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**Datasheet for the decision  
of 23 May 2023**

**Case Number:** T 1113/21 - 3.2.04

**Application Number:** 11711586.5

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**IPC:** A01J5/007, A01J5/04, A01J5/013

**Language of the proceedings:** EN

**Title of invention:**  
MILKING SYSTEM AND METHOD FOR ANALYZING MILK

**Patent Proprietor:**  
DeLaval Holding AB

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

**Headword:**

**Relevant legal provisions:**  
EPC Art. 56

**Keyword:**  
Inventive step - (no)

**Decisions cited:**

T 1018/02

**Catchword:**



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Case Number: T 1113/21 - 3.2.04

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.04**  
**of 23 May 2023**

**Appellant:** Octrooibureau Van der Lely N.V.  
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**Respondent:** DeLaval Holding AB  
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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
31 May 2021 concerning maintenance of the  
European Patent No. 2555609 in amended form.**

**Composition of the Board:**

**Chairman** A. de Vries  
**Members:** J. Wright  
C. Heath

## **Summary of Facts and Submissions**

- I. The appeal was filed by the appellant (opponent) against the interlocutory decision of the opposition division finding that, on the basis of the auxiliary request 1 (now the main request), the patent in suit met the requirements of the EPC. In particular, the opposition division decided that the subject-matter of this request involved an inventive step.
- II. Oral proceedings before the Board were held on 23 May 2023.
- III. The appellant (opponent) requests that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requests that the appeal be dismissed or in the alternative that the patent be maintained in amended form according to an auxiliary request 1 filed with its reply to the grounds of appeal.

- IV. Independent claim 1 of the main request and auxiliary request 1 (with feature references added by the Board in square brackets) reads as follows:

"[ 1] A milking system for milking animals comprising:  
[1.1] - a common milk line (4) connected to a milk storage tank (7);  
[1.2] - at least two milking stations (1a, 1b, 1c) connected to the common milk line (4), each milking station being adapted to automatically identify an animal, to automatically extract milk from the animal,

and to automatically transfer the milk in the common milk line from the milking station to the milk storage tank; and

[1.3] - a computer (9) for storing milk quality information and animal identity data,

[1.4] - a milk constituent analyzing unit (5) arranged to analyze milk from the common milk line (4) with respect to a specific constituent, wherein

[1.5] - the milking stations (1a-c), the computer (9), and the milk constituent analyzing unit (5) are communicatively connected, thereby allowing the result of the analysis of the milk with respect to the specific constituent to be associated with the identity of the animal or the identities of the animals, from which the milk was extracted, characterised in that

[1.6] - the milking system comprises means (16; 9; 8) for controlling the transfer of milk in the common milk line; and

[1.7] - the means for controlling is arranged to allow only one of the milking stations at a time to transfer milk in the common milk line;

[1.8] - the milk constituent analyzing unit (5) is arranged to sample milk from the common milk line (4) and to analyze the sampled milk with respect to the specific constituent; and

[1.9] - the means for controlling is arranged to control each of the milking stations to transfer milk in the common milk line in response to a request from that milking station".

V. In the present decision, reference is made to the following documents :

D1 : WO 2005/020674 A1

VI. The appellant-opponent's arguments can be summarised as follows:

Claim 1 of both requests lacks inventive step starting from D1 in combination with the skilled person's common general knowledge. In the context of D1, it would be obvious to use the available milking finished signal as a request to send milk on the common milk line and to arrange D1's controller to respond to this request accordingly.

VII. The respondent-proprietor's arguments can be summarised as follows: D1's system is less automated than that of the patent so would not lead to the invention in an obvious manner. Starting from D1, in implementing a control strategy for sending milk on the common milk line, the skilled person would merely automate what the dairy hand does. This would not lead to a flexible "on request" scheme as claimed but to a rigid schedule, mirroring the spatial sequence of the milking stations in the milking shed. Therefore claim 1 of the main request and auxiliary request 1 involves an inventive step.

## Reasons for the Decision

1. The appeal is admissible.

2. Background

The patent relates to a milking system and a method for analysing milk (see published patent specification, title). In the field of dairy farming, it is known to measure milk quality for individual animals with a view to keeping animals healthy and efficiently producing milk (see published patent specification, paragraph [0002]). An object of the invention is to provide a milking and analysis system with a lower number of analysing units (see paragraph [0006]). To this end, milk from a plurality of milking stations is transferred to a common milk line and the analysing unit takes milk from the common milk line (see published patent specification, paragraph [0011] and all versions of claim 1).

3. Interpretation of certain terms and features

3.1 In accordance with established jurisprudence, the skilled person reads the claim with a mind willing to understand (see Case Law of the Boards of Appeal, 10th edition, 2022 (CLBA) II.A. 6.1), giving terms their usual meanings and taking into account the whole of the disclosure. The wording of the claims should typically be given its broadest technically sensible meaning by such a skilled reader. Furthermore, where the reading of a claim feature imparts a clear, credible technical teaching to the skilled person, the description may not be used to give a different meaning to a claim feature (see CLBA II.A.6.3.1, in particular **T 1018/02**, reasons 3.8).

3.2 Interpretation of the term *common milk line*, features 1.1 and 1.2

In the Board's view, the term *milk line* is inherently clear in itself and needs no interpretation based on the description: it is a line carrying milk. In its claim context this is qualified by the adjective *common*. Amongst other things, the usual meaning of the word *common* is: Possessed or shared alike by, or belonging to, two or more people, things, etc. (see Oxford English dictionary on-line (OED)). Thus a *common milk line*, in its broadest sense, is a shared line carrying milk. Feature 1.1 defines that the line connects to a milk storage tank and feature 1.2 that it is connected to, and so shared by, at least two milking stations.

3.3 The term *request* (feature 1.9)

The usual meaning of the word *request* (see Oxford English Dictionary (OED)) is: An instruction to a [...] piece of hardware [...] to provide specified data or perform a particular function. In the context of something received by a control means, the Board holds that such a *request* can be any signal suitable for soliciting a particular control response.

4. Main request, claim 1, inventive step starting from D1 with the skilled person's general knowledge

In the Board's view, D1 (see for example the abstract and page 20, line 26 to page 22, line 6 with figures 1 and 2) is a logical starting point from which to assess inventive step because it discloses a milking and milk sampling system with at least two milking stations 8,



8U. Moreover, whatever degree of automation might be described in the description of the patent compared to D1, D1's system is operated by an *automatic* controller (see for example page 71, last two lines), so it is relevant for claim 1's automatic arrangement. In this regard, the fact that D1 may be mainly concerned with batch milking rather than robotic milking, which is normally voluntary, has no relevance for assessing inventive step because robotic milking is not reflected in the claim.

4.1 In the Board's view, contrary to how the respondent-proprietor has argued, D1 unambiguously discloses that each milking station is adapted to identify an animal, (see page 71): *The controller may also receive signals which identify the cows at the milking positions.* Moreover, the milking stations are connected via a milk line 74, 77, 79 to a milk storage tank (see page 26, lines 14 to 18 with figure 2). Bearing in mind how the skilled person interprets the term *common milk line*, the milk line 74, 77, 79, being shared by the milking stations 8, 8U (see page 6, line 23 to 27 and figure 2), is a common milk line, even though another line 7 conducts most of the milk to the storage tank. Claim 1 does not require the common milk line to be the main milk line.

4.2 D1's system has a computer for storing milk quality information and animal identity information and associating these (see for example page 17, lines 4 to 30). It also has a milk constituent analysing unit arranged to analyse milk from the common milk line as features 1.4 and 1.8 define (see D1, figure 2, extraction point 80, page 44 lines 5 to 12, pages 86-87 and claims 58 to 62). In this regard, the Board notes that, since the extraction point 80 lies on the common

milk line (between sections 77 and 79), taking milk from there is to take it from the common milk line as claimed.

4.3 Moreover, just as in feature 1.7 of claim 1, D1's system is arranged so that *only one station at a time* transfers milk on the common milk line (see page 6, lines 20 to 32). How this works is described in more detail on page 27, line 13 to page 28, line 5 with figure 6): In order to empty a vessel 24 solenoid valve 54 is operated. This causes compressed air to enter the vessel 24, raising its pressure above that in all the others, so forcing milk at a high pressure onto the common milk line 74. At the same time a solenoid valve 58 operates to isolate the holding vessel from the milk meter. The higher pressure causes shuttle valves 64 upstream and downstream of the particular holding vessel to block all other holding vessels from accessing the common milk line. Thus, the solenoid valves 54 and 58 associated with a respective vessel 24 play a decisive role in transferring the milk. When they are operated, only milk from that vessel is transferred along the common milk line.

4.4 However, in the Board's view, D1 does not directly and unambiguously disclose the last claim feature (1.9). It is common ground that D1 does not explicitly disclose by what means the system coordinates the transfer of milk from the milking stations to the common milk line one at a time, and in particular not that this is by the control controlling the milking stations to that end in response to a request from a milking station. The Board is also not convinced that D1 implicitly discloses the feature as the appellant-opponent has argued (cf. its appeal grounds, paragraph bridging pages 3 and 4). At most, D1 discloses on page 70 last

three lines and page 71 that the controller operates (amongst others) the valves 54 and 58 and that it receives certain input signals. However, other than explaining that vessels transfer milk *one at a time* on the common milk line, D1 does not disclose *how* the control is implemented: It neither explains any criteria according to which the controller decides to operate the valves 54 and 58 of a particular vessel nor whether it interprets any signal it receives from the milking station as a request for a transfer of milk.

#### 4.5 Development of the objective technical problem

The respondent-proprietor has argued that the effect of the differing feature 1.9 (request and response) is to make the system flexible, and thus more efficient and proposed that the objective technical problem should reflect this. This effect is achieved, it argued, because transfer is *on demand* rather than in accordance with a rigid schedule dictated by the sequence of the milking station locations in the milking shed. By way of example, it argued that a station at which a cow has been milked out can send a request and then have its milk transferred before another station where a cow is still milking, irrespective of the station's location.

In the Board's view, feature 1.9 does not provide this effect because it requires no more than that milk is transferred in response to a request. Thus, it does not express any particular scheme, order or promptitude with which the control means should respond to a *request* signal which might imply greater flexible than D1 offers. Nor does D1 disclose or suggest any particular scheme, much less a rigid transfer schedule. That a rigid schedule would be "most likely" is mere speculation. Rather, D1 is just as flexible in that it

has a controller that automatically controls milk transfer in some [undisclosed] way (see page 30, last two lines), and it is implicit that this can only be done for milking stations where milk is available for transfer. Therefore, the Board holds that it is not appropriate to formulate an objective technical problem reflecting improved flexibility or efficiency vis-a-vis a rigid schedule. Rather, the problem can be expressed as: How to implement the control of milk transfer on the common milk line in D1.

- 4.6 Turning now to the question of obviousness, the Board notes that the skilled person has no choice but to wait until milking has finished before transferring milk on D1's common milk line. Moreover, as the appellant-opponent has pointed out, D1's controller already receives a signal saying that milking has finished (see page 71, lines 19 to 22). In the Board's view, it would be immediately obvious for the skilled person to programme the controller to make use of this signal as an indication of readiness that a milking sample was available to be transferred and, in response thereto, to operate the valves 54 and 58 at that milking station to send it on the common milk line, with or without some delay depending on whether a previous sample was still being transferred (cf. page 38, lines 10 to 32). Bearing in mind how the Board interprets the word *request* in the claim (a signal suitable for soliciting a particular control response), used in this way, the *milking finished* signal would be just such a *request* because the controller would be arranged to interpret it in this way. This is so irrespective of the fact that it defines a status, whether or not it could also be used to elicit other responses, and whether it can respond immediately or must wait till transfer of a sample from another station has finished. Indeed in

this context, the respondent acknowledged that in the patent also the controller would have to wait until milk transfer from another station has completed, and that therefore also in the patent a request might not be met with an immediate response. Therefore, the Board considers that the skilled person would arrive at the subject matter of claim 1 as a matter of obviousness.

4.7 The respondent-proprietor has argued that, when implementing a control scheme for D1, the skilled person would merely automate the manual work of the dairy hand. This would be to walk down a row of milking stations from one to the next, inspecting each station and deciding to simply pass by any station where a cow was still milking. When reaching the next station along the row where milking was finished, they would not pass by but decide to [manually] initiate the transfer of a sample of milk for analysis. This means that they would never visit stations out of their order in the row or preordained time (determined by how fast they walk). In automating this scheme in D1, the skilled person would do no more than replicate the steps carried out manually by the dairy hand in an automated way and thus arrive at a rigid checking and testing schedule dictated by the spatial sequence of the milking stations in the milking shed, each having its allotted time for transferring a sample (when available). This, so it argued, would not constitute an automated *request and response system* as claimed. The Board disagrees.

The Board first notes that, in the manual procedure explained above, the dairy hand has to decide whether a cow has been milked out, so as to decide whether to send a sample. If the skilled person were to automate this in D1 they would naturally use the available *end of milking* signal from the milking station to make this

decision. In other words they would use this signal as a request [for milk transfer] and programme D1's controller to respond to this by transferring milk as feature 1.9 requires. It is true that this scheme would not involve transmitting a sample from a milking station where milking had finished *out of turn*. Rather, always the next position in the row of milking stations that had an available sample (from a milked out cow) would be sent, just as the dairy hand would do. However, since claim 1 does not define when (how soon) or in what order the controlling means should respond after receiving a request, let alone define a flexible sampling *out-of-turn* scheme, this has no bearing on inventive step. Rather, the automatic implementation in D1 of what the human dairy hand previously did manually would result in a request and response scheme as claimed. Therefore, the argument of the respondent-proprietor is moot.

Furthermore, in accordance with established jurisprudence, such a replacement of a manual operation by an automatic operation is in line with the general trend in technology and thus not considered inventive. Therefore, if anything, the argument of the respondent-proprietor confirms that the subject matter of claim 1 lacks inventive step.

5. From the above, claim 1 of the main request lacks inventive step, therefore the main request fails. Claim 1 of auxiliary request 1 is the same, so this request likewise fails. Since there are no further requests, the Board must revoke the patent.

## Order

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

1. **The decision under appeal is set aside.**
2. **The patent is revoked.**

The Registrar:

The Chairman:



G. Magouliotis

A. de Vries

Decision electronically authenticated