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D E C I S I O N
of 6 April 2001

Case Number: T 1112/00 - 3.2.4

Application Number: 97102503.6

Publication Number: 0800786

IPC: A47L 15/48

Language of the proceedings: EN

Title of invention:
Improvement in the washload drying arrangement of dishwashing machines

Applicant:
Electrolux Zanussi S.p.A.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 54, 123(2)

Keyword:
"Main request - added subject-matter (yes)"
"Main request - novelty (no)"
"Auxiliary request - novelty (yes)"

Decisions cited:
-

Catchword:
-

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Case Number: T 1112/00 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 6 April 2001

Appellant: Electrolux Zanussi S.p.A.
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Representative: Busca, Luciano
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 26 June 2000 refusing European patent application No. 97 102 503.6 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: C. A. J. Andries
Members: T. Kriner
H. Preglau

Summary of Facts and Submissions

I. The appellant (applicant) lodged an appeal on 22 July 2000, against the decision of the Examining Division, dispatched on 26 June 2000, refusing the European patent application No. 97 102 503.6. The fee for the appeal was paid simultaneously and the statement setting out the grounds of appeal was received on 24 October 2000.

II. The Examining Division held that the application did not meet the requirements of Article 52(1) EPC in conjunction with Article 54 EPC in view of document:

D1: EP-A-0 239 012.

Additionally, document

D2: GB-A-2 263 969

has been cited during the examining proceedings:.

III. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of a main request or an auxiliary request comprising the following documents:

Claims: No. 1 filed with letter of 8 October 1999 (main request)
No. 1 filed with letter of 1 March 2001 (auxiliary request).

Description: pages 1, 3 to 8 as originally filed
page 2 filed with letter of 28 January

2000 (both requests).

Drawings: Figures 1, 2 as originally filed (both requests).

IV. Claim 1 of the main request reads as follows:

"Dishwashing machine adapted to perform operational cycles, of which at least one comprises a phase carried out with hot water for rinsing the washload items that are arranged in a washing tank and that, during a subsequent drying phase, release inside said tank, owing to the evaporation of residual water from the same washload items, vapour that tends to condense mainly onto the inner walls of the tank, characterized in that at least an upper aperture (6) and at least a lower aperture (7) in said tank (1) are interconnected by at least a conduit (8) extending outside the tank and capable of bringing about a circulation of said vapour along a closed-loop flow-path defined by said tank (1) and said conduit (8), so as to cause the temperature of said vapour to become substantially homogeneous inside the tank, thereby improving the drying effect of the washload items without using any condenser."

Claim 1 of the auxiliary request reads as follows:

"Dishwashing machine adapted to perform operational cycles, of which at least one comprises a phase carried out with hot water for rinsing the washload items that are arranged in a washing tank and that, during a subsequent drying phase, release inside said tank, owing to the evaporation of residual water from the same washload items, vapour that tends to condense

mainly onto the inner walls of the tank, characterized in that at least an upper aperture (6) and at least a lower aperture (7) in said tank (1) are interconnected by a conduit forming an unobstructed free passage extending outside the tank and being capable of bringing about a natural circulation of said vapour along a fanless closed-loop flow-path defined by said tank (1) and said conduit (8), so as to cause the temperature of said vapour to become substantially homogeneous inside the tank, thereby improving the drying effect of the washload items without using any purpose-provided condenser based drying arrangement."

V. In support of its requests, the appellant relied essentially on the following submissions:

D1 referred to a dishwashing machine which performed a drying phase in a traditional manner including the step of condensing the vapour released inside the machine on a condenser.

The closed-loop flow path shown in D1, along which the vapour could be re-circulated when the valve 9 was closed, included a partition 6 chilled by ambient air flowing through the duct 5. Since a condenser could be defined as a chilled surface on which hot vapour condenses, the partition 6 had to be regarded as a condenser. This interpretation of the partition was supported by an affidavit signed by Mr Dino Baggio, concerning laboratory tests on a dishwasher according to D1.

Therefore, the subject-matter of claim 1 according to both requests differed from the dishwashing machine disclosed in D1 in that it did not use any condenser.

With respect to claim 1 of the auxiliary request, D1 additionally did not show the feature according to which the tank and the conduit defined a fanless closed-loop flow-path.

Reasons for the decision

1. The appeal is admissible

2. *Amendments*

Claim 1 of the main request differs from the originally filed claim 1 by the feature according to which

(a) the drying effect of the washload items is improved without using any condenser.

Claim 1 of the auxiliary request differs from the originally filed claim 1 by the following features:

(a') the drying effect of the washload items is improved without using any purpose-provided condenser based drying arrangement,

(b) the circulation is a natural circulation, and

(c) the closed-loop flow-path is a fanless flow-path.

With respect to features (a) and (a'), the originally filed documents disclose that the drying effect of the washload items is improved by the present invention without using

- any special system provided with a condenser (see

page 1, paragraph 1), or

- any purpose-provided condenser based drying arrangement (see page 5, paragraph 1).

According to the Board, these disclosed wordings of the originally filed document clearly point to the avoidance of separate or specially provided condensers. The wording "without using any condenser" (feature a) is, however, more general, particularly since the originally filed documents do not exclude the use of "any condenser". Indeed, even claim 1 according to both requests states that the vapour tends to condense mainly onto the inner walls of the tank.

Hence, feature (a) which indicates not to use "any condenser" extends beyond the content of the application as filed.

However, the indication in feature (a'), that no purpose-provided condenser based drying arrangement, i.e. a separate condenser, is used has a basis in the originally filed documents.

Feature (b) is described on page 6, lines 25 to 33 of the originally filed description, and feature (c) is disclosed in figure 1 which shows an embodiment of the claimed dishwashing machine comprising a fanless flow-path having a natural circulation (see page 6, lines 25 to 29).

Consequently, claim 1 of the auxiliary request meets the requirements of Article 123(2) EPC, whereas claim 1 of the main request does not meet these requirements.

3. *Novelty*

3.1 D1 which represents the most relevant state of the art refers to a dishwashing machine of the type which is typically adapted to perform operational cycles, of which at least one comprises a phase carried out with hot water for rinsing the washload items that are arranged in a washing tank and that, during a subsequent drying phase, release inside said tank, owing to the evaporation of residual water from the same washload items, vapour that tends to condense mainly onto the inner walls of the tank.

Hence, the features of the pre-characterizing portion of claim 1 according to both requests are implicitly disclosed in D1.

Furthermore, D1 shows that at least an upper aperture (upper opening in the tank upstream of fan 13) and at least a lower aperture (15) in said tank (2) are interconnected by at least a conduit (10) which forms a passage extending outside the tank and being capable of bringing about a circulation of said vapour along a closed-loop flow-path defined by said tank, a fan casing, and said conduit (when the valve 9 is closed), which circulation inevitably causes the temperature of said vapour to become substantially homogeneous inside the tank, thereby improving the drying effect of the washload items without using any condenser, in particular without using any purpose-provided condenser based drying arrangement.

However, since the closed-loop flow-path shown in D1 includes a fan (13), the fan casing and the conduit (10) outside the tank (2) cannot provide an

unobstructed natural circulation.

3.2 The appellant's argumentation, according to which the partition 6 of the fan casing shown in D1 had to be regarded as a condenser, is not convincing.

According to the description of D1, the partition 6 merely serves to separate the flows in conduits 4 and 5 (see column 2, lines 24 to 26).

The sole figure of D1 shows at best that the partition 6 forms a portion of the housing of the fans 13 and 14. These fans have such an output that the mixture of the flows within channels 4 and 5 does not condense outside the machine (see column 3, lines 28 to 34).

However, there is neither an indication in D1 that the partition is provided to form a cooling surface, nor that the flow in channel 5 is provided for chilling the partition 6.

Even D2 which refers to a dishwashing machine having a closed-loop flow-path including a condenser does not disclose that the partition between the two fans 70 and 84, which correspond to those shown in D1, serves as a condenser. In contrary, in order to condense the vapour within the circulation duct 56, D2 provides a separate heat exchanger 68.

Therefore, the partition 6 shown in D1 cannot be regarded as a condenser.

The laboratory tests described in the affidavit signed by Mr Dino Baggio are not suitable to prove the contrary. First of all, there is no link between the

dishwashing machine G 590 SC used for the tests and the dishwashing machine according to D1. Although some features appear to be the same in both machines, it might be that the G 590 SC machine has additional features which are not disclosed in D1 and which result in a condensing effect. Moreover, there is no evidence that the water collected during the tests was a condensate from a condenser within the flow-path of the G 590 SC. In particular there is no evidence that the water was condensed at the partition between the blowers.

3.3 In view of the assessments above, the subject-matter of claim 1 according to the main request lacks novelty over D1.

The subject-matter of claim 1 according to the auxiliary request differs from that which is disclosed in D1 in that the closed-loop flow-path is a fanless path and that the conduit between an upper and a lower aperture in said tank is capable of providing an unobstructed natural circulation along this path.

Since the further documents cited in the search report and in the application itself show less than D1, novelty of the subject-matter of claim 1 according to the auxiliary request has to be concluded.

4. *Procedural matter*

The Examining Division rejected the present application exclusively on the ground of lack of novelty.

Since this objection has been overcome by the present auxiliary request, the case is remitted to the first

instance for the examination of the further requirements of the EPC, as requested by the appellant in his letter of 1 March 2001.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The main request is rejected.

3. The case is remitted to the first instance for further prosecution on the basis of the following documents:

Claim: 1 of the auxiliary request filed with letter of 1 March 2001;

Description: pages 1 , 3 to 8 as originally filed, page 2 filed with letter of 28 January 2000;

Drawings: Figures 1, 2 as originally filed.

The Registrar: The Chairman:

G. Magouliotis C. Andries