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Datasheet for the decision of 6 November 2015

Case Number: T 0058/12 - 3.2.04

Application Number: 02078835.2

Publication Number: 1297743

IPC: A01J5/007, A01J5/013

Language of the proceedings: EN

Title of invention:
A device for separating milk from a dairy animal

Patent Proprietor:
Lely Enterprises AG

Opponents:
DeLaval International AB
WestfaliaSurge GmbH

Headword:

Relevant legal provisions:
EPC Art. 100(b), 100(a), 56

Keyword:
Sufficiency of disclosure - main request (yes)
Inventive step - main request (yes)

Decisions cited:

Catchword:

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Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 0058/12 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 6 November 2015

Appellant: (Opponent 1)	DeLaval International AB P O Box 39 147 21 TUMBA (SE)
Representative:	Bennett, Adrian Robert J. A.A. Thornton & Co. 10 Old Bailey London EC4M 7NG (GB)
Respondent: (Patent Proprietor)	Lely Enterprises AG Bützenweg 20 6300 Zug (CH)
Representative:	Corten, Maurice Jean F.M. Octrooibureau Van der Lely N.V. Cornelis van der Lelylaan 1 3147 PB Maassluis (NL)
Party as of right: (Opponent 2)	WestfaliaSurge GmbH Siemensstr. 25-27 59199 Bönen (DE)
Representative:	Neumann, Ditmar KNH Patentanwälte Kahlhöfer Neumann Rößler Heine PartG mbB Postfach 10 33 63 40024 Düsseldorf (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 7 November 2011 rejecting the opposition filed against European patent No. 1297743 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	A. de Vries
Members:	E. Frank
	C. Schmidt

Summary of Facts and Submissions

I. The appeal lies from the decision of the opposition division dated 6 October 2011 and posted on 7 November 2011, to reject the opposition against the European patent No. 1 297 743 pursuant to Article 101(2) EPC. The appellant (opponent 1) filed a notice of appeal on 29 December 2011, paying the appeal fee on the same day. The statement of grounds of appeal was submitted on 16 March 2012. The opponent 2 did not bring forward any argument and is party to the proceedings as of right.

II. Oppositions had been filed against the patent as a whole and based on Article 100(a) in conjunction with Articles 54 and 56 EPC, and Article 100(b) EPC. The opposition division held that these grounds did not prejudice maintenance of the patent as granted. In its decision the division considered the following prior art, amongst others:

D1/01 = US 5,416,417
D2/01 = EP 0 516 246 B1
D3/01 = US 5,704,311
D5/01 = WO 99/31965
D8/01 = K.Barth and H. Worstoff: "Influence of different milking intervals on electrical conductivity before alveolar milk ejection on cows", Milchwissenschaft 55 (7), published 2000
D11/01 = Denis N. Akam et al.: "Machine Milking and Lactation", Insight Books, published 1992, Chapter 3: "Milking Routines" by J. Hamann et. al., pp.68 - 97
D12/01 = EP 1 000 535 A1

The further following documents were cited in appeal:

A0 = M. Nielen et al.: "Electrical Conductivity of Milk: Measurement, Modifiers, and Meta Analysis of Mastitis Detection Performance", Journal of Dairy Science 75:606-6 14, 1992

A1 = WO 00/27183

A2 = S. Fernando and L. Spahr: "Effects of Milking Interval on Selected Milk Constituents from Normal and Infected Quarters", Journal of Dairy Science 66:1155-1161, 1983

A3 = S. Fernando et al.: "Effect of Length of Milking Interval and Fat Content on Milk Conductivity and Its Use for Detecting Mastitis", Journal of Dairy Science 64:678-682, 1981

D5/01 = WO 99/31965

III. A communication pursuant Article 15(1) RPBA was issued after a summons to attend oral proceedings, which were duly held on 6 November 2015. As announced with letter dated 16 October 2015, no one was present on behalf of the opponent 2.

IV. The appellant requests that the decision under appeal be set aside and the patent be revoked.

The respondent (proprietor) requests that the appeal be dismissed and the patent maintained as granted, or, alternatively, on the basis of one of the auxiliary requests 1 to 3, all filed with letter dated 5 October 2012.

V. The wording of claim 1 as granted (main request) reads as follows:

"A device for separating milk obtained from a dairy animal, said device being provided with a processing device (33) and with a measuring device (9, 29, 30, 31) for measuring a value of a milk variable and for issuing a signal indicative of the measured value to the processing device, the processing device (33) comprising a memory suitable for containing a reference value for the milk variable, and the processing device (33) comprising a comparing device for comparing the measured value of the milk variable with the reference values and for issuing a comparison signal, the device separating milk in dependence on the comparison signal, characterized in that the device is provided with a means for determining the period between two successive milking runs of the dairy animal, in that the memory contains various reference values for the milk variable, the reference values depending on the measured period, and in that the device is suitable for comparing the measured value with the corresponding reference value belonging to said determined period."

VI. As to the main request, the appellant argued as follows:

Sufficiency of disclosure

The skilled person will not be able to determine the period between two successive milking runs, merely based on the provision of a clock. Therefore the invention of claim 1 as granted cannot be carried out.

Inventive step

The subject-matter of claim 1 differs from D2/01 by its final two features, viz. storing in the computer memory different reference values of the milk variable for different milking intervals, and comparing the measured value with the reference value corresponding with the milking interval. However, starting from D2/01, the skilled person would know that D2/01's computer memory was suitable for taking into account different reference values for different cows. Since it is moreover generally known in the art that all milking variables depend on the milking interval, cf. the milk conductivity in D8/01, the skilled person would also be motivated to foresee different reference values of different milking intervals for the same cow, thus to arrive at the subject-matter of claim 1 as granted. The same considerations apply starting from D12/01, D3/01, D1/01, or late filed A1, in the light of D11/01, D8/01, or late filed A0, A2, and A3. Finally, claim 1 as granted is also obvious in the light of D5/01 and common general knowledge (or D12/01). Therefore, claim 1 as granted lacks an inventive step.

VII. As to the main request, the respondent argued as follows:

Sufficiency of disclosure

A clock is mentioned in the patent, cf. par. 0019. Since moreover cow identification systems are common general knowledge, the period between two successive milking runs can readily be determined by the skilled person. Thus, the invention of claim 1 can be put into practice.

Inventive step

D8/01 concerns the influence of different milking intervals on the conductivity of foremilk, which always has to be discharged. Though interval dependency is known from some variables it is disputed that all milk variables depend on the milking interval. D2/01 invariably suggests comparing one measured milk conductivity value with one single averaged progressive reference value of the same cow. D2/01 in any case nowhere hints at many reference values to be stored for one cow. Furthermore, because of the enormous variety of possibilities, the skilled person would not know how milking interval dependency had to be taken into account to decide to discharge milk in a more accurate manner: e.g. a constant average milking interval, progressive averages of milking intervals, or weighted averages of the milk conductivity (cf. D8/01) might be contemplated for the single reference value of D2/01. Thus, claim 1 as granted is inventive in the light of D2/01 and D8/01 or the common general knowledge concerning milking interval dependencies alleged by the appellant. Starting from D12/01, D3/01, D1/01, or late filed A1, in the light of D11/01, D8/01, or late filed A0, A2, and A3, the above considerations likewise apply. Late filed D5/01 is irrelevant, since it does not address milk separation. Therefore, claim 1 as granted involves an inventive step.

Reasons for the Decision

1. The appeal is admissible.

2. *Sufficiency of disclosure - main request*

In the Board's view, this objection is unconvincing. As argued by the respondent, the skilled reader would immediately understand based on the wording of claim 1 alone, that a suitable means for determining a period between two successive milking runs of the same dairy animal can for example be a clock. This is confirmed in the patent itself, see paragraphs 0004 and 0019. It is readily envisageable for the skilled person how this might operate, e.g. in conjunction with cow identification means commonly known in the art. Therefore, the patent discloses the invention of granted claim 1 in a sufficiently clear and complete manner for it to be carried out by the skilled person at the date of filing, Article 100(b) EPC.

3. *Inventive step - main request*

3.1 Novelty of the granted claim 1 is not in dispute. It is common ground that document D2/01 forms a suitable starting point for the assessment of inventive step of claim 1, since it concerns a computer controlled milking plant which separates milk obtained from a dairy animal after it has been found that the milk is unsuitable for human consumption, cf. D2/01, col.1, lines 1 to 17, and col. 2, lines 7 to 12.

3.2 The computer implemented milk separation control is based on the conductivity of the milk as milk variable, see D2/01, col. 2, lines 13 to 24, and col.5, line 38 to col. 6, line 3. The processing device of D2/01

compares measured milk conductivity values of a dairy animal with a progressive average of the milk conductivity values measured over a number of days regarding the animal. This progressive average is stored in the computer memory as reference value. Exceeding the progressive average value stored in the memory by a certain degree, e.g. in the case of mastitis, will result in the discharge of milk.

However, D2/01 does not disclose measuring the period between two successive milking runs of the respective dairy animal, i.e. measuring the milking interval, let alone that milking conductivity might depend on the milking interval.

3.3 The parties thus also agree that the subject-matter of claim 1 in any event differs from D2/01's computerized decision-making for milk separation by its final two features, viz.:

(i) that the (computer) memory contains various reference values for the milk variable, the reference values depending on the measured period, and

(ii) that the (processing) device is suitable for comparing the measured value with the corresponding reference value belonging to said determined period.

3.4 These different features allow for a more accurate or better comparison of measured values (namely to appropriate reference values) so as to correctly decide whether or not milk is suitable for further processing, cf. patent specification paragraph 0004. The underlying problem of these two distinguishing features with respect to the above cited prior art disclosure can therefore be seen as how to improve milk separation,

such that the decision whether or not milk obtained is suitable for being processed further can be taken in a more accurate manner. See patent, paragraph 0003.

3.5 Document D8/01 discloses that different milking intervals ("MI") have an influence on electrical conductivity ("EC") and also affect somatic cell count ("SCC"), cf. D8/01, introduction at the top of page 363, and page 363, right col., third paragraph. The respondent argues that D8/01 concerns the impact of different milking intervals on foremilk only, which would have to be discharged anyway. Moreover, the respondent disputes that the milking interval had a significant effect on all milk variables. Whether or not this is in fact so however not decisive in the present case, as will become apparent from the following.

3.6 For the sake of argument the Board will assume that it is indeed common general knowledge that the milk quality, i.e. a measured milk variable in whole udder milk, generally depends on the milking interval as brought forward by the appellant. This has also been presumed by the opposition division in the impugned decision (cf. point 2.4.4, second paragraph). Under this assumption that the correlation of milking interval and various milking variables used for mastitis detection is generally known in the art, and that the skilled person would want to take this into account to improve the decision making process for milk separation the question remains *how* he would then take this known milking interval dependency into account when deciding to discard milk.

3.7 The appellant argues that starting from D2/01, the skilled person would already know therefrom that he can

store different reference values for different cows in D2/01's computer memory. Based on his common general knowledge as illustrated by D8/01 he would moreover be aware of varying conductivity values depending on different milking intervals. Thus, he would further contemplate the provision of separate reference values belonging to respective milking intervals in the memory of D2/01 for one and the same cow as required by claim 1 as granted.

3.8 The Board however concurs with the respondent, that D2/01 in any case nowhere hints at a plurality of reference values to be stored in the memory for the same cow. Rather, D2/01 consistently teaches to compare one measured milk conductivity value with one single averaged reference value of one cow, namely the progressive average of milk conductivity values measured over a number of days, cf. D2/01, col. 2, lines 18 to 21.

3.9 Moreover, as further argued by the respondent, neither common general knowledge assumed in point 3.6 above nor D8/01 provide any clear teaching as to how the known milking interval dependency of a measured milk conductivity variable might be applied to the milk separation decision of D2/01. There is certainly no suggestion that this might be by different reference values for different intervals. There are many possibilities that might spring to the skilled person's mind: for example, the animals could simply be milked at a constant average milking interval in D2/01, or progressive averages of milking intervals might be used, or the dependency on the milking interval could be averaged out using some form of weighted average, etc.. In this regard the Board notes that D8/01 in determining the somatic cell count SCC for mastitis

diagnosis takes account of the milk interval by a average of counts weighted by milk yield for different intervals provides, see formula [1] on page 363 of D8/01, right column.

3.10 Consequently, starting from D2/01 and looking to make a more accurate decision whether or not milk has to be separated, based on D8/01 or common general knowledge as assumed above under section 3.6, the skilled person would not be led in an obvious manner to the two final features (i) and (ii) of granted claim 1.

3.11 Furthermore, reference is also made to the further lines of argument starting from D12/01, D3/01, D1/01, or late filed A1 and combined with D11/01, D8/01, or one of late filed A0, A2 and A3, which have also been advanced by the appellant. At the oral proceedings the appellant acknowledged that though not identical in detail these lines of attack were analogous to that developed from D2/01 and discussed above and refrained from further comment.

It is common ground that as with D2/01 none of the suggested starting points D12/01, D3/01, D1/01, or late filed A1 disclose or teach the final two features (i) and (ii) of granted claim 1, namely storing in memory different reference values of the milk variable for different milking intervals, and comparing the measured value with the reference value corresponding with the milking interval. As above if D11/01, D8/01 or late filed A0, A2, and A3 can be said to illustrate the correlation of milking interval and various milking variables that can be used for mastitis detection, again none of these documents disclose or suggest or provide any other guidance as to how this known milking interval dependency can be taken into consideration by

the skilled person in deciding to discard milk in a more accurate manner, much less that this could be as claimed, cf. also points 3.8 and 3.9 above.

3.12 Finally, as acknowledged by the appellant the late submission starting from D5/01 appears to be of limited relevance, as it does not concern or address milk separation as claimed in claim 1. Thus, in line with the well established problem-solution-approach, this document would not be considered a suitable starting point by the skilled person.

3.13 Following from the above, the Board holds that the subject-matter of claim 1 as granted involves an inventive step, Articles 100(a) and 56 EPC. Hence, whether or not the late filed documents A0, A1, A2, A3, and D5/01 should be admitted into the proceedings, Articles 12(4), 13(1) and (3) RPBA, can be left undecided by the Board.

4. The Board concludes that neither ground of insufficiency or lack of inventive step raised in first instance and pursued in appeal prejudices maintenance of the patent as granted. As these are the only its findings contested it confirms the appealed decision. The appeal therefore fails.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Magouliotis A. de Vries

Decision electronically authenticated