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Datasheet for the decision of 7 October 2015

Case Number: T 1874/11 - 3.2.04

Application Number: 03744574.9

Publication Number: 1484961

IPC: A01J7/02

Language of the proceedings: EN

Title of invention:
A METHOD AND AN ARRANGMENT AT A DAIRY FARM

Patent Proprietor:
DeLaval Holding AB

Opponent:
Octrooibureau Van der Lely N.V.

Headword:

Relevant legal provisions:
EPC Art. 100(a), 54, 56

Keyword:
Novelty - main request (no)
Inventive step - first auxiliary request (no)
Inventive step - second auxiliary request (yes)

Decisions cited:

Catchword:

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Case Number: T 1874/11 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 7 October 2015

Appellant: (Opponent)	Octrooibureau Van der Lely N.V. Weverskade 110 3147 PA MAASSLUIS (NL)
Representative:	Jennen, Peter Leonardus Hendricus Octrooibureau Van der Lely N.V. Cornelis van der Lelylaan 1 3147 PB Maassluis (NL)
Respondent: (Patent Proprietor)	DeLaval Holding 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)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 27 June 2011 rejecting the opposition filed against European patent No. 1484961 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	A. de Vries
Members:	E. Frank
	T. Bokor

Summary of Facts and Submissions

I. The appeal lies from the decision of the opposition division dated 27 May 2011 and posted on 27 June 2011, to reject the opposition against the European patent No. 1 484 961 pursuant to Article 101(2) EPC. The appellant (opponent) filed a notice of appeal on 29 August 2011, paying the appeal fee on the same day. The statement of grounds of appeal was submitted on 27 October 2011.

II. The opposition was 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 inter alia the grounds of lack of novelty and lack of inventive step did not prejudice maintenance of the patent as granted. In its decision the division considered the following prior art, amongst others:

D1 = GB 761 774 A
D2 = GB 1 051 347 A
D3 = US 2 228 520 A

III. A communication pursuant Article 15(1) RPBA was issued after a summons to attend oral proceedings, which were duly held on 7 October 2015. At the beginning of the oral proceedings, the appellant withdrew its objections under Article 100(b) EPC.

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, or alternatively that the decision under appeal be set aside and the patent be maintained in an

amended form on the basis of any of the first to sixth auxiliary requests as on file, where the first auxiliary request was filed with letter dated 26 April 2011, while the second to sixth auxiliary requests were filed with letter in response to the grounds of appeal dated 1 March 2012.

V. The wording of the independent claims of the requests that are relevant for this decision reads as follows:

Main request (as granted)

"1. A method for cleaning in an automated milking system (9) comprising a plurality of teat cups (1 9), each of which is connected to a respective milk line, wherein, during milking of a milking animal, the plurality of teat cups are attached to the teats of the animal, and vacuum is supplied to the respective milk lines in order to draw milk from the tests [*sic*] of the milking animal, characterized by the steps of:

- removing milk or other residues present at each of said plurality of teat cups (19) by means of flushing (37) each of said plurality of teat cups with a cleaning fluid supplied via a first supply line (36, 34c);
- evacuating cleaning fluid from each of said plurality of teat cups (19) or from the first supply line (36, 34c): and
- disinfecting at least one of said plurality of teat cups by means of exposing (60) said at lest [*sic*] one of said plurality of teat cups to steam."

"26. An arrangement for cleaning in an automated milking system (9) comprising a plurality of teat cups (19), each of which is connected to a respective milk

line, wherein, during milking of a milking animal, the plurality of teat cups are attached to the teats of the animal, and vacuum is supplied to the respective milk lines in order to draw milk from the teats of the milking animal, characterized in :

- a cleaning member (34e) connected to a supply (35) of cleaning fluid by means of a first supply line (36) for flushing (37) each of said plurality of teat cups (1 9) with a cleaning fluid in order to remove milk or other residues present at each of said plurality of teat cups;
- means for evacuating cleaning fluid from each of said plurality of teat cups (1 9) or from the first supply line (36, 34e); and
- a steam generator (66) for exposing (60) at lest [*sic*] one of said plurality of teat cups to steam in order to disinfect said at least one of said plurality of teat cups."

First Auxiliary request

Claim 1 is as in the main request, but adds in the preamble, after the wording "..., the plurality of teat cups are attached", the word "automatically". Furthermore it adds at its end the following text: ", wherein said step of evacuating cleaning fluid is performed prior to said step of disinfecting at least one of said plurality of teat cups."

Claim 24 is as claim 26 of the main request but adds after the wording "..., the plurality of teat cups are attached", the word "automatically". At its end the following text: "; wherein the means for evacuating is adapted to evacuate cleaning fluid prior to exposing

(60) at lest [*sic*] one of said plurality of teat cups to steam."

Second Auxiliary request

Claim 1 is as in the first auxiliary request but adds at its end the following further text: ",and wherein each of said plurality of teat cups is held in a downwards direction while being flushed with said cleaning fluid to prevent said cleaning fluid from flowing into the milk line, to which the teat cup is connected."

Claim 23 is as claim 24 in the first auxiliary request but at the end of the first characterising feature amended to read (after ... present at each of said plurality of teat cups) ", the cleaning chamber being insertable into the teat cup with the teat cup held in a downwards direction to prevent the cleaning fluid from flowing into the milk line to which the teat cup is connected, while being flushed with said cleaning fluid;"

VI. The appellant argued as follows:

Main request

The ordinary meaning of "evacuating" in claim 1 is "to empty out" or "to remove from". Thus, claim 1 is not limited to a complete removal of all cleaning fluid from the milking system, nor does it require that the system must not be wet. A removal of substantially all cleaning fluid is only required by dependent claim 23 (cf. also patent, col.7, l.38). Thus, D1's first embodiment (see page 1, lines 24-44) discloses flushing, steaming, and also evacuating, since the

latter corresponds to discharging (of water) on page 1, line 31, of D1. Therefore, claim 1 lacks novelty over D1.

First auxiliary request

Claim 1 differs from D1 in that the teat cups are attached automatically. The automated attachment of the teat cups is not related to the cleaning steps of claim 1. Moreover, the clusters of D1 are suitable for an automated attachment in a simpler, more rapid manner, which is however generally known to the skilled person. Thus, claim 1 of the first auxiliary request is not inventive in the light of D1 and common general knowledge.

Second auxiliary request

If the inflow of cleaning fluid into the milk line should be minimized in D1 or D2, the skilled person would turn to D3, where the flushing of teat cups is taught upside down, see D3, figs. 3 and 7. Therefore, starting form D1 or D2, claim 1 would be obvious for the skilled person based on D3's teaching. Therefore, claim 1 of the second auxiliary request also does not involve an inventive step.

VII. The respondent argued as follows:

Main request

"Evacuating" in method claim 1 has to be interpreted as to remove all the cleaning fluid from the milking system, cf. patent, col.7, l.38. Thus, the evacuation step of claim 1 ensures that the wetness of the system is entirely removed or emptied out. Consequently, the

first embodiment (see page1, lines 24-44) of D1 discloses flushing and steaming, but not evacuating, since D1's installation is not sucked dry during discharging of water and therefore the system remains wet in D1. Thus, claim 1 is novel over D1.

First auxiliary request

Claim 1 differs from D1 in that the teat cups are attached automatically. Thus, in the context of cleaning an automated milking system according to claim 1, the underlying problem to be solved must be seen in how to clean the system more quickly. In D1 the teat cups are however attached manually. Thus, automated attachment of the teat cups is neither disclosed nor hinted at in D1 for the skilled person, much less in the light of the above stated problem. Therefore, claim 1 of the first auxiliary involves an inventive step in view of D1 and common general knowledge.

Second auxiliary request

D1 teaches the skilled person to flush the installation by suction. Moreover, D2 describes draining of teat cups from buckets above. Finally, D3 is all about introducing cleaning fluid directly into the teat cups from below. Therefore, starting from D1 or D2, D3 would not be taken into consideration by the skilled person, since the cleaning methods of D1 or D2 are incompatible with the cleaning principle of D3. Thus, claim 1 of the second auxiliary request is inventive over D1 or D2 in the light of D3.

Reasons for the Decision

1. The appeal is admissible.

2. *Main request: lack of novelty*

2.1 Claim 1 is directed to a method for cleaning teat cups of an automated milking system. One method step requires evacuating cleaning fluid from each of the plurality of teat cups or from the first supply line (via which the cleaning fluid has been supplied to the teat cups before). The parties however disagree as to the understanding of "evacuating".

2.2 The Board concurs with the appellant that "evacuating" in claim 1 is to be interpreted using normal reading skills, namely as meaning "to empty out" or "to remove from" according to its ordinary meaning. The Board sees no compelling reason to accept the respondent's narrow reading of the term, namely that "evacuating" means removing whatever is left in the milking system, or that the system may not be wet after evacuating. In particular, contrary to the respondent's view, the broad formulation of method claim 1 fails to specify to what degree the teat cups or the first supply line have to be emptied out or dried from cleaning fluid as a result of the evacuating.

2.3 This interpretation of claim 1 is also in line with the dependent claims and specification of the granted patent. In specification paragraph [0043] describes a "typical cleaning sequence" which relates to evacuation (see opening sentence). In this sequence step 3 starts by stating "most of the cleaning fluid ... is removed from the teat cups by means of its own gravity",

provided that the teat cups are suitably oriented, cf. patent, col.7, lines 25 to 28. This can be followed, see the following lines, by application of vacuum to remove remaining fluid: "remaining fluid can be evacuated by ... applying vacuum ... [or] exposing the teat cup 19 and the sleeve 64 to compressed air", cf. patent, col.7, lines 28 to 41. In a fair reading of this passage the initial removal by gravity and the subsequent application of vacuum are successive stages of evacuation, which combine to remove substantially all fluid, as stated in the closing lines of the paragraph. This understanding is reflected in dependent claim 23, where as a refinement of the main idea expressed in claim 1, evacuation may comprise evacuating substantially *all* cleaning fluid from teat cups and supply line, which implies that claim 1 allows for a lesser degree of evacuation. In this regard the Board notes that it is nowhere stated that the system must not be wet at all, as advanced by the respondent.

2.4 Document D1 describes the cleaning and sterilizing of parts of a milking apparatus especially a "cluster", i.e. of teat cups and their supply lines. Moreover, a first cleaning method of D1 (see page 1, lines 24 to 44) comprises inter alia the following method steps where water is used as a cleaning fluid:

(i) drawing water from a bucket through the clusters to remove the bulk of milk residues,(D1, page 1, lines 26 to 29)

(ii) the water is drawn through the usual releaser and then discharged (cf. D1, page 1, lines 29 to 30)

(iii) sterilizing the whole equipment by passing steam through it (D1, page 1, lines 41 to 44).

It is clear that the patent also contemplates water as a cleaning fluid, cf. patent specification, col. 6, lines 11 to 12. Thus it is undisputed that features (i) and (iii) correspond to the removing and disinfecting steps of claim 1. In dispute is whether or not step (ii) corresponds to the evacuating step of claim 1.

2.5 It is common ground that discharging water from D1's clusters for the skilled person is tantamount to emptying out the clusters from water or removing water from the clusters. The respondent however argues that wetness resulting from drawing water through the clusters remains in the installation after the water had been discharged. Since D1's installation is not sucked dry, this would not result in evacuation. Therefore, although D1 describes flushing and steaming steps, an evacuation step as required by claim 1 of the patent is not disclosed.

2.6 Following from point 2.2 above, the evacuation step of claim 1 of the patent empties out or removes cleaning fluid, but does not require the milking installation to be completely dry (i.e. without "wetness") after evacuating. The Board thus holds that D1's method step of discharging water from the clusters falls within that of evacuating cleaning fluid from each of said plurality of teat cups (or from the first supply line) according to method claim 1 as granted within the broad meaning of these terms, see above.

2.7 As it is undisputed that all other features of method claim 1 are disclosed by D1 where it describes the first cleaning method on page 1, lines 24 to 44, the Board cannot but conclude that document D1 deprives the subject-matter of granted claim 1 of novelty. Thus,

claim 1 of the main request contravenes Articles 100(a) and 54 EPC.

3. *First auxiliary request: lack of inventive step*

3.1 Compared to the main request, claim 1 now requires that the teat cups are attached automatically, while (added final feature) the evacuation step is performed before the disinfection step.

3.2 It is common ground that the newly added feature at the end of claim 1 is disclosed in D1. As is evident from their ordering, the 3rd and last step of sterilization clearly follows discharge, i.e. in D1 discharging water from the clusters, i.e. evacuating, is performed prior to disinfecting. Therefore, the subject-matter of claim 1 of the first auxiliary request differs from D1's disclosure only in that the plurality of teat cups are attached automatically.

3.3 The Board is unconvinced that the automation of teat cup attachment is associated with cleaning effects of method claim 1 as argued by the respondent. The patent itself is silent as to any associated benefits; otherwise this claimed effect is unsubstantiated. Rather, the broadest problem to be solved can be seen as how to attach D1's clusters simpler and more rapidly as indeed advanced by the appellant.

3.4 However, the automation of teat cup attachment is generally known to the skilled person in the context of milking machinery, as are the benefits typically associated therewith, i.e. simpler (less laborious) and faster operation. Contrary to the respondent's view, the Board moreover holds that the clusters of D1's automated milking system are in principle suitable for

automatic attachment, cf. D1, page 1, lines 9 to 23, and figures.

3.5 Hence, starting from D1 and faced with the problem of a simpler, quicker cluster attachment, the skilled person drawing on his common general knowledge of automation and its associated benefits would automate the teat cup attachment of D1, thus to arrive at claim 1 of the first auxiliary request in an obvious manner. Therefore, the subject-matter of claim 1 of the first auxiliary request does not involve an inventive step, contrary to the requirements of Article 56 EPC.

4. *Second auxiliary request*

4.1 With respect to the first auxiliary request, method claim 1 of the second auxiliary request has been further characterised in that: "... each of said plurality of teat cups is held in a downwards direction while being flushed with said cleaning fluid to prevent said cleaning fluid from flowing into the milk line, to which the teat cup is connected."

4.2 The amendments of claim 1 of the first auxiliary request (already filed on 26 April 2011) are based on claims 1 and 2 as granted, and the support for an automated attachment of the teat cups can be found in the patent specification, cf. paragraphs 0002 and 0015, which is unchanged vis-a-vis the originally filed and published application. Moreover, claim 1 of the second auxiliary request of 2 March 2012 (filed with the reply to the grounds of appeal) is further limited by the features of claim 6 as granted. These amendments of claim 1 are also not objected to by the appellant. The Board concludes that these amendments comply with Article 123(2) EPC.

4.3 In reaction to the newly filed second auxiliary request, the appellant now advances two lines of argument for the assessment of the inventive step of method claim 1, viz. starting from either D1 or D2 in the light of D3.

4.3.1 According to the embodiment of the first cleaning method of D1, the skilled person is taught to flush the clusters of teat cups by suction in that water is drawn from a bucket through the releaser into the installation, see point 2.4 above. Moreover, in an embodiment of document D2, buckets "22" are inverted for drainage after preliminary washing, which apparently will result in a flow of the cleaning liquid through the teat cup clusters "20" from above, but for the purposes of draining the buckets "22", cf. D2, page 1, line 85 to page 2, line 1, and figure 2.

4.3.2 Aside from the feature of automatic attachment neither document shows the additional feature of holding the teat cups in a downward direction while flushing with cleaning liquid, Articles 52(1) and 54 EPC. As is evident from the final lines of the feature itself this difference serves to prevent cleaning liquid flowing into the milk line. The feature "while being flushed" must be read in this sense and the associated objective technical problem can be formulated accordingly.

4.3.3 Further document D3 cited by the appellant relates to an embodiment of a teat cup rinser, which consists essentially of a container "11" with cleaning members formed by upright spray tubes "12" mounted inside, see D3, figures 3 and 7. In operation, the user grasps the four teat cups hanging downwardly, and brings them into the container from above, see D3, figure 7.

As argued by the respondent, flushing of the teat cups with cold or hot water always takes place from below via a pipe "36" and the upright spray tubes "12", see D3, figure 7. Subsequently, the water drains vertically through the pipe "37". For the sake of completeness, the Board adds that the container may also be filled with water, and in this particular case the vertical drain (via pipe "37") may be stopped up by a suitable plug. The water may then be sucked out of the container via the teat cups into the milker receiver jar and used to wash the jar or the milk pipe line. However, flushing and draining of the teat cups is only disclosed via the pipes "36" and "37", respectively, cf. D3, page 2, lines 14 to 42.

Finally, the Board notes that steam application is mentioned once on page 1 in D3 at line 8, however, only in context with prior art teat cup cleansing. As opposed to this, the embodiment described above in D3 considers the teat cup rinser with spray tubes only for use with cold or hot water, cf. page 2, lines 30 to 35. Thus, the embodiment of D3 does not disclose or suggest a method step of disinfecting with steam or steam generating means.

4.3.4 In the light of the above, the Board holds that D1, D2 and D3 address rather different cleaning principles of teat cup clusters, namely flushing by suction through the installation in D1, preliminary washing and draining, i.e. removing the cleaning liquid from a container above the teat cup in D2, and introducing water directly into the teat cups from below to flush them in D3. The Board finds these cleaning methodologies to be so different as to represent alternative approaches from which the skilled person might choose one or the other, but which he would not

readily combine. Thus, apart from the fact that D3 does not identify the problem of cleaning liquid flow into the milk lines, following the well-established problem-solution-approach of the boards of appeal, the skilled person would not take D3 into consideration in order to modify the cleaning methods taught in D1 or D2.

4.3.5 Therefore the Board concludes that the subject-matter of claim 1 of the second auxiliary request is inventive in view of D1 or D2 in the light of D3 within the meaning of Article 56 EPC.

4.4 The above considerations likewise apply to the arrangement according to claim 23 of the second auxiliary request. The amendments of claim 23 were also not objected to by the appellant and are based on claims 26, 27, and 6 as granted, and on paragraphs 0002, 0015 (automated attachment), 0043 and 0044 (teat cup held upside down) of the patent which is unchanged with respect to the originally filed and published application.

4.5 No further objections have been raised nor are any apparent to the Board. In particular, the amendments to the claims and consequential amendments to the description of the second auxiliary request have a clear basis in the original disclosure, Article 123(2) EPC. The Board therefore finds, that taking into consideration the amendments made by the respondent proprietor, the patent and the invention to which it relates meet the requirements of the EPC, and that therefore the patent according to the second auxiliary request can be maintained as amended pursuant to Article 101(3)(a) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance with the order to maintain the patent as amended in the following version:

Description:
Columns 1-6, 11-15 of the patent specification
Columns 7-10 as filed in the oral proceedings before the Board;

Claims:
No. 1-51 filed as second auxiliary request with letter dated 1 March 2012;

Drawings:
Figures 1-3, 4a, 4b, 5, 6a, 6b, 6c (sheets 1/6-6/6) of the patent specification.

The Registrar: The Chairman:

G. Magouliotis A. de Vries

Decision electronically authenticated