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**Datasheet for the decision
of 22 May 2024**

Case Number: T 0309/21 - 3.2.06

Application Number: 13000361.9

Publication Number: 2623659

IPC: D06F35/00

Language of the proceedings: EN

Title of invention:

Control method of washing machine

Patent Proprietor:

LG Electronics Inc.

Opponent:

Whirlpool EMEA S.p.A.

Headword:

Relevant legal provisions:

EPC Art. 56

RPBA 2020 Art. 12(2), 12(3), 12(4), 12(5)

Keyword:

Inventive step - auxiliary request 2 (no)

Auxiliary requests - lack of substantiation - admitted (no)

Decisions cited:

Catchword:



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Case Number: T 0309/21 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 22 May 2024

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Decision under appeal:

**Interlocutory decision of the Opposition
Division of the European Patent Office posted on
3 March 2021 concerning maintenance of the
European Patent No. 2623659 in amended form.**

Composition of the Board:

Chairman M. Harrison
Members: M. Hannam
J. Hoppe

Summary of Facts and Submissions

- I. Appeals were filed by each of the appellant (opponent) and the appellant (patent proprietor) against the interlocutory decision of the opposition division in which it found that European patent No. 2 623 659 in an amended form according to what was then auxiliary request 1 met the requirements of the EPC.
- II. The opponent requested that the decision under appeal be set aside and the patent be revoked.
- III. With its grounds of appeal, the patent proprietor requested that the decision under appeal be set aside and the patent be maintained as granted or, as an auxiliary measure, that the patent be maintained according to one of
- auxiliary request 1 as filed with its grounds of appeal; or
 - auxiliary request 2 (corresponding to auxiliary request 1 before the opposition division which was found to meet the requirements of the EPC); or
 - auxiliary requests 3 to 8 or 10 to 21 (all as filed with its grounds of appeal).

Auxiliary request 2 corresponds to the proprietor's request to dismiss the opponent's appeal as filed with the proprietor's reply. It is also noted that an auxiliary request 9 is missing from the chronology of auxiliary requests filed by the patent proprietor.

- IV. The following documents are relevant to the present decision:

D1 EP-A-0 481 442

E1 EP-A-1 526 210

E2 US-A-5 887 456

- V. The Board issued a summons to oral proceedings and a subsequent communication under Article 15(1) RPBA containing its provisional opinion, in which it indicated *inter alia* that the subject-matter of claim 1 of the main request seemed to lack novelty *inter alia* over E1 and that the subject-matter of claim 1 of auxiliary request 2 seemed to lack an inventive step when starting from E2. It further indicated why all of the further auxiliary requests on file would likely not be admitted.
- VI. With its submission of 18 December 2023 the patent proprietor withdrew its appeal and, with a further submission of 30 January 2024, indicated that it would not attend the scheduled oral proceedings.
- VII. With notification of 16 February 2024 the scheduled oral proceedings were cancelled.
- VIII. Claim 1 of auxiliary request 2, corresponding to auxiliary request 1 found to meet the requirements of the EPC by the opposition division, reads as follows:
- "A control method of a washing machine, the method comprising:
- performing first-stage rotation (S100, S300) in which a drum (30) is rotated at a predetermined rotational speed;
- performing second-stage rotation (S236, S310) in which the drum (30) is rotated at a first target RPM when a predetermined time has passed after the first-stage rotation (S100, S300) ends;
- performing deceleration rotation (S237, S315) in which

the rotational speed of the drum (30) is kept at a lower value than in the second-stage rotation (S236, S310); and performing third-stage rotation (S238, S320) in which the drum (30) is rotated at a second target RPM that is greater than the rotational speed of the drum (30) in the deceleration rotation, characterized in that the deceleration rotation (S237, S315) includes supplying hot air into the drum (30) via a heater (120), wherein the deceleration rotation (S237, S315) includes iteratively performing a set of rotation and pause of the drum (30), wherein the first target RPM differs from the second target RPM."

Merely for completeness it is noted that the order of the last two features of the claim as filed with the grounds of appeal as auxiliary request 2 above were swapped around compared to auxiliary request 1 found allowable by the opposition division. This is, however, of no consequence for the decision to be taken, since these two features do not define any order of steps.

The wording of claim 1 of each of auxiliary requests 3 to 8 and 10 to 21 respectively is immaterial for the present decision and is thus not reproduced here.

IX. The opponent's arguments relevant to the present decision may be summarised as follows:

Auxiliary request 2

The subject-matter of claim 1 lacked an inventive step. The technical problem posed by the opposition division when starting from E2 was not objective. The different

target speeds had no technical effect and the iterative rotation and pause of the drum simply distributed the laundry in the drum in the same manner as that already achieved in E2. If an increase in drying efficiency were nonetheless sought, this was anyway obvious in the light of D1 which disclosed an iterative rotation and pausing of the drum.

Auxiliary requests 3 to 8 and 10 to 21

The auxiliary requests should be found inadmissible in their entirety under Article 12(4) RPBA. Auxiliary requests 3, 5 to 8 and 21 were new on appeal, lacked convergence and thus should not be admitted. Even if the remaining auxiliary requests were to be admitted, the patent proprietor failed to show how the subject-matter of the respective claim 1 of each request involved an inventive step over the cited documents.

- X. The patent proprietor's arguments relevant to the present decision may be summarised as follows:

Auxiliary request 2

The subject-matter of claim 1 involved an inventive step. E2 was inappropriate for use as the closest prior art as it related just to a drying process whereas claim 1 was directed to dehydration (i.e. spinning, prior to drying). E2 also failed to disclose deceleration rotation, at which the drum speed was kept at a lower value than in the second-stage rotation. If the differentiating features of claim 1 over E2 were limited to the deceleration rotation including iteratively performing rotation and pause of the drum and the first and second target RPM being different

from one another, the opposition division's reasoning in support of the presence of an inventive step was valid.

Auxiliary requests 3 to 8 and 10 to 21

Each request was based on auxiliary request 2 in combination with granted dependent claims such that the subject-matter of each independent claim 1 met the requirements of Article 123(2) EPC.

With respect to novelty and inventive step, reference was made to the arguments presented in support of the main request and auxiliary request 1. The added features also differentiated the claimed subject-matter of each auxiliary request from E1 and E2 which failed to disclose these features.

Reasons for the Decision

The proprietor's main request and auxiliary request 1 were filed with the proprietor's grounds of appeal and are broader than auxiliary request 2 corresponding to the auxiliary request found to meet the requirements of the EPC by the Opposition Division. While the main request and auxiliary request 1 have not been withdrawn explicitly, the Board understands the proprietor's withdrawal to entail withdrawal of these requests. Without an appeal of the proprietor any request broader than that found to be allowable by the Opposition Division would otherwise be inadmissible due to it being a violation of the principle of *reformatio in peius*.

Auxiliary request 2 (corresponding to auxiliary request 1 found to meet the requirements of the EPC by the opposition division)

1. *Inventive step*

1.1 The subject-matter of claim 1 of auxiliary request 2 does not involve an inventive step.

1.2 Starting from E2 (see in particular Fig. 4 and col. 9, line 8 to col. 10, line 29), this discloses the following features of claim 1, the references in parentheses referring to E2:

A control method of a washing machine (see col. 1, lines 5 to 11; time chart for the washing machine in Fig. 4), the method comprising:
performing first-stage rotation (the first, short, high speed drum rotation at the start of the drying operation in Fig. 4) in which a drum (3) is rotated at a predetermined rotational speed;
performing second-stage rotation (the second, from the start of drying operation, relatively longer high speed drum rotation in Fig. 4) in which the drum (3) is rotated at a first target RPM when a predetermined time has passed after the first-stage rotation ends;
performing deceleration rotation (phase in which the drum rotation is decelerated from the second stage rotation speed and maintained at the lower rotation speed) in which the rotational speed of the drum (3) is kept at a lower value (low speed rotation in Fig. 4) than in the second-stage rotation; and
performing third-stage rotation (the third, from the start of drying operation, high speed drum rotation in Fig. 4;) in which the drum (3) is rotated at a second

target RPM that is greater than the rotational speed of the drum (3) in the deceleration rotation, wherein the deceleration rotation includes supplying hot air into the drum (3; see Fig. 4 in which the low mode heater is 'ON' during deceleration rotation) via a heater (low mode heater 11).

1.3 The patent proprietor's contention that E2 is inappropriate for use as the closest prior art when considering inventive step because it relates just to a drying process, whereas claim 1 is directed to dehydration (i.e. spinning, prior to drying), is not accepted, not least since claim 1 is not limited to either dehydration or drying. Additionally, E2 is directed to both dehydration and drying as this discloses drum speeds of 1000rpm which are clearly drum speeds associated with dehydration (see e.g. col. 9, lines 36 and 37) albeit as part of the drying stage (col. 9, line 20).

1.4 The patent proprietor's further argument that E2 fails to disclose deceleration rotation, at which the drum speed is kept at a lower value than in the second-stage rotation, is also not accepted. In reaching this conclusion, the proprietor defines the second stage rotation in E2 as being the first low speed rotation period of the drum. However, in doing so, the proprietor is assuming that the second-stage rotation must be the second speed at which the drum rotates from the start of the drying operation, yet no such limitation is defined by claim 1. The label 'second-stage rotation' can reasonably be applied to any relevant rotation speed occurring after the first-stage rotation. The Board selects the second, (from the start of drying operation) longer high speed drum rotation in Fig. 4 to be the 'second-stage rotation'. Deceleration

rotation thus occurs immediately following this high speed rotation stage, because the drum rotation must be decelerated from the high speed rotation speed to achieve the low rotation speed.

- 1.5 In regard to the features of claim 1, E2 thus fails to disclose solely that:
- a. 'the deceleration rotation includes iteratively performing a set of rotation and pause of the drum'; and
 - b. 'the first target rpm differs from the second target rpm'.

- 1.6 In its grounds of appeal (see page 11, 'Auxiliary request 2'), the patent proprietor referred to the opposition division's finding that this request met the requirements of the EPC. In its later reply to the opponent's appeal made with its submission of 16 November 2021, the patent proprietor also referred back to page 8 of its grounds of appeal (which however relates to inventive step regarding the main request). Taking these references together, these are understood essentially to argue that E2 is an inappropriate starting point for considering inventive step and that, as such, a combination with D1 is based on hindsight. As stated above however, E2 is a suitable starting point since claim 1 does not define a dehydration process.

- 1.6.1 Regarding the patent proprietor's general reference to the inventive step reasoning of the opposition division, the Board notes that the opposition division concluded in accordance with point 1.5 above, that E2 failed to disclose features a and b. Based on these differentiating features, the opposition division found the objective technical problem to read 'to further

increase the laundry drying efficiency prior to accelerating the drum to a higher target speed during a dehydration process'.

- 1.6.2 However, the Board finds this problem not to be objective. Whilst the iterative rotation and pausing of the drum is seen to improve drying efficiency due to redistribution of laundry in the drum, the part of the problem reading 'acceleration of the drum to a higher target speed' is completely unrelated to any of the differentiating features. A first target rpm differing from a second target rpm is unrelated to allowing a higher target drum rotational speed, not least since no magnitude of difference between the first and second target rotational speeds is claimed. Without a correctly formulated objective technical problem, the opposition division's finding that the subject-matter of claim 1 involves an inventive step is incorrectly founded.

- 1.7 Contrary to the opposition division, the Board finds the differentiating features a and b identified in point 1.5 above to be a mere aggregation of features which are not functionally interdependent i.e. they do not mutually influence each other to achieve a technical effect over and above the sum of their respective individual effects. The formulation of a partial objective technical problem for each of the differentiating features is thus appropriate.

- 1.8 Regarding differentiating feature a, E2 discloses (see Fig. 4, in particular the first and fourth graphic representations indicating drum rotation and low mode heater operation) an iterative speed change of the drum from 50rpm to 1000rpm (see e.g. col. 9, lines 21 to 37) while the low mode heater is permanently activated. The

laundry in the drum rotating at 50 rpm will undergo improved distribution and significant drying as a result of a tumbling action in warm air. It is not evident what advantage the claimed iterative rotation and pause of the drum offers over the rotation method known from E2. Indeed the patent proprietor in point 46 of its letter of 23 March 2022, where this feature is addressed, did not identify one. Therefore, when starting from E2 and considering the solution provided by feature a, the partial objective technical problem is found to be 'to provide an alternative rotation pattern for the drum during a drying cycle'.

1.9 In wishing to provide an alternative rotation pattern for the drum, the skilled person finds this for example in D1, also relating to a drying operation by means of dehydration (see page 14, lines 16 to 18) and which discloses changes in direction of rotation of the drum that inherently include a pause between each direction of rotation. This would guide the skilled person to a suitable alternative rotation pattern satisfying the first differentiating feature of iteratively rotating and pausing rotation of the drum.

1.10 As regards differentiating feature b, different drum rotation speeds are commonplace during dehydrating cycles, typically starting slowly and then increasing with pauses in between, which ensures more even laundry distribution in the drum which is necessary to avoid vibration and resultant noise. The claimed first and second target rotational speeds, however, need simply be different (no amount of difference is defined). In E2, the first and second target rotation speeds are the same (1000rpm). The partial objective technical problem is thus found to be 'to provide alternative target

rotation speeds'.

1.11 When wishing to solve this problem, Fig. 32(c) of D1 discloses a low and high speed dehydrating step which would guide the skilled person to the claimed second differentiating feature when merely seeking alternative target rotation speeds.

1.12 These preliminary conclusions were also laid out in the Board's communication under Article 15(1) RPBA. To this opinion the patent proprietor provided no counter-arguments. For the reasons given above, the Board thus hereby confirms the preliminary opinion that, starting from E2 and wishing to solve the posed partial objective technical problems, the skilled person would be guided to the subject-matter of claim 1 through the teaching of D1 without having to exercise an inventive step. Consequently the subject-matter of claim 1 does not meet the requirements of Article 56 EPC.

1.13 Auxiliary request 2 is therefore not allowable.

2. *Auxiliary request 3*

2.1 According to Article 12(3) RPBA, the statement of grounds of appeal and the reply shall contain a party's complete appeal case. Accordingly, they shall set out clearly and concisely the reasons why it is requested that the decision under appeal be reversed, amended or upheld, and should specify expressly all the requests, facts, objections, arguments and evidence relied on (underlining added by the Board).

2.2 In the patent proprietor's grounds of appeal (see page 11) the mere statement that "with respect to novelty and inventive step, it is referred to arguments of the

main request and Auxiliary request 1 above" does not provide any substantiation of what relevance the features of the respective claim 1 of auxiliary requests 3 should have in regard to inventive step; reference to arguments concerning the main request and auxiliary request 1 is of no assistance in this respect, since the added features are simply not present in those requests. Likewise, the further statement on page 11 that the added features "further specify the speed profile to further differentiate the claims from E1 and E2" does not address any issues concerning inventive step and why, with the particular features added in the request, these would overcome any particular objections (which were not solely based on E1 and E2 but included their combination with further documents), nor why the amendments address any particular issues which led to the decision under appeal (see e.g. Article 12(4) RPBA). Contrary to the proprietor's unreasoned allegation, it is also not self-evident why the amendments overcome the objections based on the combination of several different documents.

2.3 In its communication under Article 15(1) RPBA the Board indicated that it intended not to admit auxiliary request 3 into the proceedings on account of it being unsubstantiated. To this preliminary opinion, the patent proprietor provided no counter-arguments. The Board thus hereby confirms its preliminary opinion and exercises its discretion not to admit auxiliary request 3 under Article 12 (3) and (5) RPBA.

3. *Auxiliary requests 4 to 8 and 10 to 17*

3.1 In the same manner as that found for auxiliary request 3 (see point 2. above), auxiliary requests 4 to 8 and

10 to 17 also lack substantiation as required by Article 12(3) RPBA. Discussion of novelty and inventive step (where any can be seen as having been made at all) is primarily limited to referring to arguments presented for the main request and auxiliary request 1, yet such a reference is of no assistance in understanding how auxiliary requests 4 to 8 and 10 to 17 may overcome the objections to those requests, since the added features are simply not present there. Where the statement is made that the newly added features in claim 1 of a particular request are not disclosed in E1 or E2, this does not address any issues concerning inventive step and why, with the particular features added in the request, these would overcome any particular objections which were based on the combination with further documents. In view of the number of features which have been added and the lack of convergence it is also not self-evident which objections are intended to be addressed by the respective requests.

3.2 In its communication under Article 15(1) RPBA the Board indicated that it intended not to admit auxiliary requests 4 to 8 and 10 to 17 into the proceedings on account of these being unsubstantiated. To this preliminary opinion, the patent proprietor provided no counter-arguments. The Board thus hereby confirms its preliminary opinion and exercises its discretion not to admit auxiliary requests 4 to 8 and 10 to 17 under Article 12(5) RPBA.

4. *Auxiliary requests 18 to 20*

4.1 These auxiliary requests were on file before the opposition division as auxiliary requests 5a, 5b and 6 but the impugned decision was not based on these

requests. According to Article 12(4) RPBA such requests are to be regarded as an amendment, unless the party demonstrates that this part was admissibly raised and maintained in the first instance proceedings.

4.2 In the present case, with higher ranking auxiliary requests having been inserted before auxiliary requests 18 to 20, the overall sequence of auxiliary requests for consideration relative to the opposition has changed, which materially changes the focus of auxiliary requests 18 to 20. This has also led to a lack of convergence because the higher ranking requests are based on combinations with dependent claims and also include newly introduced features from the description (see e.g. the opponent's analysis on page 10 of its reply to the proprietor's grounds of appeal). In the Case Law of the Boards of Appeal such a change of case resulting from the introduction of higher ranking requests has been regarded as an amendment (see with respect to Article 13(1) RPBA: T 1185/17, Reasons 3.1; T 2112/16, Reasons 7.1; and with respect to Article 12(4) RPBA: T 1516/20, reasons 2.8).

4.3 The proprietor has also not demonstrated that these auxiliary requests were admissibly raised in the opposition proceedings. The proprietor provided the date on which these auxiliary requests were filed during the opposition proceedings and explained that they were just based on combinations of granted claims. However, the proprietor did not present any reasoning why the requests were admissibly raised at that stage of the opposition proceedings. In this respect the Board holds that not every claim request submitted after the expiry of the time limit set under Rule 79(1) EPC, but before the expiry of the time limit set under Rule 116(1) EPC, is automatically admissibly raised

(see e.g. T 364/20, Reasons 7.2.3). Rather, this depends on several criteria, one of which may be procedural economy depending on the case in question, and in many cases convergence with higher ranking claim requests (see T 364/20, Reasons 7.2.10). In the present case it is thus, without further explanations from the proprietor, not evident that the auxiliary requests were admissibly raised during the opposition proceedings.

4.4 Auxiliary requests 18 to 20 are found, therefore, to be an amendment under Article 12(4) RPBA, according to the last sentence of which, the admittance of these requests is at the Board's discretion in view of *inter alia* the need for procedural economy.

4.5 As also indicated in the analysis on page 10 of the opponent's reply to the proprietor's grounds of appeal, the respective claim 1 of these auxiliary requests are broadly not convergent from their higher ranking auxiliary requests, such that at least procedural efficiency is negatively impacted by these requests.

4.6 In its communication under Article 15(1) RPBA the Board indicated that, due to the effect on procedural economy caused by this lack of convergence, it intended to exercise its discretion not to admit auxiliary requests 18 to 20 into the proceedings. To this preliminary opinion, the patent proprietor provided no counter-arguments. The Board thus hereby confirms its preliminary opinion and exercises its discretion under Article 12(4) RPBA not to admit auxiliary requests 18 to 20 into the appeal proceedings.

5. *Auxiliary request 21*

- 5.1 In the same manner as that found for auxiliary request 3 (see point 2. above), auxiliary request 21 also lacks the requisite substantiation required by Article 12(3) RPBA.
- 5.2 In its communication under Article 15(1) RPBA the Board indicated that it intended not to admit auxiliary request 21 into the proceedings on account of this being unsubstantiated. To this preliminary opinion, the patent proprietor provided no counter-arguments.
- 5.3 The Board thus hereby confirms its preliminary opinion and exercises its discretion not to admit auxiliary request 21 under Article 12(5) RPBA.
6. No further requests of the proprietor are on file and none of the proprietor's requests in the proceedings is allowable. Absent any requests upon which the patent can be maintained, revocation of the patent is to be ordered.

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:



D. Grundner

M. Harrison

Decision electronically authenticated