

**Internal distribution code:**

- (A) [ - ] Publication in OJ
- (B) [ - ] To Chairmen and Members
- (C) [ - ] To Chairmen
- (D) [ X ] No distribution

**Datasheet for the decision  
of 26 June 2023**

**Case Number:** T 0628/22 - 3.2.07

**Application Number:** 13802711.5

**Publication Number:** 2897871

**IPC:** B65B55/12, A23L3/00, A23L3/16,  
G05D23/13, A23L19/00

**Language of the proceedings:** EN

**Title of invention:**  
METHODS AND SYSTEMS FOR COORDINATION OF ASEPTIC STERILIZATION  
AND ASEPTIC PACKAGE FILLING RATE

**Patent Proprietor:**  
Société des Produits Nestlé S.A.

**Opponents:**  
Schramm, Michael / Schneider, Günther

**Headword:**

**Relevant legal provisions:**  
EPC Art. 100(a), 54, 56, 123(2)  
RPBA 2020 Art. 12(4), 12(6)

**Keyword:**

Grounds for opposition - lack of patentability (yes)  
Amendment to case - evidence of common general knowledge -  
exercise of discretion - amendment admitted (yes)  
Novelty - main request (no) - auxiliary requests 1 to 4, 9, 11  
and 13 (no)  
Inventive step - auxiliary requests 2, 2', 7, 8, 10 and 14 (no)  
- obvious alternative - common general knowledge  
Late-filed request - auxiliary requests 5 and 6 - error in use  
of discretion at first instance (no) - admitted (no)  
Amendments - auxiliary request 12 - disclosure in drawings -  
allowable (no)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

Case Number: T 0628/22 - 3.2.07

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.07**  
**of 26 June 2023**

**Appellant:** Société des Produits Nestlé S.A.  
(Patent Proprietor) Entre-deux-Villes  
1800 Vevey (CH)

**Representative:** Rupp, Christian  
Mitscherlich PartmbB  
Patent- und Rechtsanwälte  
Sonnenstraße 33  
80331 München (DE)

**Appellants:** Schramm, Michael / Schneider, Günther  
(Opponents) Cuvilliesstr 14a  
81679 München (DE)

**Representative:** 2s-ip Schramm Schneider Bertagnoll  
Patent- und Rechtsanwälte Part mbB  
Cuvilliesstrasse 14a  
81679 München (DE)

**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
5 January 2022 concerning maintenance of the  
European Patent No. 2897871 in amended form.**

**Composition of the Board:**

**Chairman** G. Patton  
**Members:** A. Cano Palmero  
Y. Podbielski

## **Summary of Facts and Submissions**

I. The patent proprietor and the opponents lodged appeals within the prescribed period and in the prescribed form against the decision of the opposition division to maintain European patent No. 2 897 871 in amended form on the basis of the then auxiliary request 9.

As all the parties have the status of both appellant and respondent they will continue to be referred to in the following as the "patent proprietor" and the "opponents", for facilitating the reading.

II. An opposition was filed against the patent in its entirety and based on the grounds for opposition pursuant to Articles 100(a) and (c) EPC.

III. In preparation for oral proceedings, scheduled upon the parties' requests, the board communicated its preliminary assessment of the case to the parties by means of a communication pursuant to Article 15(1) RPBA 2020.

IV. In response to the communication under Article 15(1) RPBA 2020, the patent proprietor submitted auxiliary request 2' with letter dated 16 June 2023.

V. Oral proceedings before the board took place on 26 June 2023.

At the conclusion of the proceedings the decision was announced. Further details of the proceedings can be found in the minutes thereof.

VI. The opponents requested

that the decision under appeal be set aside and that the patent be revoked.

VII. The patent proprietor requested

that the decision under appeal be set aside and that the patent be maintained as granted (main request);

or in the alternative,

that the patent be maintained on the basis of one of auxiliary requests 1 to 14 filed with the statement setting out the grounds of appeal and re-ordered according to letter dated 28 February 2023, or auxiliary request 2' filed with letter dated 16 June 2023, whereby:

auxiliary requests 1 to 7 correspond to auxiliary requests 1, and 3 to 8 discussed in the decision under appeal;

auxiliary request 8 corresponds to requesting the dismissal of the opponents' appeal, and thus the maintenance of the patent according to the then auxiliary request 9 filed during oral proceedings before the opposition division;

auxiliary request 9 corresponds to auxiliary request 2 discussed in the decision under appeal;

auxiliary request 10 corresponds to auxiliary request 6 filed with letter dated 16 April 2020;

auxiliary requests 11, 13 and 14 correspond to auxiliary requests 7 to 9 filed with letter dated 8 April 2021; and

auxiliary request 12 corresponds to auxiliary request 7' filed with letter dated 1 June 2021.

VIII. The following documents have been filed during the opposition proceedings and are relied upon by the parties in the present appeal proceedings:

**D1:** JP H09 10286 A;

**D1':** English translation of D1.

IX. The following documents have been filed by the opponents for the first time with their statement setting out the grounds of appeal:

**D21:** Excerpt from the book "Chemietechnik" published by Europa-Lehrmittel, pages 2, 58;

**D22:** Maslow, M. "Wasserreiche Lebensmittel" <https://www.marathonfitness.de/wasserreiche-lebensmittel/>, pages 8-11;

**D23:** Brammen, C. "Welche Lebensmittel haben einen hohen Wassergehalt?" <https://www.fitforfun.de/wissen/welche-lebensmittel-haben-einen-hohen-wassergehalt-261184.html>, pages 1-2;

**D24:** Diamante L., Umemoto, M. "Rheological Properties of Fruits and Vegetables: A Review", International Journal of Food Properties, 18:1191-1210, 2015;

**D25:** "Rheologische Stoffkennwerte richtig bestimmen", Technische Universität Berlin, Fakultät für Prozesswissenschaften Institut für Lebensmitteltechnologie und Lebensmittelchemie, Fachgebiet Lebensmittelrheologie, published in: Deutsche Milchwirtschaft, Book 7, 2004, pages 256-260;

**D25':** Calculation of the local and effective viscosity for various fruits and vegetables and vegetables using the formulas from D24 and D25.

**D26:** "The Design of Complete Aseptic Processing Systems", Journal of the Society of Dairy

Products, Vol. 30, No. 3, July 1977, pages 143 to 148;

**D27:** "Aseptic Packaging and Processing of Products", Journal of the Society of Dairy Products, Vol. 30, No. 3, July 1977, pages 151 to 156;

**D28:** Book "Handbuch der Fülltechnik", Behr's Verlag ISBN:3-89947-089-3, first edition 2004, Chapter 9.

X. The lines of argument of the parties relevant for the present decision are dealt with in detail in the reasons for the decision.

XI. **Claim 1** of the **main request** (*i.e.* according to the patent as granted) reads as follows:

"A method of balancing a continuous product production flow rate with a package filling rate, the method comprising:

applying an averaging level control scheme to a food manufacturing process, wherein the food manufacturing process comprises package filling and aseptic sterilization of a food product; the averaging level control scheme comprising:

setting a target flow rate for a continuous food product production system comprising a buffer tank and a controller;  
setting a maximum level for a product in the buffer tank;  
measuring a level of the product in the buffer tank; and  
triggering the controller to lower the target flow rate when the measured level rises above the set maximum level, **characterized in that**

continuous production and sterilization is maintained even when package filling stops and restarts."

XII. **Claim 14** of the **main request** (*i.e.* according to the patent as granted) reads as follows:

"A food manufacturing system comprising:

a product supply;  
a machine for continuous product production comprising a variable speed pump;  
a buffer tank;  
an aseptic sterilizer for aseptic sterilization of a food product;  
a level indicating controller that measures product level in the buffer tank;  
a speed indicating controller responsive to the level indicating controller; and  
a package filling machine that when stopped causes the product level in the buffer tank to rise, causing the speed indicating controller to change a speed of the variable speed pump so that the continuous production and sterilization can be maintained even when the package filling machine is stopped and restarted;  
and an averaging level control scheme adapted to carry out the method of any of claims 1 to 13."

XIII. **Claim 1 of auxiliary request 1** reads as follows (the additional features with respect to claim 1 as granted emphasised by the board) :

"A method of balancing a continuous product production flow rate with a package filling rate, the method comprising:

applying an averaging level control scheme to a food manufacturing process,  
wherein the food manufacturing process comprises package filling and aseptic sterilization of a food product;  
the averaging level control scheme comprising:  
setting a target flow rate for a continuous food product production system comprising a buffer tank, **a package filling machine** and a controller;  
setting a maximum level for a product in the buffer tank;  
measuring a level of the product in the buffer tank; and  
triggering the controller to lower the target flow rate when the measured level rises above the set maximum level characterized in that continuous production and sterilization is maintained even when package filling **by the package filling machine** stops and restarts."

XIV. The wording of **claim 14 of auxiliary request 1** is identical to the wording of claim 14 according to the patent as granted.

XV. **Claim 1 of auxiliary request 2** reads as follows (the additional features with respect to claim 1 as granted emphasised by the board):

"A method of balancing a continuous product production flow rate with a package filling rate, the method comprising:

applying an averaging level control scheme to a food manufacturing process,  
wherein the food manufacturing process comprises package filling and aseptic sterilization of a food product;

the averaging level control scheme comprising:  
setting a target flow rate for a continuous food product production system comprising a buffer tank, a package filling machine and a controller;  
setting a maximum level for a product in the buffer tank;  
measuring a level of the product in the buffer tank; and  
triggering the controller to lower the target flow rate when the measured level rises above the set maximum level characterized in that continuous production and sterilization is maintained even when package filling by the package filling machine stops and restarts, wherein during stoppage of package filling the package filling machine is repaired or cleaned or packaging material is replaced."

- XVI. The wording of **claim 14 of auxiliary request 2** is identical to the wording of claim 14 according to the patent as granted.
- XVII. The wording of **claim 1 of auxiliary request 2'** is identical to the wording of claim 1 according to auxiliary request 2.
- XVIII. **Claim 1 of auxiliary request 3** corresponds to claim 1 as granted, whereby the features of claim 2 as granted:  
  
"... , wherein the package filling is aseptic package filling."  
  
has been added at the end of the claim.
- XIX. The wording of **claim 13 of auxiliary request 3** is identical to the wording of claim 14 according to the

patent as granted with the back reference adapted to claims 1 to 12.

XX. **Claim 1 of auxiliary request 4** corresponds to claim 1 as granted, whereby the feature of claim 12 as granted:

"..., wherein the product is a pureed food."

has been added at the end of the claim.

XXI. The wording of **claim 13 of auxiliary request 4** is identical to the wording of claim 14 according to the patent as granted with the back reference adapted to claims 1 to 12.

XXII. The wording of the claims according to **auxiliary requests 5 and 6** is not relevant for the present decision.

XXIII. **Claim 1 of auxiliary request 7** is identical to claim 1 according to auxiliary request 4.

XXIV. **Claim 1 of auxiliary request 8**, *i.e.* according to the form held as allowable by the opposition division, reads as follows (the additional features with respect to claim 1 as granted emphasised by the board):

"A method of balancing a continuous product production flow rate with a package filling rate, the method comprising:

applying an averaging level control scheme to a food manufacturing process,  
wherein the food manufacturing process comprises package filling and aseptic sterilization of a food product;  
the averaging level control scheme comprising:

setting a target flow rate for a continuous food product production system comprising a buffer tank, a package filling machine and a controller;  
setting a maximum level for a product in the buffer tank;  
measuring a level of the product in the buffer tank; and  
triggering the controller to lower the target flow rate when the measured level rises above the set maximum level characterized in that continuous production and sterilization is maintained even when package filling by the package filling machine stops and restarts, wherein the product is a pureed food."

XXV. **Claim 1 of auxiliary request 9** reads as follows (the additional features with respect to claim 1 as granted emphasised by the board):

"A method of balancing a continuous product production flow rate with a package filling rate, the method comprising:

applying an averaging level control scheme to a food manufacturing process,  
wherein the food manufacturing process comprises package filling and aseptic sterilization of a food product;  
the averaging level control scheme comprising:  
setting a target flow rate for a continuous food product production system comprising a buffer tank, set between a sterilizer and a package filling machine, and a controller;  
setting a maximum level for a product in the buffer tank;  
measuring a level of the product in the buffer tank; and

triggering the controller to lower the target flow rate when the measured level rises above the set maximum level characterized in that continuous production and sterilization is maintained even when package filling stops and restarts."

XXVI. **Claim 14 of auxiliary request 9** reads as follows (the additional features with respect to claim 14 as granted emphasised by the board):

"A food manufacturing system comprising:  
a product supply;  
a machine for continuous product production comprising a variable speed pump;  
a buffer tank;  
an aseptic sterilizer for aseptic sterilization of a food product;  
a level indicating controller that measures product level in the buffer tank;  
a speed indicating controller responsive to the level indicating controller; and  
a package filling machine that when stopped causes the product level in the buffer tank to rise, causing the speed indicating controller to change a speed of the variable speed pump so that the continuous production and sterilization can be maintained even when the package filling machine is stopped and restarted;  
**wherein the buffer tank is set between the aseptic sterilizer and the package filling machine;**  
and an averaging level control scheme adapted to carry out the method of any of claims 1 to 13."

XXVII. **Claim 1 of auxiliary request 10** corresponds to claim 1 as granted, whereby the following features of claims 5

and 7 as granted have been added at the end of the claim:

"..., wherein the food manufacturing process comprises a buffer tank and a level indicating controller, wherein the level of the food product in the buffer tank is measured, wherein the level is measured through instrumentation methods selected from the group consisting of ultrasonics, radar, load cells, and combinations thereof."

XXVIII. **Claim 1 of auxiliary request 11** corresponds to claim 1 as granted, whereby the following features have been added at the end of the claim:

"..., wherein the method includes:

- providing the product in a product supply tank, a speed indicating controller placed relative to a pump, an aseptic sterilizer, a level indicating controller relative to the buffer tank, and a package filling machine;
- pumping the product from the product supply tank through the aseptic sterilizer, the buffer tank, and into the package filling machine;
- measuring a product supply flow rate from the product supply tank; and
- adjusting a rate of flow of the product from the product supply tank to the aseptic sterilizer and buffer tank based on measurements of the product supply flow rate and the product level in the buffer tank."

XXIX. **Claim 1 of auxiliary request 12** corresponds to claim 1 as granted, whereby the following features have been added at the end of the claim:

"..., wherein the method includes:

- providing the product in a product supply tank, a speed indicating controller placed relative to a variable speed pump, an aseptic sterilizer, a level indicating controller relative to the buffer tank, and a package filling machine;
- pumping, by the variable speed pump only, the product from the product supply tank through the aseptic sterilizer, the buffer tank, and into the package filling machine;
- measuring a product supply flow rate from the product supply tank; and
- adjusting a rate of flow of the product from the product supply tank to the aseptic sterilizer and buffer tank based on measurements of the product supply flow rate and the product level in the buffer tank."

XXX. **Claim 1 of auxiliary request 13** reads as follows (the additional features with respect to claim 1 as granted emphasised by the board):

"A method of balancing a continuous product production flow rate with a package filling rate, the method comprising:

- applying an averaging level control scheme to a food manufacturing process,
- wherein the food manufacturing process comprises package filling and aseptic sterilization of a food product;
- the averaging level control scheme comprising:
  - setting a target flow rate for a continuous food product production system comprising a buffer tank and a controller;

setting a maximum level for a product in the buffer tank **at one-third full or at half full**;  
measuring a level of the product in the buffer tank; and  
triggering the controller to lower the target flow rate when the measured level rises above the set maximum level. characterized in that continuous production and sterilization is maintained even when package filling stops and restarts."

XXXI. **Claim 1 of auxiliary request 14** corresponds to claim 1 as granted, whereby the following features have been added at the end of the claim:

"..., wherein the food manufacturing process comprises a buffer tank and a level indicating controller, wherein the level of the food product in the buffer tank is measured by differential pressure."

## **Reasons for the Decision**

### ***Patent proprietor's appeal***

1. *Admittance of documents D21 to D25, D25' and D26 to D28 into the proceedings*

1.1 The patent proprietor requested that documents D21 to D28 (including D25') not be admitted into the appeal proceedings since they should have been submitted during the opposition proceedings.

1.1.1 In particular, the limitation of the product to pureed food in the then auxiliary request 5 was present at an early stage in the opposition proceedings or at least in claim 12 according to the patent as granted, so that

the opponents should have filed D21-D25, D25', D26 and D27 for supporting an alleged interpretation of the claimed "pureed food" or the alleged suitability of D1 for high-viscous products.

1.1.2 With respect to D28, the introduction of the feature of the package filling machine was also present in claim 1 of the then auxiliary request 9, so that this document should have been filed during the opposition proceedings.

1.1.3 Furthermore, none of these documents depicted the common general knowledge and were in any case irrelevant for the substantive issues of the present case.

1.2 The board disagrees. Contrary to the patent proprietor's view, the board is convinced that these documents depict the common general knowledge, the content of which is under dispute between the parties. Furthermore, the board notes that no fresh objection has been formed based on these documents. It also concurs with the opponents that these documents constitute a mere development of the case already presented during the opposition proceedings and that their submission is triggered by the different views of the parties of this common general knowledge and the decision of the opposition division. The issue of pureed food became even more central by the decision of the opposition division at the oral proceedings that auxiliary request 8, which limits the product to pureed food, fulfils the requirements of the EPC. Whilst the documents supporting common general knowledge could have been filed in the proceedings before the opposition division, it was not essential that they were filed during the opposition proceedings.

1.3 In view of this, the board sees no reason to invoke Article 12(6), second sentence, RPBA 2020, and it exercises its discretion under Article 12(4) RPBA 2020 to admit the proof of common general knowledge depicted by documents D21 to D28 (including D25') into the proceedings.

2. *Patent as granted (main request) - Novelty in view of D1, Articles 100(a) and 54 EPC*

2.1 The patent proprietor argued that D1 does not disclose the application of an **averaging level control scheme** as required by claim 1 as granted. The averaging level control scheme defined in independent claim 14 as granted is thus also not disclosed.

According to the patent proprietor an averaging level control scheme requires the control objectives of (1) gradual change of the exit flow rate from the tank, (2) maintenance of the liquid level within specified upper and lower limits, and (3) satisfaction of the steady state mass balance. D1 does not disclose a gradual change of the exit flow rate from the aseptic tank 11, so that objective (1) is not fulfilled. Furthermore, D1 does not specify an upper limit for the liquid level in the tank 11. On the contrary, D1 purposely refrains from specifying an upper limit in the tank 11, because D1 allows the liquid level to rise until 100% of the tank is filled, so that control objective (2) is also not disclosed.

2.1.1 The board disagrees. As convincingly put forward by the opponents, the concept of averaging level control scheme in the technical field is to be understood as the control of the filling level in a storage tank, in

which the outflow rate of the liquid is to be kept as constant as possible with respect to variations in the inflow rate while at the same time keeping the level within certain upper and lower limits.

2.1.2 In particular, the averaging control scheme required by claim 1 of the patent as granted requires (a) setting a target flow rate for a continuous food production system, (b) setting a maximum level of the product in the buffer tank, (c) measuring a level of the product in the buffer tank and (d) triggering the controller to lower the target flow rate when the measured level rises above the set maximum level. The board concurs with the reasoned finding of point 2.2.1.7 of the decision under appeal that D1 discloses the setting of the flow rate at 100% and the lowering thereof to 85% or 66% should a specific level (of 50% or 75%) be reached in the aseptic tank 11 (see paragraphs [0013] and [0015] of D1', which is referred to hereafter). The level of product in the buffer 11 is measured by the liquid level gauges 26, 27 and 28. The board is thus convinced that the required features (a) to (d) are met by the averaging control scheme of D1. In this light, the arguments brought forward by the patent proprietor are not convincing.

2.2 The board also concurs with the opponents and with the opposition division (see point 2.2.1.4 of the reasons for the decision under appeal) that as D1 deals with a product liquid "such as juice" (see paragraph [0002]), the method and apparatus of this document deal with the production of a **food** product as required by the patent in suit. The allegation of the patent proprietor that a generic "juice" does not imply any food or liquid food cannot be followed by the board. Furthermore, contrary to the patent proprietor's view, even though paragraph

[0002] concerns the prior art of D1 exemplified in figure 3, the apparatus and method of D1 relate to the liquid product disclosed therein as they consist in a development on the basis of said prior art, see paragraph [0011].

2.3 The patent proprietor further considers that D1 does not disclose an **aseptic sterilization** for a food product as claimed. In particular, D1 does not disclose in a direct and unambiguous way that the sterilization heater 5 can effect an aseptic sterilization, *i.e.* a sterilization with ultra-high temperatures to produce shelf-stable foods. Furthermore, the "aseptic" tank 11 just prevents that pathogenic micro-organisms grow in the tank 11, but does not necessarily imply that an upstream aseptic and continuous sterilization of the product has taken place.

2.3.1 The board is again not persuaded by the patent proprietor's view and rather concurs with the opposition division (see point 2.2.1.5 of the reasons for the decision under appeal) that the skilled person directly and unambiguously understands from the combination sterilization heater 5 and the aseptic tank 11 that a continuous sterilization is carried out by the heater 5 and the product is maintained in aseptic conditions until it reaches the aseptic tank 11.

2.4 The patent proprietor also argues that the filling machine of D1 does not directly and unambiguously include a **package filling machine** and the adapted control of the continuous production with respect to the package filling as defined in granted independent claim 14. The patent proprietor argues that a package is a particular case of a container, which is the entity filled in D1.

2.4.1 The board is not persuaded by this argument either. The board is convinced by the finding of the opposition division of point 2.2.1.2 of the reasons for the decision under appeal, that the terms "container" and "package" could be considered as corresponding means as long as claim 14 does not specify structural features enabling to inevitably distinguish the two components. Further it would make no technical sense to subject the product to a cumbersome sterilization process and then just fill open containers without sealing or packaging the sterilized product.

2.5 Finally, the patent proprietor argues that D1 does not disclose the **continuous production and sterilization to be maintained when package filling stops and restarts** according to claim 1 and 14 as granted.

2.5.1 The patent proprietor argues that D1 does not explicitly show a **continuous product production** at all, and rather shows that the liquid product goes through a series of steps in a discrete manner.

2.5.2 In addition, the patent proprietor indicates that claims 1 and 14 as granted do not only require a stoppage, but also a restart, which is not derivable from D1. In particular, looking at figure 2 of D1 in combination with paragraphs [0005], [0007] and [0013] to [0015], the point C at time  $t_2$  does not represent a restarting of the machine, but rather a starting. Otherwise, the filling machine is always consuming. In addition, the patent proprietor argues that at least at  $t_2$  a continuous production and sterilization is not maintained, as claimed, because D1 discloses that at time  $t_2$  the fresh water circulation from water tank 16 starts. Because of this fresh water circulation,

neither a production nor a sterilization is maintained at  $t_2$ , *i.e.* at the alleged restart of the filling machine 30. Finally, the patent proprietor considers that there is no direct and unambiguous disclosure in D1 that (beginning with  $t_4$ ) the filling machine is stopped.

2.5.3 The board is not persuaded by the patent proprietor's arguments and rather concurs with the finding of point 2.2.1.1 of the decision under appeal and with the opponents' view that the product in D1 is continuously produced and supplied through the pipe 1. It is true that the pump 50 and the valve 7 have a direct influence on the product flow from the cushion tank 2 to the buffer 11, but this does not mean that the product has not been previously produced and supplied to the whole system in a continuous manner. In sum, the board sees as the only technical sensible interpretation of D1 that the production, *i.e.* the supply of the product through the pipe 1 into the tank 2 is not interrupted.

2.5.4 The board also concurs with the reasoned finding of the opposition division of point 2.2.1.12 of the reasons for the decision under appeal, that paragraph [0007] describes that the filling machine is repeatedly started and stopped depending on the supply conditions. Even when the level of the buffer tank reaches the level of 100% and the fresh water circulation occurs (*e.g.* at the points  $t_2$  and  $t_5$ ), neither the production nor the sterilization is interrupted. As already explained under point 2.5.3 above, the skilled person would directly and immediately derive from D1 that the production and transfer of the product to the cushion tank 2 is performed continuously, as the opposite would lack technical sense. In addition, the sterilization of

liquid flowing to the aseptic tank cannot be interrupted, otherwise the buffer tank would lose its aseptic properties.

2.6 In the light of these conclusions, the subject-matter of claims 14 and 1 of the main request (patent as granted) lacks novelty in view of document D1.

3. *Auxiliary request 1 - Novelty in view of D1, Article 54 EPC*

3.1 Claim 14 according to auxiliary request 1 corresponds to claim 14 according to the patent as granted. The board is convinced that the reference to claim 1, which has been amended to specify the package filling machine in the method, does not further restrict the subject-matter of claim 14. As a matter of fact, said reference to claim 1 only concerns the average level control scheme. It follows that, for analogous reasons as for claim 14 as granted, the subject-matter of claim 14 according to auxiliary request 1 lacks novelty in view of D1.

4. *Auxiliary requests 2 and 2' - Novelty in view of D1, Article 54 EPC*

4.1 Claim 14 according to auxiliary request 2 corresponds to claim 14 according to the patent as granted. The board is convinced that the reference to claim 1, which has been amended to specify the package filling machine and the maintenance operations performed during its stoppage in the method does not further restrict the subject-matter of apparatus claim 14. As a matter of fact, said reference to claim 1 only concerns the average level control scheme. It follows that, for analogous reasons as for claim 14 as granted, the

subject-matter of claim 14 according to auxiliary request 2 lacks novelty in view of D1.

4.2 With respect to method claim 1, the board concurs with the patent proprietor that the additional steps of repairing or cleaning the package filling machine or of replacing of packaging material are method steps that limit the subject-matter the claim. The board sees no direct and unambiguous disclosure of these steps in D1, therefore, the subject-matter of claim 1 according to auxiliary requests 2 and 2' is novel in view of this document. A package filling machine which has been introduced in claim 1 of auxiliary requests 2 and 2' is, however, considered to be disclosed in D1 (see point 2.4.1 above).

4.2.1 The patent proprietor argued that said distinguishing method steps have the technical effect of increasing the production output and that the availability of package filling is improved, thereby increasing the efficiency of production. Starting from D1, the skilled person, in view of the objective technical problem of increasing the efficiency of the production process, would not be hinted to perform the distinguishing method steps. In particular, D1 teaches in a different direction, namely to perform a fresh water circulation.

4.2.2 The board disagrees and rather concurs with the opponents that the distinguishing method steps when the filling machine's operation is interrupted are customary processes that are known and obvious for the skilled person, which are to be applied under those circumstances. The fresh water circulation of D1 is only activated when the buffer tank is full and not when the package filling machine is stopped, so that the argument of the patent proprietor, that D1 would

teach away from these routine operations cannot be followed.

4.2.3 As a result, the subject-matter of claim 1 according to auxiliary requests 2 and 2' lacks an inventive step in view of D1.

5. *Auxiliary request 3 - Novelty in view of D1, Article 54 EPC*

Claim 13 according to auxiliary request 3 corresponds to claim 14 according to the patent as granted. The board is convinced that the reference to claim 1, which has been amended to include the subject-matter of claim 2 as granted (that the package filling is aseptic package filling) does not further restrict the subject-matter of claim 13. As a matter of fact, said reference to claim 1 only concerns the average level control scheme. It follows that, for analogous reasons as for claim 14 as granted, the subject-matter of claim 13 according to auxiliary request 3 lacks novelty in view of D1.

6. *Auxiliary request 4 - Novelty in view of D1, Article 54 EPC*

6.1 The wording of claim 13 according to auxiliary request 4 corresponds to that of claim 14 according to the patent as granted. The patent proprietor argues that since claim 1 according to auxiliary request 4 is restricted to pureed food, there is a limiting effect in claim 13 as well, due to its reference to claim 1. In particular, the system claim 13 requires that the averaging level control scheme is adapted to carry out the method of claim 1. This particularly includes the configuration to process pureed food, because of the

reference to the averaging level control scheme of claim 1, in particular the steps of "setting a maximum level of the (pureed food) product in the buffer tank" and "measuring a level of the (pureed food) product in the buffer tank". At least the differences in viscosity and texture imply that the production of pureed food involves structural limitations in the system claim 13, including the necessity of a pump suitable to work with products of increased viscosity and different texture such as pureed food.

- 6.2 The board is not convinced by the arguments of the patent proprietor and follows the finding of the opposition division of point 7.3.2 of the reasons for the decision under appeal, that due to the back reference to claim 1 solely the averaging level control scheme - and not the whole system claimed - is restricted to its suitability to be used for pureed food. In this light, the board is convinced that the averaging level control scheme of D1 is well suitable to be applied not only to liquid products but also to other kinds of products such as pureed food. Furthermore, beside the consideration of whether or not the pump of claim 1 is part of the averaging level control scheme referred to in claim 13, the board does not follow the patent proprietor's view that in D1 the variable flow pump 50 provided in the embodiment of figure 1 or the centrifugal liquid feed pump 4 of the prior art shown in figure 3 would be unsuitable for pureed food, in the absence of any evidence in this respect, see paragraph [0011] (see also point 9.7 below).
- 6.3 It follows that, for analogous reasons as for claim 14 as granted, the subject-matter of claim 13 according to auxiliary request 4 lacks novelty in view of D1.

7. *Auxiliary requests 5 and 6 - Admittance, Article 12(6) RPBA*

7.1 The opposition division did not admit the then auxiliary requests 6 and 7 (now auxiliary requests 5 and 6) into the opposition proceedings for reasons of procedural efficiency, see point 8.1 of the reasons for the decision under appeal. These requests were filed during the oral proceedings as auxiliary requests 5' and 5'' before the opposition division with amendments in the system claim 13.

7.2 The patent proprietor holds the view that the opposition division should have admitted these requests into the proceedings since they *prima facie* overcome the novelty objection by specifying in claim 13 that the product is pureed food. Furthermore, the amendments carried out do not trigger any new objections, since the new claims are in accordance with the requirements of at least Articles 84 and 123(2) EPC. Finally, the patent proprietor is of the view that the opponents could not have been taken by surprise, since the amendments in the then auxiliary requests 6 and 7 only relate to the limitation "pureed food", which is claimed in dependent claim 12 as granted, and which was already a substantial issue in the opposition proceedings.

7.3 The board disagrees for the following reasons.

7.3.1 According to Article 12(6), first sentence, RPBA 2020, the board may admit a request which was not admitted in the first-instance proceedings **only** if the decision not to admit the request(s) suffered from an error in the

use of discretion or if the circumstances of the appeal case justify its admission.

7.3.2 The board fails to identify any error of the opposition division in its exercise of discretion to not admit the then auxiliary requests 6 and 7 in opposition proceedings. In other words, it cannot be established that the opposition division had exercised its discretion on the basis of the wrong principles, without taking the right principles into account or in an arbitrary or unreasonable way (see Case Law of the Boards of Appeal, 10th edition 2022, V.A.3.4.1.b)). Indeed, as correctly found by the opposition division, the requests were late-filed and the amendments to claims 13 were not the result of a combination of granted claims, so that the opponents could not necessarily be expected to be prepared for the new amended system claims. The board can thus not see any circumstances of the appeal case which could justify the admittance of these auxiliary requests into the appeal proceedings.

7.3.3 In sum, auxiliary requests 5 and 6 are not admitted into the proceedings under Article 12(6), first sentence, RPBA 2020.

8. *Auxiliary request 7 - Novelty over D1, Article 54 EPC*

8.1 The opponents argue that document D1 discloses *inter alia* the feature introduced in independent method claim 1 with respect to claim 1 of the patent as granted that the product is a pureed food. In support for this, the opponents submitted for the first time with its statement setting out the grounds of appeal documents D22 to D25 and D25' as a proof for the common general knowledge speaking against the allegation made by the

opposition division that pureed food is "normally thicker" as juice (see points 7.3.1 and 10.3.1.1 of the reasons of the decision under appeal). The opposition division thus erred in its decision based on this incorrect allegation.

- 8.2 The board disagrees with the opponents for the following reasons. Although it could be agreed that there could be certain juices than might be thicker and present a higher viscosity or similar textures than certain pureed foods, the board cannot agree that a juice (as in D1) can be equated to pureed food in accordance with method claim 1 of auxiliary request 7. The board concurs with the opposition division that there is an inherent difference between juice and pureed food at least by their different ways of production. This clear distinction becomes also evident from the alleged proof of common general knowledge submitted by the opponent: for example D24 makes explicit distinction between "juice", "jam", "pulp" and "puree" (see for example tables 1 to 6).
- 8.3 In the light of the above, the subject-matter of claim 1 of auxiliary request 7 merely differs from the method of D1 in that the product is a pureed food.
9. *Auxiliary request 7 - Inventive step, Article 56 EPC. D1 as closest prior art in combination with the common general knowledge*
- 9.1 Following the conclusion reached in 2.6 and 8.3 above, the board can establish that the subject-matter of claim 1 of auxiliary request 7 differs from the method of D1 solely in that the product is pureed food.

- 9.2 According to the patent proprietor, the objective technical problem underlying the limitation of the product to pureed food is increasing the versatility.
- 9.3 The opposition division found in point 10.3.1.2 of the reasons for the decision under appeal that, starting from a juice production method as in D1, the handling of pureed food is not obvious for the skilled person, even taking into account the common general knowledge. Indeed, the skilled person would have no motivation to face major modifications in the apparatus used by the method of claim 1 in order to adapt it from the production of liquids to the production of pureed food.
- 9.4 The patent proprietor further argued that the subject-matter of claim 1 of auxiliary request 7 requires a kind of pump suitable to work with pureed products. In particular, the method of D1 would only contemplate (see paragraph [0002] of D1) the production of juices with similar characteristics than water or coffee, *i.e.* of juices presenting low viscosity and texture, and not of juices with viscosity values and textures similar to pureed food. The production and packaging of such juices described in D1 only requires a rather general pumping, that cannot always work with pureed products with higher viscosity and more complex textures. In addition, D1 explicitly rules out in paragraph [0011] the use of a centrifugal pump, such as the one described in D21, that could potentially work for high viscous liquids.
- 9.5 According to the opposition division and the patent proprietor, faced with the problem of processing different products, the skilled person would rather consider other beverages in liquid state, but not other textures such as pureed food, for which the skilled

person has no clear guidance to which extent the same components such as valves, tanks and pumps have to be modified in order to make them suitable for pureed food processings.

9.6 The board is neither persuaded by the patent proprietor's arguments nor by the finding of the opposition division and is rather convinced by the arguments of the opponents that the only distinguishing feature of the product being a food product instead of a juice cannot render the subject-matter of claim 1 of auxiliary request 7 inventive, since the common general knowledge as depicted by documents D22 to D25 (see for example tables 1 to 6 of D24) shows that juices, as identified in paragraph [0002] of D1, can have high viscosity, in some cases even higher than certain pureed products. The board is also convinced that certain juices may comprise a solid part and present textures similar to certain pureed products.

9.7 The common general knowledge evidenced by D26 (see for example page 145, left column, third paragraph) shows that the same aseptic facility can work with a different range of products with different viscosities such as milk or pudding. This wide range of products is also covered by the aseptic UHT treatment described by D27, which explicitly contemplates fruit puree (see page 151, right column "Second generation"). Finally, the board concurs with the opponents that, contrary to the patent proprietor's allegation, paragraph [0011] of D1 does not rule out the use of centrifugal pumps (such as the one described in D21), but rather presents these as the conventional pump in product manufacturing systems, *i.e.* as a working embodiment.

- 9.8 In sum, the board concludes that the system and method of D1 is suitable to work with pureed food products, and fails to identify any technical hindrance or prejudice that would prevent the skilled person to use the system of D1 for pureed products.
- 9.9 It follows that starting from D1 and in view of the technical problem identified by the patent proprietor of increasing versatility, the skilled person, in the absence of any technical obstacle, would immediately consider to use the known method of D1 for the production of pureed food, thereby arriving at the subject-matter of claim 1 of auxiliary request 7 in an obvious manner.
10. In view of the above conclusions, the appeal of the patent proprietor is to be dismissed.

**Opponent's appeal**

11. *Auxiliary request 8 - Inventive step, Article 56 EPC. D1 as closest prior art in combination with the common general knowledge*
- 11.1 Auxiliary request 8 corresponds to the version held by the opposition division to meet the requirements of the EPC. Claim 1 according to auxiliary request 8 corresponds to claim 1 according to auxiliary request 7 whereby the package filling machine has been introduced as part of the product production system and the package filling has been specified to be performed by said package filling machine.
- 11.2 As already established in points 2.4.1 and 4.2 above, the board concurs with the opponents that such a

package filling machine and the corresponding packaging step is anticipated by D1.

11.3 Thus, for analogous reasons as for claim 1 according to auxiliary request 7, the subject-matter of claim 1 according to auxiliary request 8 lacks inventive step in view of D1 in combination with the common general knowledge.

12. It follows that the opponents have convincingly demonstrated the incorrectness of the decision under appeal with regard to inventive step of the subject-matter of claim 1 of the maintained version of the patent. The decision under appeal is thus to be set aside.

13. *Auxiliary request 9 - Novelty in view of D1, Article 54 EPC*

Claim 14 according to auxiliary request 9 corresponds to claim 14 according to the patent as granted with the additional feature that the buffer tank is set between the aseptic sterilizer and the package filling machine. The board expressed its preliminary view in point 18.1 of the communication under Article 15(1) RPBA 2020 that this feature was also disclosed by D1. This preliminary view was not contested, either orally or in writing, by the patent proprietor. It follows that, for analogous reasons as for claim 14 as granted, the subject-matter of claim 14 according to auxiliary request 9 lacks novelty in view of D1.

14. *Auxiliary request 10 - Inventive step in view of D1, Article 56 EPC*

14.1 Claim 1 of auxiliary request 10 corresponds to claim 1 according to the patent as granted whereby the measurement method for the buffer tank is restricted to the group consisting of ultrasonics, radar, load cells, and combinations thereof. It was common ground among the parties that such measurement methods are not anticipated by D1.

14.2 The patent proprietor argued that, in contrast to the discrete measurements delivered by the level gauges of D1 the new features enabled a continuous measurement of the level at the buffer. Through this continuous measurement the pump can be controlled in a more effective way thereby resulting in a system with a quicker response. In addition, it can be avoided that the buffer tank reaches its complete capacity, so that the maintenance of the production can be guaranteed.

14.2.1 Starting from D1 as closest prior art the objective technical problem could be seen as delivering a more flexible averaging control scheme and increasing the availability of the production system. Taking into account that the control scheme of D1 only needs the measurements values at certain points of the buffer tank the skilled person would have no motivation from its common general knowledge or from the teachings of the prior art to disregard the level gauges of D1 and replace them by more sophisticated measurement tools as now claimed. The subject-matter of claim 1 would be therefore inventive in view of D1, according to the patent proprietor.

14.3 The board disagrees for the following reasons.

14.3.1 It is in first place noted that it was not argued by the patent proprietor that claimed instrumentation

methods are not part of the common general knowledge of the skilled person.

- 14.3.2 As correctly argued by the opponents, the claim is not limited to continuous measurements but rather to general alternative measurement methods. In addition, there is no indication in the patent in suit that a quicker reaction is sought by the implementation of these measurement methods.
- 14.3.3 Therefore, contrary to the patent proprietor's view, the objective technical problem is a less ambitious one, namely the provision of an alternative measurement technique to the level gauges.
- 14.3.4 In this light, the board finds that, starting from the known method of D1, and in view of the technical problem of providing alternative measurement techniques at the desired locations of the buffer tank, the provision of such known alternative instrumentation methods is an obvious measure and cannot be seen as involving an inventive step.
- 14.4 The skilled person would thus arrive at the subject-matter of claim 1 of auxiliary request 10 in an obvious manner starting from D1 as closest prior art in combination with the common general knowledge.
- 15. *Auxiliary request 11 - Novelty in view of D1, Article 54 EPC*
  - 15.1 The patent proprietor argued that D1 fails to disclose a speed indicating controller placed relative to a pump and a measuring of the product supply flow rate from the product supply tank as it is now required by claim 1 of auxiliary request 11, see first and third bullet

points of the characterising part. The speed measurement of the pump is not sufficient to anticipate these features. Furthermore, it is clear from the system claim 10 that the method has to be performed by one single pump, which is not the case in D1. Thus, D1 does not disclose pumping the product from the product supply tank through the aseptic sterilizer, the buffer tank, and into the package filling machine, see second bullet point of the characterising part of claim 1. D1 does not disclose either adjusting the rate of flow of the product based on measurements of the product supply flow rate due to the use of "and", see last bullet point of claim 1.

15.2 The board is not persuaded by the patent proprietor's arguments and rather concurs with the opponents that the method claim 1 is anticipated by D1. In the first place, it is to be noted that there is no limitation in amended claim 1 as to the number of pumps required to perform the method, so that the claimed pumping step through the entire production line is not restricted to one single pump. In addition, a speed indicating controller inherently forms part of a variable speed pump as used for instance in figure 1 of D1. The board is further convinced that if the product supply is measured (*i.e.* the flow rate according to the dotted line of figure 2, paragraph [0012], as indicated by the patent proprietor) and an adjustment to that flow rate is made (which is made through the averaging control scheme of D1), then a speed indicating controller and a measurement of the product supply flow rate from the product supply tank are implicitly needed. In addition, the board is of the view that adjusting the rate of flow of the product is inevitably performed on its own basis in order to be able to achieve the targeted level of flow rate.

15.3 In sum, the board is of the view that the additional features introduced in independent claim 1 of auxiliary request 11 in comparison with claim 1 of the patent as granted are anticipated by D1. Therefore, the subject-matter of claim 1 of auxiliary request 11 lacks novelty taking into consideration point 15.2 above.

16. *Auxiliary request 12 - Added subject-matter, Article 123(2) EPC*

16.1 Claim 1 of auxiliary request 12 corresponds substantially to claim 1 of auxiliary request 11 with the further restriction that the pumping of the product from the the supply tank through the sterilizer, the buffer tank and into the filling machine is performed by one variable speed pump only. The patent proprietor indicated that original figure 1 in combination with paragraph [0041] of the original application served as a clear and unambiguous basis for this limitation. Although figure 1 illustrates the manufacturing line in a schematic way, this schematic representation relates to the different elements of the line, but not to the line itself, which therefore directly and unambiguously comprises exactly one speed variable pump.

16.2 The board disagrees. As correctly put forward by the opponents, neither figure 1 nor the relating passages [0090] to [0092] in support of this figure, are able to provide a direct and unambiguous disclosure of at least the function of the speed variable pump, namely that the pump of figure 1 is suitable and configured to perform the pumping of the product from the supply tank through the sterilizer, the buffer tank and into the package filling machine. Also original paragraph [0041] is silent on this feature.

16.3 It follows that there is no direct and unambiguous disclosure for the added feature, so that the subject-matter of claim 1 of auxiliary request 12 does not meet the requirements of Article 123(2) EPC.

17. *Auxiliary request 13 - Novelty in view of D1, Article 54 EPC*

17.1 Claim 1 according to auxiliary request 13 corresponds to claim as granted whereby the maximum level for a product in the buffer tank is set at one-third full or at half full.

17.2 As correctly put forward by by the opponents, this feature is already anticipated by D1 at least in paragraph [0013], which has not been contested by the patent proprietor.

17.3 In view of this, the subject-matter of claim 1 of auxiliary request 13 lacks novelty in view of D1.

18. *Auxiliary request 14 - Inventive step in view of D1, Article 56 EPC*

18.1 Method claim 1 of auxiliary request 14 differs from claim 1 according to the patent as granted essentially in that the level of the food product in the buffer tank is measured by differential pressure.

18.2 The board, for similar reasons as for auxiliary request 10 (see point 14.3 above), is of the view that starting from the known method of D1, and in view of the technical problem of providing alternative measurement techniques at the desired locations of the buffer tank, the provision of such known alternative instrumentation

method such as by differential pressure is an obvious measure which cannot be seen as involving an inventive step.

19. *Conclusion*

Since none of the patent proprietor's requests is admissible and allowable, the patent is to be revoked.

**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:



G. Nachtigall

G. Patton

Decision electronically authenticated