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**Datasheet for the decision  
of 16 January 2018**

**Case Number:** T 2110/16 - 3.2.06

**Application Number:** 10192928.9

**Publication Number:** 2458078

**IPC:** D06F58/28

**Language of the proceedings:** EN

**Title of invention:**

Rotatable-drum laundry drier and method of controlling a  
rotatable-drum laundry drier

**Patent Proprietor:**

Electrolux Home Products Corporation N.V.

**Opponent:**

Dr. Jordan, Volker

**Headword:**

**Relevant legal provisions:**

EPC Art. 123(2), 54(1), 56, 111(1), 114(1)

**Keyword:**

Oral proceedings - non-attendance of appellant/opponent - held in absence of appellant

Amendments - extension beyond the content of the application as filed (no)

Novelty - main request (yes)

Examination of own motion - appeal proceedings

Inventive step - main request (yes) - non-obvious modification

Remittal to the department of first instance - (yes)

**Decisions cited:**

T 1408/04

**Catchword:**



**Beschwerdekammern**  
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Case Number: T 2110/16 - 3.2.06

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.06**  
**of 16 January 2018**

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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
28 July 2016 concerning maintenance of the  
European Patent No. 2458078 in amended form.**

**Composition of the Board:**

**Chairman** M. Harrison  
**Members:** P. Cipriano  
J. Hoppe

## Summary of Facts and Submissions

- I. An appeal was filed by the appellant (opponent) against the interlocutory decision of the opposition division in which it found that European patent No. 2 458 078 in an amended form met the requirements of the EPC.
- II. The appellant (opponent) requested with its grounds of appeal that the interlocutory decision be set aside and the patent be revoked. Auxiliarily, oral proceedings were requested.
- III. The respondent (proprietor) requested in its reply that the appeal be dismissed, auxiliarily that the patent be maintained in an amended form according to one of auxiliary requests 1 to 8. An auxiliary request for oral proceedings was also made.
- IV. The following documents were *inter alia* referred to by the parties:  
E1: US 2004/0200093 A1  
E2: DE 197 05 148 B4  
E6: DE 10 2008 041 265 A1
- V. With letter of 28 June 2017 the appellant withdrew its request for oral proceedings and stated that it would not attend the oral proceedings or reply to the summons.
- VI. The Board issued a summons to oral proceedings and a communication containing its provisional opinion, in which it indicated that E6 seemed to render the subject-matter of claim 5 of the main request not new under Article 54(1) EPC. It further stated that should the subject-matter of claim 5 be found novel, inventive step of same might require discussion. It was however

noted that the only attack on inventive step that had been made by the appellant started from E6 as the closest prior art.

- VII. With letter of 15 December 2017 the respondent filed a further request named "Main Request B" and auxiliary requests 1B, 2B and 4B to 7B to be considered in the following order: main request, main request B, auxiliary requests 1, 1B, 2, 2B, 3, 4, 4B, 5, 5B, 6, 6B, 7, 7B and 8.
- VIII. Oral proceedings were held before the Board on 16 January 2018 in the absence of the appellant as already announced. During the oral proceedings, the respondent withdrew all its previous requests and submitted a new main request.
- IX. The appellant had requested in writing that the decision under appeal be set aside, that the patent be revoked and that a decision be taken according to the state of the file.
- X. The respondent requested that the patent be maintained on the basis of the main request filed in the oral proceedings.
- XI. Claims 1 and 5 of the main request read:  
"1. A control method for controlling a rotatable-drum laundry drier (1) to dry laundry in a drum (3), said control method being characterized by comprising the steps of:  
- memorizing a in a memory device of said laundry drier (1) a comparison threshold ( $F_c(t)$ ) variable in time according to a predetermined discrete profile comprising a number of different threshold values, each

corresponding to a predetermined drying time interval and to a predetermined laundry quantity/weight, and  
- at predetermined drying times ( $t_i$ ) in the laundry drying cycle:

- measuring an electric quantity ( $Z(t_i)$ ) indicating the moisture in the laundry at the drying time ( $t_i$ );
- comparing, at each drying time ( $t_i$ ), the measured electric quantity ( $Z(t_i)$ ) with the memorized comparison threshold ( $F_c(t_i)$ ) corresponding to the drying time ( $t_i$ );
- determining the end of drying cycle time ( $t_{END}$ ) on the basis of said comparison."

"5. A rotatable-drum drier (1) characterized in that it comprises:

- a memory device in which a comparison threshold ( $F_c(t)$ ), variable in time according to a predetermined discrete profile comprising a number of different threshold values, each corresponding to a predetermined drying time interval and to a predetermined laundry quantity/weight, is memorized;
  - an electronic control unit (14) configured to:
    - measure an electric quantity ( $Z(t_i)$ ) indicating the moisture in the laundry at a drying time ( $t_i$ );
    - comparing said measured electric quantity ( $Z(t_i)$ ) with the comparison threshold ( $F_c(t_i)$ ) corresponding to said drying time ( $t_i$ ); and
    - determine the end of drying cycle time ( $t_{END}$ ) on the basis of said comparison,
- the electronic control unit (14) further configured to:
- calculate the laundry quantity/weight on the basis of the comparison threshold ( $F_c(t_i)$ ) corresponding to the end of drying cycle time ( $t_{END}$ ); and

- adjust the duration of a laundry cooling stage, subsequent to the end of drying cycle time (tEND), on the basis of the calculated laundry quantity/weight."

XII. The appellant's arguments which only referred to claims 1 and 5 of the previous main request are still valid for claims 1 and 5 of the (new) main request. These are summarised as follows:

*Novelty - Claims 1 and 5*

E1 rendered the subject-matter of claims 1 and 5 not novel. In respect of the features of claim 1 which were considered by the opposition division not to be known from E1, E1 disclosed in paragraphs [0088] to [0092], *inter alia* a discrete function with discrete values being connected by a linear function. This was a "discrete profile" as defined in claims 1 and 5. Further, a profile having discrete threshold values was present in any case, since the prior art solution in paragraph [0022] implemented the use of an analogue to digital converter, which necessarily gave discrete digital output values. Also, the embodiment of paragraph [0087] disclosed a discrete profile including two threshold voltage levels each corresponding to a predetermined drying time.

E2 also rendered the subject-matter of claims 1 and 5 not novel. The feature "each threshold corresponding to a different laundry quantity/weight" was disclosed in E2. Each of the selected target values corresponded to a laundry with a particular moisture content and had a different weight, thus corresponding to a different laundry quantity/weight.

Claim 5 was also not new in view of E6.

*Inventive Step*

Claim 1

Starting from E6 as the closest prior art, the objective technical problem was to achieve a precise, stable process termination depending on process parameters variable during the process.

The skilled person knew from paragraph [0046] of E6 that two subsequent measurements increased the safety and accuracy of the detection of an inadmissible operating status. E6 did not cover all the possible combinations of threshold values and still presented risks under certain situations. Thus, it would be obvious for the skilled person to add one or more observation points to increase the safety of the drying process.

Claim 5

The appellant did not bring forward any specific arguments on inventive step relating to claim 5 of the new main request.

XIII. The respondent's arguments may be summarised as follows:

*Article 123(2) EPC*

The combination of features in claim 5 was directly and unambiguously disclosed when considering the passage bridging page 3, last line, to page 4, line 6, together with claims 8, 10, 11 and 14 as filed.

*Novelty - Claims 1 and 5*



Nothing in E1 indicated that the comparison threshold was a discrete profile. On the other hand, the embodiment in E1, paragraphs [0087] to [0092] disclosed a comparison threshold that was defined as a continuous function of time. Thus the moisture sensor signals were compared against a threshold profile that was continuous. This also applied to the same feature in claim 5.

The initial moisture measuring and comparison procedure was only carried out for the purpose of obtaining information on the level of dryness of the laundry, which might be used for controlling the drying power as disclosed in paragraph [0007], not for determining the end of the drying cycle time.

E2, paragraph [0009] disclosed that the user could select between a number of different drying levels. Further it was disclosed in paragraphs [0011] and [0012] that this selected drying level was used for controlling the end of the drying cycle and remained constant over the whole drying cycle. Thus, the feature of claim 1, "said predetermined profile being a discrete profile comprising a number of different threshold values, each corresponding to a predetermined drying time interval and to a predetermined laundry quantity/weight" was not disclosed in E2. The same arguments applied to claim 5.

The threshold values in E6 did not correspond to predetermined laundry quantity/weights as in claim 1, since they were measured at the beginning of the drying cycle, as explained in paragraph [0020]. Further, E6 did not disclose "drying time intervals", only two discrete measuring points in time. Even if it were considered that these points corresponded to drying

time intervals, only one corresponded to a determination point for the end of the drying cycle time and not both of them.

In E6 the end of drying cycle time was simply an interruption; the cycle time end was not determined. The skilled person interpreted the term "drying cycle time" in claim 1 as the time required for the laundry to be dry, as explained in paragraph [0043] of the patent. This was not the meaning it had in E6.

The same arguments regarding the features of claim 1 applied to claim 5. In addition, E6 did not disclose the added features "calculate the laundry quantity/weight on the basis of the comparison threshold  $(F_c(t_i))$  corresponding to the end of drying cycle time  $(t_{END})$ " and "adjust the duration of a laundry cooling stage, subsequent to the end of drying cycle time  $(t_{END})$ , on the basis of the calculated laundry quantity/weight".

#### *Inventive Step*

E6 was not an appropriate starting point for considering inventive step of the subject-matter of claim 1 since it addressed a different purpose. However, if E6 was used as the closest prior art, the technical effect obtained starting from E6 would be a low-cost solution to achieve a precise, stable final moisture, regardless of the quantity/weight of the laundry in the drum. Thus, the problem to be solved would be to provide a drying cycle for laundry dryers, which was suitable for obtaining the effects identified above.

E6 did not provide any hint for the skilled person as to how its method should be modified in order to solve the technical problem and arrive at the subject-matter of claim 1.

Even if consideration were given to adding further observation points to the method disclosed in E6, the skilled person would not arrive at the subject-matter of claim 1.

When starting from E6 and applying the knowledge of the skilled person thereto, the subject-matter of claim 5 was also not obvious.

## **Reasons for the Decision**

### *Preliminary procedural remark*

The oral proceedings were held in the absence of the duly summoned appellant (Rule 115(2) EPC). In accordance with Article 15(3) RPBA, the appellant may be treated as relying on its written case.

During the oral proceedings the respondent filed a new main request. The Board exercised its discretion and admitted the request into the proceedings, since it was a proportional reaction to the discussion during oral proceedings, its consideration by the Board was not complex nor did it detract from procedural economy since it was *prima facie* allowable. In view of the Board's provisional opinion it was also a reaction which could have been expected. After further examination of the request, this was also found allowable.

1. Article 123(2) EPC

- 1.1 The features of claim 5 concern a combination of the features of granted claims 8, 10, 11 and 14. Granted claim 10, which corresponds to originally filed claim 10, is directed to "a rotatable-drum laundry dryer as claimed in Claims 8 **and** 9". Claim 9 is also dependent on claim 8 both in the granted version and in the application as originally filed. The features of granted claim 9 do not however need to be included in new claim 5 in order to fulfil the requirement of Article 123(2) EPC, as explained below.
- 1.2 In the application as originally filed, both the paragraph bridging pages 3 and 4 (which corresponds to the specific features of claim 9) and the sentence on page 4, lines 4 and 5 (which corresponds to the specific features of claim 10) refer to features "in the laundry drier according to the invention". Also, each of these passages refers to the "comparison threshold", which itself is described on page 3, lines 17 to 26. This structure is also present for all the other paragraphs on pages 2 to 4 that disclose features corresponding to specific features in dependent claims that may depend on any of the preceding claims. The Board thus finds that the skilled person, taking into account the structure of the description and in particular the disclosure in the paragraph bridging pages 3 and 4 as well as the sentence on page 4, lines 3 and 4 of the description unambiguously infers that the terminology "according to the invention" in both of these passages is referring to the invention as described on page 3, lines 17 to 26, which is described as "the present invention relates to a rotatable-drum laundry dryer comprising:..." and corresponds to the features of independent claim 8 as filed (and as granted). The skilled person would then derive clearly

and unambiguously that the features of dependent claim 10 can also be taken to be dependent only on claim 8 in spite of the "and 9" wording in claim 10 as filed.

1.3 The subject-matter of claim 5 thus meets the requirement of Article 123(2) EPC.

2. Novelty (Article 54 EPC)

2.1 E1

Claim 1

2.1.1 The appellant argued that E1 disclosed an embodiment comprising all the features of claim 1, including the following feature:

- that the predetermined profile is a discrete profile

2.1.2 E1 discloses in paragraphs [0087] to [0093] a control strategy for delicate loads, where the threshold value (in E1 called the target moisture level) is a function of the elapsed time. This control strategy is represented by the equations given in paragraphs [0088] to [0092]. This group of equations builds a profile for the target moisture level which is variable in time, that constitute a point, a line segment and a constant level extending from the end of the line segment (i.e. a ray) according to three conditions. These conditions are laid out in a way such that they build a continuous linear time-dependent function for the target moisture level that starts with the definition of a point value of 4.3 volts at minimum time=3.5 minutes (see paragraph [0089] and [0090]) and grows linearly and continuously to 4.8 volts at the time=12 minutes (see paragraph [0091]). After 12 minutes, the target moisture level

stays at a constant level at 4.8 volts. This control strategy may assume any value between 4.3 and 4.8 volts and is thus not a discrete profile in the context of the patent, since the skilled person would understand that a discrete profile as claimed may only assume a certain finite number of values. The description of the patent also supports this interpretation by considering step profiles as disclosed in paragraphs [0046] and [0047] discrete as distinct from a hyperbolic function as defined in paragraph [0052], which is considered continuous. The conditions laid down in paragraphs [0088] to [0092] result in a continuous linear function that can assume any value within the range 4.3 to 4.8 and this cannot be considered a group of discrete values connected by a linear function.

2.1.3 Whilst it is correct that paragraph [0022] discloses an analogue to digital converter, this does not imply that the threshold profile may only assume certain values and can thus be considered discrete. As disclosed in paragraph [0022], the converter receives signal representations from the moisture sensor, which do not correspond to values of the threshold profile but to the values of the measured electric quantity  $Z(t_i)$  in the patent. This means that in E6, the measured electric quantities may only assume discrete digital values, but the threshold profile, on the other hand, is defined by a continuous equation.

2.1.4 Contrary to the argument of the appellant, paragraph [0087] does not disclose an embodiment with simply two discrete threshold values of 4.0 and 4.8 volts. The two values in paragraph [0087] are mentioned in the context of the development of the control strategy of paragraphs [0088] to [0092]. They represent values that the skilled person infers from the empirical data in

Figures 15 and 16, but then further develops into the control strategy of paragraphs [0088] to [0092], as can be derived from the last 3 sentences of paragraph [0087] ("This means that [...] Thus, the control strategy [...] Such control strategy may be represented [...]") and do not constitute an embodiment *per se* but are only a step of a mental process towards the elaboration of the control strategy of paragraphs [0088] to [0092].

- 2.1.5 Since E1 does not disclose at least the feature concerning a "discrete profile", the subject-matter of claim 1 is novel over E1.

Claim 5

- 2.1.6 The subject-matter of claim 5 also includes the feature concerning a "discrete profile", which as found above is not disclosed in E1. Thus the Board finds, for the same reasons as apply to claim 1, that the subject-matter of claim 5 is novel over E1.

- 2.2 E2

Claim 1

- 2.2.1 The appellant argued that E2 disclosed an embodiment comprising all the features of claim 1, particularly the following feature of claim 1:

- said predetermined profile being a discrete profile comprising a number of different threshold values, each corresponding to a predetermined drying time interval and to a predetermined laundry quantity/weight

This feature will be referred to as the "each threshold value corresponding to a different laundry quantity/weight" feature.

2.2.2 E2 discloses in paragraph [0009] that there are eight different drying programs, each corresponding to different target resistance values, memorized in the controller, which the user can choose from. As the skilled person can infer from paragraph [0009], these target resistance values were established for different types of textiles and desired levels of dryness before they were memorized in a memory device. Thus, the target resistance values determined in this step have not been established taking account of the laundry quantity/weight. These predetermined target resistance values correspond to the electric resistance levels desired by the user at the end of the drying process.

2.2.3 Whilst it is true that the moisture content affects the overall weight of the laundry and the resistance value at the same time, selecting a target resistance value for the drying level of the laundry does not imply unambiguously that the target resistance values correspond to a predetermined laundry quantity/weight. The resistance level depends not only from the laundry quantity/weight but also on other factors, such as the the textile used, room conditions or the dryer heat level. The target resistance values selected by the user in E2 correspond rather to a resistance value that needs to be achieved irrespective of the laundry quantity/weight and from which nothing about the laundry quantity/weight can be inferred, since other factors can influence the measured electrical resistance of the laundry. Thus the threshold values do not correspond to predetermined laundry/quantity weights and the feature is not disclosed in E2.



2.2.4 Since E2 does not disclose at least the feature "each threshold value corresponding to a different laundry quantity/weight" as mentioned above, the subject-matter of claim 1 is novel over E2.

Claim 5

2.2.5 The subject-matter of claim 5 also includes the feature "each threshold value corresponding to a different laundry quantity/weight" found above not to be disclosed in E2, thus the Board finds, for the same reasons as apply to claim 1, that the subject-matter of claim 5 is novel over E2.

2.3 E6

Claim 1

2.3.1 It has not been disputed between the parties that E6 discloses the following features of claim 1:

1. A control method for controlling a rotatable-drum laundry drier (1) to dry laundry in a drum (3), said control method comprising the steps of:
  - memorizing a in a memory device of said laundry drier (1) a comparison threshold ( $F_c(t)$ ) variable in time according to a predetermined discrete profile comprising a number of different threshold values, and
  - at predetermined drying times ( $t_i$ ) in the laundry drying cycle:
    - measuring an electric quantity ( $Z(t_i)$ ) indicating the moisture in the laundry at the drying time ( $t_i$ );
    - comparing, at each drying time ( $t_i$ ), the measured electric quantity ( $Z(t_i)$ ) with the memorized comparison threshold ( $F_c(t_i)$ ) corresponding to the drying time ( $t_i$ );

The Board also finds no reason to disagree on this matter.

2.3.2 It has also not been disputed that E6 does not disclose the feature:

- at predetermined drying times (ti) in the laundry drying cycle, determining the end of drying cycle time on the basis of said comparison.

In E6 any determination is done only at one point in time.

2.3.3 The Board also finds no reason to disagree with the foregoing. Whilst novelty of the subject-matter of the claim has already been established by this difference, it is nevertheless important for the decision (concerning inventive step) to consider the further alleged difference invoked by the respondent.

2.3.4 The respondent disputed that E6 discloses the following feature of claim 1:

- each threshold value corresponding to a predetermined drying time interval and to a predetermined laundry quantity/weight

2.3.5 E6 discloses a control method for a laundry drier wherein two threshold values  $L_c^{lim1}$  and  $L_c^{lim2}$  corresponding to two different times  $\Delta t1$  and  $\Delta t2$  are stored in a memory. As disclosed in paragraph [0020], the drier comprises third means to determine the laundry quantity ("Masse der eingefüllten Wäschstücke") and adapt the values  $L_c^{lim1}$  and  $L_c^{lim2}$  accordingly. This profile thus comprises two threshold values corresponding to two different times, where the values

are determined according to the measured laundry quantity at the beginning of the drying process.

2.3.6 The measured laundry quantity is considered to be a "predetermined laundry quantity/weight". The Board considers that every laundry quantity established before it is introduced in the memory is considered "predetermined" and cannot agree with the respondent's argument that "predetermined" means that the quantity/weight has been determined at a previous stage independently from any step of the drying process, including the initial laundry quantity measurement. This does not correspond to the general meaning that a person skilled in the art would attribute to that term and there is also no definition in the description that would lead the skilled person to interpret the term otherwise. The term "predetermined" is generally understood as "determined before" some particular moment in time. When reading the claim, the skilled person understands that the only possible moment in time that the term "predetermined" may refer to is the memorizing in a memory device, since, in the claim, the term is applied only in the context of the technical features relating to the memory device.

2.3.7 E6 also discloses "drying time intervals". Whilst a claim must be interpreted in a technically sensible manner, there is no reason why it should not be given its broadest, technically logical meaning. Thus the Board interprets the expression "drying time interval" as corresponding to a period of time between two events during the drying operation of the drier.  $\Delta t_1$  and  $\Delta t_2$ , which are referred to in the paragraphs [0011] and [0017] of E6 as "Zeiträume", refer to the time elapsed between the beginning of the drying process ("Beginn eines Trocknungsprozesses") and the time at which a

measured resistance value  $L_c$  is compared with the threshold value  $L_c^{lim1}$  and  $L_c^{lim2}$ , respectively. Also, paragraph [0022] defines  $\Delta t1$  and  $\Delta t2$  as times intervals by stating that the progression of the measured value  $L_c$  may be monitored within the time interval  $\Delta t1$  or also  $\Delta t2$ . The skilled person would thus consider  $\Delta t1$  and  $\Delta t2$  also to be drying time intervals. The Board notes further that the patent does not give any specific definition of "drying time interval" that could put the interpretation of the Board into question. Thus the feature "each threshold value corresponding to a predetermined drying time interval and to a predetermined laundry quantity/weight" is disclosed in E6.

- 2.3.8 However, as stated above, since E6 does not disclose the feature "at predetermined drying times (ti) in the laundry drying cycle, determining the end of drying cycle time on the basis of said comparison", the subject-matter of claim 1 is novel over E6.

#### Claim 5

- 2.3.9 It has not been disputed that E6 discloses the following features of claim 5:  
A rotatable-drum drier comprising:  
- a memory device in which a comparison threshold, variable in time according to a predetermined discrete profile comprising a number of different threshold values, is memorized  
- an electronic control unit configured to:  
- measure an electric quantity indicating the moisture in the laundry at a drying time;  
- comparing said measured electric quantity with the comparison threshold corresponding to said drying time;  
and

The Board finds no reason to disagree.

- 2.3.10 It has only been disputed that E6 discloses the following features of claim 5:
- each threshold value corresponding to a predetermined drying time interval and to a predetermined laundry quantity/weight;
  - said electronic control unit (14) configured to determine the end of drying cycle time ( $t_{END}$ ) on the basis of said comparison.
- 2.3.11 The feature "each threshold value corresponding to a predetermined drying time interval and to a predetermined laundry quantity/weight" of claim 5 is the same as for claim 1. Thus, the Board finds that said feature of claim 5 is disclosed in E6 for the same reasons as already explained *supra* under points 2.3.5 to 2.3.7.
- 2.3.12 Regarding the feature "electronic control unit (14) configured to determine the end of drying cycle time ( $t_{END}$ ) on the basis of said comparison", the respondent's argument that "drying cycle time" was the time required to dry the laundry and not the time that the drier was in operation, is not accepted. The term "drying cycle time" does not have such an acknowledged meaning for the skilled person. The Board finds in this case that, while the term must be construed by a mind willing to understand it in a technically sensible manner, it should also be given the broadest, technically logical interpretation in the sense that only technically illogical interpretations should be excluded (see also Case Law of the Boards of Appeal, II.A.6.1, Interpretation of claims or T 1408/04, Reasons 1.) and, without a specific definition of the

term "drying cycle time" in the patent, a reference to the description to interpret the term in a more limited manner is inappropriate. Such a broadest, technically sensible interpretation does not restrict the claimed drying cycle time to the time required to dry the laundry but also encompasses any uninterrupted period of time that a drier may be performing a drying operation. Paragraph [0043] of the patent also does not give a specific definition of drying cycle time as argued by the respondent, rather stating only that it may "advantageously correspond" to particular drying criteria. Hence no fixed definition can be derived from the patent.

2.3.13 E6 discloses in paragraphs [0018] and [0019] that a controller is adapted to compare  $L_c$  with  $L_c^{lim2}$  and interrupt the drying process at time  $\Delta t_2$  if the operating condition is considered to be inappropriate. As explained in the preceding paragraph, such an interruption also corresponds to determining the end of the drying cycle time to be at this point in time, thus E6 discloses the feature "electronic control unit (14) configured to determine the end of drying cycle time ( $t_{END}$ ) on the basis of said comparison".

2.3.14 In addition, the following features were added to claim 5 of the main request during the appeal proceedings: the electronic control unit (14) further configured to:

- calculate the laundry quantity/weight on the basis of the comparison threshold ( $F_c(t_i)$ ) corresponding to the end of drying cycle time ( $t_{END}$ ); and
- adjust the duration of a laundry cooling stage, subsequent to the end of drying cycle time ( $t_{END}$ ), on the basis of the calculated laundry quantity/weight.

2.3.15 The appellant did not bring forward any arguments concerning the disclosure of these two features in E6. Notwithstanding the fact that the appellant did not wish to take any further active role in the proceedings, the Board nevertheless examined the amended claims, to the extent that any *prima facie* non-compliance with the EPC was present.

2.3.16 In appeal proceedings resulting from a decision in an opposition case, the legal and factual framework is primarily based on the facts, evidence and arguments submitted by the parties. The principle of *ex officio* examination pursuant to Article 114(1) EPC does not oblige the Board to make investigations of its own, in particular to search for further facts, evidence and arguments, if the opponent decides to remain passive. Likewise, while the Board has the power to remit the case to the opposition division for further prosecution (Article 111(1) EPC), the Board considers that it would only be appropriate to do this in a case such as this if, as a minimum, there were materials before it which indicated that one or more of the claims under attack in the appeal proceedings were *prima facie* highly likely to be invalid. In the present case, however, there are no materials in the appeal proceedings which have caused the Board to reach such a conclusion.

2.3.17 Thus the Board, in agreement with the respondent, finds that E6 does not disclose the following features of claim 5:

"the electronic control unit (14) is further configured to:

- calculate the laundry quantity/weight on the basis of the comparison threshold ( $F_c(t_i)$ ) corresponding to the end of drying cycle time ( $t_{END}$ ); and

- adjust the duration of a laundry cooling stage, subsequent to the end of drying cycle time ( $t_{END}$ ), on the basis of the calculated laundry quantity/weight"

2.4 The subject-matter of claim 5 is thus found to be novel over E1, E2 and E6 under Article 54(1) EPC.

3. Inventive step (Article 56 EPC)

3.1 The only attack brought forward by the appellant regarding inventive step relies on the combination of E6 as the closest prior art with the knowledge of the skilled person.

Claim 1

3.1.1 As discussed *supra* under points 2.3.5 to 2.3.7, the subject-matter of claim 1 differs from E6 in that at (more than one) predetermined drying times ( $t_i$ ) in the laundry drying cycle, the end of drying cycle time is determined on the basis of the comparison between the measured electric quantity and the threshold value.

3.1.2 The objective technical problem derived from the differing feature is regarded as being how to achieve a precise process termination at the required moisture level. This is done in the invention according to claim 1 not only by measuring and comparing the moisture level at more than one time (thus achieving a more accurate monitoring) but also by allowing the process to possibly terminate the drying cycle time after more than one comparison step, thus increasing the precision in the process termination.

3.1.3 The argument that paragraph [0046] in E6 constitutes a clear indication for the skilled person to add further



process observation points and thus arrive at the subject-matter of claim 1 is not accepted. Paragraph [0046] discloses that two threshold values at two consecutive time points allow a particularly high level of security and accuracy to be achieved. It is not stated in paragraph [0046] that further increasing the number of threshold values increases the security and the accuracy. This conveys to the skilled person the understanding that two points is enough. There is also no indication that increasing the number of threshold values would be advantageous.

- 3.1.4 Also the possibility presented by the appellant that the measured conductivity could be below the threshold value at  $\Delta t_1$  and above at  $\Delta t_2$  is not found to be realistic by the Board. If the drying process were running abnormally the laundry would not be drying correctly, i.e. the measured conductivity would remain almost constant and drop only slightly. In order to detect such an anomaly where the measured conductivity does not drop, the skilled person would choose  $L_c^{lim1}$  and  $L_c^{lim2}$  such that they would be either the same (such as proposed in paragraph [0046]) or very similar. This would be contrary to the alleged possibility. The skilled person departing from E6 and using their own knowledge would thus not arrive at the subject-matter of claim 1 in an obvious way.

Claim 5

- 3.1.5 As discussed *supra* under points 2.3.10 to 2.3.17, claim 5 differs from E6 in that the electronic control unit (14) is further configured to:
- calculate the laundry quantity/weight on the basis of the comparison threshold ( $F_c(t_i)$ ) corresponding to the end of drying cycle time ( $t_{END}$ ); and

- adjust the duration of a laundry cooling stage, subsequent to the end of drying cycle time ( $t_{END}$ ), on the basis of the calculated laundry quantity/weight.

3.1.6 The appellant did not make any argument against the involvement of an inventive step in the subject-matter of claim 5. Nor does the Board find any reason of its own to conclude otherwise. Thus, for the reasons put forward by the respondent, the Board finds that the skilled person would not arrive at the subject-matter of claim 5 starting from E6 without the exercise of inventive skill.

3.1.7 The subject-matter of claims 1 and 5 thus involves an inventive step in accordance with Article 56 EPC.

#### 4. Remittal

4.1 From the above it follows that nothing stands against claims 1 to 7 forming the basis for maintenance of the patent in amended form. The same applies to figures 1 to 5 as granted. The text of the description, however, still has to be adapted to this new set of claims.

Amendments are for example necessary because the description includes embodiments that either do not fall under the scope of the claims or, on the other hand, are now no longer simply "preferable" but instead form the claimed invention. For instance, page 11, line 4 of the description in the form found allowable by the opposition division includes the possibility of the profile being continuous.

4.2 The background art which can be regarded as useful for understanding the invention should be indicated in the description. In this respect it should however be noted

that the position of the terminology "characterized by" and "characterized in that", in claims 1 and 5 respectively, was not altered by the opposition division when reaching its interlocutory decision, nor did the appellant raise any objection to this. Since there may indeed have been reasons to leave the claims (as then found allowable) in that particular two-part form, even though not stated as such in the interlocutory decision, consideration should be given to stating which features of the respective independent claims are disclosed in the indication of the background art (e.g. in regard to E1, E2 or E6). In order to give the parties sufficient opportunity to deal with this matter, the Board remits the case in accordance with Article 111(1) EPC to the opposition division.

## **Order**

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

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent on the basis of claims 1 to 7 of the main request as filed in the oral proceedings of 16 January 2018, figures 1 to 5 as granted, and a description to be adapted.

The Registrar:

The Chairman:



M. H. A. Patin

M. Harrison

Decision electronically authenticated