements (9), and capable of bringing a milk sample, representatively taken from milk yielded during a milking of an animal by means of an automated milking system, into anyone of said milk sample collecting elements (9) and said filling member is moved to a position above a selected one of said milk sample collecting elements (9) by means of moving an arm (34), which extends in a first direction (Y) in a plane (XY) above said milk sample collecting elements (9), in a second direction (X) in said plane (XY) characterized by the steps of moving said arm by means of a first drive means and in response to a first provided signal value or a first provided number of pulses (29), said first (Y) and second (X) directions being orthogonal ; and moving a first runner (32) holding said filling member (27) along said arm (34) by means of a second drive means (31) and in response to a second provided signal value or a second provided number of pulses; and
bringing said milk sample into said selected one of said milk sample collecting elements (9)."

The independent method claim of auxiliary requests 1 to 3 is identical with claim 22 as granted.

Claim 20 of auxiliary request 4 and claim 1 of auxiliary request 5 are identical and differ from 22 as granted in that the characterising portion of these claims reads "characterized by the steps of receiving an indication of said selected one of said milk sample collecting elements (9) and controlling first and second drive means to move said arm and a first runner, wherein the position of said selected one of said milk sample collecting elements in said plane (XY) is provided by means of a pair of coordinates and wherein said arm and said first runner are moved in response to said pair of coordinates, moving said arm by means of the first drive means and in response to a first provided signal value or a first provided number of pulses (29), said first (Y) and second (X) directions being orthogonal; and moving the first runner (32) holding said filling member (27) along said arm (34) by means of the second drive means (31) and in response to a second provided signal value or a second provided number of pulses; and whereby said filling member is placed above said selected one of said milk sample collecting elements, and
bringing said milk sample into said selected one of said milk sample collecting elements (9)."

Claim 1 of auxiliary request 6 differs from claim 1 as granted in that it further specifies "further comprises processing means (33) arranged to receive from the automated milking system an indication of said selected one of said milk sample collecting elements (9) and to control said first and second drive means to move said arm and said first runner such that said filling member (27) is positioned above said selected one of said milk sample collecting elements (9), and

wherein the position of said selected one of said milk sample collecting elements in said plane (XY) is provided by means of a pair of coordinates and wherein by means of supplied voltages or number of pulses corresponding to the coordinates for the position of the milk sample collecting element said first and second drive means are effective to move in response to said pair of coordinates to position the filling member at said location."

## Reasons for the Decision

1. The appeal is admissible.

2. *Claim 1 as granted - novelty with respect to D2*

2.1 The patent proprietor has submitted that the apparatus of D2 is not a milk sampling apparatus suitable for use with an automated milking system. Furthermore the filling member in D2 is not moved to a position above a selected sample collecting element by first and second drive means responding to signal values or a number of pulses provided thereto.

The Board in unable to follow the patent proprietor's submission. The patent specification defines in its introductory portion the features of a milk sampling apparatus. In particular paragraph [0005] specifies that a milk sampling apparatus is provided with a fixed or removable cassette in which test tubes can be placed and with a filling member connected to a milking system and capable of filling the respective tubes with milk. The patent specification does not describe any further

constructional of functional requirements which should distinguish a milk sampling apparatus from the sampling device disclosed in D2 which is intended to be used for liquids of biological nature.

Thus the apparatus of D2 is suitable for sampling milk and is therefore considered as a milk sampling apparatus suitable for use with an automated milking system, since it also comprises a removable cassette (12), in which test tubes (216) capable of being filled with milk are placed, and a filling member (sample head 18) connected to a supply source and capable of filling the respective tubes with milk (see column 3, lines 7 to 9 of D2). The filling member of D2 is capable of being placed above a selected one of said milk sample collecting elements by means of a positioning system (column 3, lines 4 to 7) and capable of bringing a milk sample, representatively taken from milk yielded during milking of an animal by means of the automated milking system, into the selected one of the milk sample collecting elements (216). The positioning system of D2 comprises:

- an arm (Y axis carriage 16) extending in a first direction (Y) in a plane XY above the milk sample collecting elements (see Figure 1) and being movable in a second direction (X) in the plane XY, the first (Y) and second (X) directions being orthogonal (see column 3, lines 25 to 31)
- a first runner (sample head 18) holding said filling member (column 4, lines 19 to 30) and being movable along said arm
- first drive means (X axis drive motor 42, see column 3, lines 25 to 34) and a second drive means (Y axis motor 156, see column 5, lines 53 to 57) wherein

- the first drive means (42) is effective to move said arm in the second direction (X) in response to a first provided signal value (electric potential supplied to the X axis drive motor, see column 3, lines 45 and 46). It is said in column 3, lines 43 to 45 that the direction and the rotation of the drive motor are reversible and determined by the electrical potential supplied to the X drive motor. Thus the electrical potential may have at least two different values in response to which the drive motor may rotate either in the one direction or in the opposite direction
- the second drive means (156) is effective to move the first runner (18) along the arm (Y direction) in response to a second provided signal value (electric potential supplied to the Y axis drive motor, see column 5, lines 53 to 57) to position the filling member above the selected on of the milk sample collecting elements (column 6, lines 43 to 47). The provision of an additional braking action by a brake solenoid (column 6, line 11) does not alter the fact that the runner is moved by the second drive means in response to a signal (electric potential) provided there to achieve the positioning of the sample head (18).

It is true that the apparatus of D2 comprises an optical sensor system.

In column 3, lines 2 to 10 of D2, it is indicated "When the "Y" axis carriage has reached a desired … line, as indicated by … the optical sensor of that sample line, the associated control system, slows the "X" axis drive motor … then engages the "X" axis brake assembly." In other words, when the target position is reached, the delivered signal value is changed to stop the motor. Thus, the filling member in D2 is positioned over a

sample collecting element by the drive in response to signal values provided thereto.
In fact, claim 1 requires that there are drive means effective to move the arm and the runner in response to "signal values"; this does not imply that the signal value is directly applied to the drive motors nor that value of the signal is directly representative of the coordinate itself.

2.3 The Appellant has submitted that the filling member of D2 comprises a redundant number of nozzles and means for withdrawing liquid from the sample collecting elements which would not be necessary for collecting milk samples. However, the fact that the apparatus of D2 is able to carry out more operations than actually required does not affect its capability to perform the requested functions as claimed by the invention.

2.4 The Appellant has contended that the apparatus of D2 is not suitable for sampling milk because the diameter of the nozzle of the filling member is very small (column 5, lines 21 to 24) and may therefore become clogged. D2 specifically provides at column 15 lines 34 to 45 that the use of the system for biological sample analyses is merely an exemplary embodiment and "obviously the system has many uses other than just this". It would however be immediately apparent to any practitioner that in particular the nozzle diameter may if necessary be adapted to the specific liquid sample.
Thus, D2 discloses all features of claim 1 as granted, so that the subject-matter of this claim is not novel.

3. *Auxiliary requests 1 to 3*

3.1 All these requests comprise the same independent method claim which is identical with the independent method claim as granted.

3.2 D15 discloses a method for milk sampling in a milk sampling apparatus comprising a cassette (rack) wherein milk sample collecting elements (sampling bottles) are placed, and at least one filling member (nozzle of a hose) movable above said milk sample collecting elements, and capable of bringing a milk sample, representatively taken from milk yielded during a milking of an animal by means of an automated milking system, into one of said milk sample collecting elements and wherein said filling member is moved to a position above a selected one of said milk sample collecting elements; i.e. the bottle over which the hose is positioned and which is indicated by the computer program which acts on a drive means in form of a step motor.
It is also clear that in order to position the filling member at the right position the computer which is foreseen in D15 must provide signal values or numbers of pulses to the drive means.

3.3 More precisely the sampling apparatus of D15 is provided with an arm along which the nozzle in movable by the step motor. This arm extends in a first direction (Y) in a plane XY above the milk sample collecting elements. However this arm is fixed to the frame of the apparatus and is thus not moveable in a second direction in said plane (XY).

Starting from D15 as closest prior art the problem to be solved by the claimed method may be seen in using a milk sample device provided with an alternative, simpler system for positioning the nozzle or filling member above any selected milk sample collecting element.

3.4 As has been explained, the positioning system of D2 also comprises an arm (16) along which a filling member can be moved. This arm extends in a first direction or Y direction in a plane XY above the milk sample collecting elements. The arm (16) is also movable in a second (X) direction in said plane XY. A runner is further provided at which the filling member is mounted. Like the movable nozzle of D15 the runner may be movable by a step motor, by means of applied voltages or a number of pulses corresponding to the selected position of the runner on the Y axis. The arm is also movable in the X direction by the driving means disclosed in D2 or by a step motor of the kind disclosed in D15.

Thus D2 in the neighbouring field provided a solution to the above technical problem and the skilled person would see the advantages of this teaching, i.e. of a positioning device in which the movement in both the X and Y directions is performed in the same plane XY above the milk sample collecting elements. He would also have no practical difficulties in applying such a positioning device to the milk sample device as employed in the milk sampling method of D15.

3.5 The Appellant has submitted that a skilled person would not have taken D2 into consideration because it is not concerned with collecting milk samples.

However, D2 discloses a sampling method intended to be used for liquids of biological nature and of the kind stated in the independent method claim that is employing a filling member movable above the sample collecting elements and capable of bringing a sample into any selected sample collecting element, wherein the filling member is movable above every selected sample collecting element, by means of an arm extending in a first direction (Y), said arm being movable in a second direction (X) in a plane (XY) above the sample collecting elements.
In this respect it is established case law that when considering inventive step, a skilled person would, apart from considering the state of the art in the specific technical field of the patent, look for suggestions in neighbouring or in broader general technical fields if the same problem arises and if he could be expected to be aware of such general fields (which is the case here).

3.6 Accordingly, the subject-matter of the independent method claim of the auxiliary requests 1 to 3 does not involve an inventive step and therefore, these requests must fail, too.

4. *Auxiliary requests 4 and 5*

4.1 With respect to the method claim of auxiliary requests 1 to 3 the method claim of auxiliary requests 4 and 5 in essence adds the following features of claims 30 and 34 as granted:
i) receiving an indication of said selected one of said milk sample collecting elements and controlling first and second drive means to move said arm and a first

runner such that said filling member is placed above said selected one of said milk sample collecting elements, and
ii) the position of said selected one of said milk sample collecting elements in said plane (XY) is provided by means of a pair of coordinates and wherein said arm and said first runner are moved in response to said pair of coordinates.

4.2 In D2 (column 1, lines 53 to 61) as well as in D15 (lines 37 to 39) the positioning of the filling member over the selected sample collecting element is computer controlled. The method of sampling thus compulsorily comprises the step of receiving an indication of said selected one of said sample collecting elements. Furthermore, according to the same passage of D2 anyone of said sample collecting elements can be addressed individually on the basis of a pair of coordinates by means of which the arm (Figure 1, carriage 16) and the runner (support of sample head 18) are moved. Consequently, the additional features are already taught by D2 which relates to a sampling apparatus of the kind used in the claimed milk sampling method. In this sampling apparatus, the position of a selected sample collecting element in a plane (XY) is also provided by a pair of coordinates. These additional features cannot therefore make an inventive contribution to the claimed method.

4.3 Accordingly, the subject-matter of the independent method claim of the auxiliary requests 4 and 5 does not involve an inventive step, either, and therefore, these requests must fail.

5. *Auxiliary request 6 - admissibility:*

This request has been filed without any proper justification at the end of the oral proceedings, after the issue of patentability for the main and auxiliary requests 1 to 5 had been debated at length by the parties.

This request comprises only apparatus claims. Claim 1 of this request in addition to the features of claim 1 as granted comprises the features of claims 16 and 21 as granted as well as features taken from the description. The features of claims 16 and 21 in essence correspond to those of the method claims 30 and 34 as granted, which are discussed under point 4 above.

The Appellant admitted that these additional features were in essence intended to express more explicitly what is already stated in claim 1 of the main request as granted and rejected during oral proceedings for lack of novelty. This gives rise to serious doubts as to the patentability of this amended subject-matter. In the light of such doubts, the Board does not consider amended claim 1 of this auxiliary request to be clearly allowable.

As the auxiliary request 6 is late filed without any proper justification and not clearly allowable, the Board in exercising its discretion under Article 13(1) of the Rules of Procedures of the Boards of Appeal (RPBA) decided not to admit it into the appeal proceedings.

## Order

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

The appeal is dismissed.

The registrar: The Chairman:

G. Magouliotis M. Ceyte