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**Datasheet for the decision
of 18 September 2025**

Case Number: T 0385/23 - 3.2.03

Application Number: 17774394.5

Publication Number: 3418372

IPC: C12M1/38, C12M1/36, C12M1/02,
C12M1/00, C12M1/12

Language of the proceedings: EN

Title of invention:
CULTURE APPARATUS, AND METHOD FOR CONTROLLING CULTURE APPARATUS

Patent Proprietor:
PHC Holdings Corporation

Opponent:
TIGGES Rechtsanwälte Partnerschaft mbB

Headword:

Relevant legal provisions:
EPC Art. 14(2), 54(2), 54(3), 56, 83, 84, 123(2), 123(3)
RPBA 2020 Art. 12(4), 12(6), 13(2), 15a(1)

Keyword:

Oral proceedings held in mixed-mode format
Amendments - correction of the translation of the authentic text - added subject-matter (yes) - extension beyond the content of the application as filed (yes) - inescapable trap (yes)
Novelty - (yes)
Sufficiency of disclosure - auxiliary request (yes)
Claims - clarity (yes)
Inventive step
Amendment to case - admissibly raised and maintained (no) - exercise of discretion
Amendment after notification of Art. 15(1) RPBA communication - exceptional circumstances (no)

Decisions cited:

G 0001/21, G 0001/24, T 0700/05, T 0516/12, T 1822/12,
T 1585/12, T 0939/23, T 1185/23

Catchword:



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Case Number: T 0385/23 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 18 September 2025

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
22 December 2022 concerning maintenance of the
European Patent No. 3418372 in amended form.**

Composition of the Board:

Chairman C. Herberhold
Members: B. Goers
F. Bostedt

Summary of Facts and Submissions

I. European patent No. 3 418 372 relates to a culture apparatus and a method of controlling a culture apparatus.

II. The opposition division decided that the patent as amended according to auxiliary request 7 (which corresponds to auxiliary request 8 in the appeal proceedings) meets the requirements of the EPC.

This decision was appealed by both the patent proprietor and the opponent, which will be referred to as such for the sake of simplicity.

III. At the oral proceedings before the Board, the final requests were as follows.

The patent proprietor requested that the decision under appeal be set aside and that the patent be maintained as amended according to the main request, or, in the alternative, according to any of auxiliary requests 1 to 9.

The patent proprietor further requested that documents D17 to D19 and D23 not be admitted into the appeal proceedings and that the case be remitted to the opposition division should the patentability of any of the main request and auxiliary requests 2 and 3 become relevant in the appeal proceedings.

The opponent requested that the decision under appeal be set aside and that the patent be revoked in its

entirety. The opponent also requested that documents D17 to D19 and D23, be admitted and that the patent proprietor's request for remittal be rejected.

IV. Documents referred to in this decision:

- D5: JP 3070976 B2
- D5t: Translation of D5
- D6: US 7,028,913 B2
- D7: Instructions for use - CO2 Incubator, CO2Cell 190(D) Standard - 24 January 2013
- D8: CelCulture -CO2 incubators, Esco Technologies Inc., 2013
- D9: JP 2010154792 A
- D9t: Translation of D9
- D10: US 6,299,837 B1
- D16: WO 2016/158337 A1 (published 6 October 2016), this document is also referred to as D6 in the opponent's submissions
- D16t: translation of D16
- D17: "Tastgrad" entry, Wikipedia, 7 September 2015
- D18: DE 2 106 319 A1
- D19: DE 29 24 446 C2
- D20: JP 2016-063720, first claimed priority of the patent
- D21: JP 2016-063719, second claimed priority of the patent
- D22: Translation of the originally filed application PCT/JP2017/010678 of the patent submitted by the patent proprietor by letter dated 6 July 2022
- D23: User manual "Heracell Vios 160i/ Heracell Vios 250i CO2 incubator", User Manual, Thermo Scientific, "31 July 2015"

V. Relevant claim wording

(a) Independent claim 1 of the main request reads
(feature numbering added in "[]" and amendments
with respect to the patent as granted are marked in
bold and strike-through).

Claim 1:

"A culture apparatus (1) comprising:
[1] a heat-insulated casing (2) including
[1.1] an inner case (20) surrounding a culture space
(6),
[1.2] an outer case (10) surrounding the inner case
(20),
[1.3] and a front surface,
[1.4] the heat-insulated (2) casing having an opening
(7) in the front surface;
[2] a box-shaped heat-insulated door (3) configured to
open and close the opening (7) of the heat-insulated
casing (2);
[3] one or more heaters (28)
[3.1] provided to one or more ~~inner~~ **rear** surfaces of
the inner case
[3.2] and **a rear surface of** an inner wall surface of
the heat-insulated door (3) and
[3.3] configured to heat the culture space (6),
[3.4] the inner wall surface being adapted to face the
culture space (6) when the door is closed (3);
and
[4] a control unit (62) configured for turning on the
heaters (28),
[4.1] the heaters (28) including one or more first
heaters (28A) and
[4.2] one or more second heaters (28B),
characterized in that

[5] the control unit (62) is further configured so that the first heaters (28A) are turned on, when a temperature of the culture space (6) is controlled to a first temperature to incubate a culture in the culture space (6) and

[5.1] when a temperature of the culture space (6) is controlled to a second temperature to make the culture space (6) sterile, the second temperature being higher than the first temperature,

[5.2] and the second heaters (28B) are turned on when a temperature of the culture space (6) is controlled to the second temperature to make the culture space (6) sterile."

(b) The wording of features [3.1] and [3.2] is also used in claim 1 of auxiliary requests 1 and 2, while claim 1 of auxiliary requests 3 to 5 use the granted wording without the marked amendments.

(c) From auxiliary request 6 onwards, the device claims are deleted. The sole independent method claim 1 of auxiliary request 6 reads:

"[F1] A method of controlling a culture apparatus (1) to perform temperature control in a culture space (6) using one or more first heaters (28A) and one or more second heaters (28B), the method comprising:

[F2] when the culture apparatus (1) performs the temperature control in a first mode to incubate a culture in the culture space (6), driving the first heaters (28A) without driving the second heaters (28B) so that a temperature in the culture space (6) is maintained at a first temperature;

[F3] and when the culture apparatus (1) performs the temperature control in a second mode to make the culture space sterile, driving the first heaters (28A)

and the second heaters (28B) so that a temperature in the culture space (6) is maintained at a second temperature, the second temperature being higher than the first temperature."

(d) Auxiliary request 7 is based on auxiliary request 6 with the following amendments in features [F2] and [F3] (marked in bold and strike-through):

"[F2'] **an incubation mode** ~~where~~ the culture apparatus (1) performs the temperature control in a first mode to incubate a culture in the culture space (6), **of** driving the first heaters (28A) without driving the second heaters (28B) so that a temperature in the culture space (6) is maintained at a first temperature; [F3'] and **a sterilization mode** ~~where~~ the culture apparatus (1) performs the temperature control in a second mode to make the culture space sterile, **of** driving the first heaters (28A) and the second heaters (28B) so that a temperature in the culture space (6) is maintained at a second temperature, the second temperature being higher than the first temperature"

(e) Auxiliary request 8 (patent as maintained) is based on auxiliary request 6 with the following additional features (the amendment marked in bold does not have basis in the claims as granted):

"[F4] when performing the temperature control in the first mode **and in the second mode**, the culture apparatus (1) performs duty control of repeating an ON state and an OFF state to the first heater (28A) at a predetermined cycle [F5] and when performing the temperature control in the second mode, the culture apparatus performs control so that the second heaters (28B) are kept in an ON state"

VI. The patent proprietor's arguments relevant to the present decision can be summarised as follows.

(a) Format of the oral proceedings

Oral proceedings should be held as a videoconference. This would save costs, reduce environmental impact and potentially allows the Japanese client to attend the hearing.

(b) Main request and auxiliary requests 1 and 2 -
Article 123(3) EPC

The amendments made to claims 1 to 3 were a correction allowable under Article 14(2) EPC and did not unallowably extend the protection of the patent. The application as filed encompassed both heater locations, at the inner and at the outer surface and the terms were used synonymously. The skilled person, in view of the contradiction between claims 1 and 2, understood that the location in the described embodiments was meant. Moreover, the term was not restricted to the inner surface of the inner case but meant all internal surfaces of the culture apparatus from the perspective of a user. In addition, the wording "provided to" does not limit the application of the heater but rather defined the application of heat.

(c) Auxiliary requests 3 to 5 - Article 123(2) EPC

Auxiliary requests 3 to 5 complied with the requirements of Article 123(2) EPC when considering the embodiments of Figures 3 and 6 of the application as filed.

(d) Auxiliary request 6 - novelty

The subject-matter of claim 1 was novel over documents D7, D8 and D10. None of these documents disclosed a sterilisation step as defined in the patent. D7 showed different embodiments, and it was not clear whether an additional heating element was present. Even if this was the case, two heating elements were not described to be used in the sterilisation mode. D8 also did not disclose details about the number of heating elements applied in the different modes. D10 did not describe any incubation or cultivation mode and the temperature control in this mode was thus undisclosed.

(e) Auxiliary requests 6 and 7 - inventive step

The subject-matter of claim 1 of auxiliary requests 6 and 7 involved an inventive step starting from D7 in combination with common general knowledge. It was not obvious to implement the temperature control in accordance with features [F2] and [F3]. The most simple and straightforward implementation was to use a single heater in both modes. The invention made it possible to avoid oversizing the second heater and improved controllability.

(f) Auxiliary request 8 - admittance issues

Documents D17 and D18 should not be admitted. Their late submission constituted an abuse of procedure. The opposition division's discretionary decision not to admit the argument that the priority was not validly claimed for the subject-matter of claim 1 should be confirmed. The inventive-step attack using D16 should also not be admitted as D16 was prior art under Article 54(3) EPC. No exceptional circumstances were present

which justified admitting the D7 inventive-step objection in combination with common general knowledge as this objection was not maintained in the opponent's appeal case.

(g) Auxiliary request 8 - Article 123(2) EPC

The requirements of Article 123(2) EPC were met for the amendment "and in the second mode". This feature had a basis in the embodiment of Figure 9 of the patent.

(h) Auxiliary request 8 - Article 83 EPC

The "predetermined cycle" in feature [F5] was sufficiently disclosed. It was clear from the patent specification that this term related to the actual predetermination of the manipulated variable in the control unit and that this value could vary over time and could be different in the two modes.

(i) Auxiliary request 8 - Article 84 EPC

The amendment "and in the second mode" in feature [F4] did not give rise to a clarity issue.

(j) Auxiliary request 8 - inventive step

None of D8 or D10 disclosed duty-cycle control in accordance with features [F4] and [F5]. Even if duty-cycle control were considered, a division of a lower-power heater to be cycle controlled with an uncontrolled higher-power heater in the sterilisation mode would not have been made obvious from common general knowledge as e.g. represented by D17.

VII. The opponent's arguments relevant to the present decision can be summarised as follows.

(a) Format of the oral proceedings

Oral proceedings should be conducted as an in-person hearing and, as an auxiliary measure, in mixed-mode format. In accordance with G 1/21, a deviation from the optimum format required good reasons.

(b) Main request and auxiliary requests 1 and 2 -
Article 123(3) EPC

The amendments made to claim 1 resulted in an extension of protection as its subject-matter was not restricted but different to the granted version.

(c) Auxiliary requests 3 to 5 - Article 123(2) EPC

The subject-matter of claims 1 to 3 was extended beyond the content of the application as filed, represented by translation D20.

(d) Auxiliary request 6 - novelty

The subject-matter of claim 1 was not novel in view of the disclosure of D7, D8 and D10. D7 and D8 disclosed first and second heaters, and the application of both heaters in the sterilisation mode was at least implicitly disclosed. D10 was novelty-destroying since claim 1 did not require that a cultivation process take place in the first mode. Phase V was suitable for cultivation conditions and thus anticipated feature [F2].

(e) Auxiliary requests 6 and 7 - inventive step

Starting from D7, it was obvious to implement the temperature control in the sterilisation mode as defined by feature [F3] as this was one of two options the skilled person had for its implementation with the two heaters disclosed in D7. Both options were equivalent and within the common practice of the skilled person.

(f) Auxiliary request 8 - admittance issues

Documents D17 and D18 should be admitted as proof of common general knowledge already discussed in the proceedings. The opposition division's discretionary decision not to admit the argument that the priority was not validly claimed for the subject-matter of claim 1 was erroneous. The argument should be admitted, and the claimed priority was thus not valid, rendering D16 prior art under Article 54(2) EPC. The inventive-step attack using D16 should thus also be admitted. The D7 inventive-step objection in combination with common general knowledge should be admitted as well as it was identical to the objection dealt with in the decision under appeal.

(g) Auxiliary request 8 - Article 123(2) EPC

The amendment "and in the second mode" added subject-matter. Even considering the embodiment of Figure 9, it constituted a non-allowable intermediate generalisation.

(h) Auxiliary request 8 - Article 83 EPC

The "predetermined cycle" in feature [F5] was a single value, and it was not disclosed how such a single value could be used for controlling the temperature, and particularly the temperature in two modes having a different target temperature.

(i) Auxiliary request 8 - Article 84 EPC

The amendment "and in the second mode" in feature [F4] gave rise to a clarity issue as two modes are addressed but only a single predetermined cycle is defined in claim 1.

(j) Auxiliary request 8 - inventive step

The subject-matter of claim 1 did not involve an inventive step in view of D8 or D10 as the starting point and in combination with common general knowledge as represented, for example, by D17. In D8, the mentioned PID controller anticipated cycle control, and the implementation of the control scheme in accordance with features [F4] and [F5] was within the common general knowledge.

Reasons for the Decision

1. Format of the oral proceedings

Oral proceedings were held in mixed-mode format in accordance with Article 15a(2) RPBA as decided by the Board in exercising its discretion under Article 15a RPBA for the following reasons.

- 1.1 The Board summoned the parties with a notification dated 11 February 2025 to in-person oral proceedings. By letter dated 11 March 2025, the patent proprietor requested that the oral proceedings be held by videoconference to save costs, reduce environmental impact and potentially allow the Japanese client to attend the hearing.
- 1.2 By letter dated 26 March 2025, the opponent requested that the oral proceedings be conducted as in-person hearing or, as an auxiliary request, in mixed-mode format. It argued that the reasons provided by the patent proprietor were insufficient and that in-person hearings constituted the optimum format in accordance with decision G 1/21 and a deviation required "good reasons".
- 1.3 The Enlarged Board considered in its decision G 1/21 that communicating by videoconference cannot yet be put on the same level as communicating in person (G 1/21, Reasons 38 and 39). However, the Enlarged Board also stated (Reasons 40) that it cannot be concluded from this that the right to be heard or the right to fair proceedings could not be respected when oral proceedings were held as a videoconference.

The Board considers that this conclusion is equally applicable to where one of the parties participates remotely in oral proceedings conducted in mixed-mode format.

There are no circumstances to the present case that prevented applying the above conclusion to the case in hand. By conducting oral proceedings in mixed-mode format, both the patent proprietor and the opponent is given the opportunity to participate in accordance with their preference (see T 939/23, Reasons 1.5).

2. Main request - Article 123(3) EPC

The main request as amended with respect to the patent as granted does not comply with the requirements of Article 123(3) EPC, as was also concluded in the decision under appeal.

The patent proprietor argued that the amendments made were not an extension of scope but at most a restriction. Even if that were not the case, it argued, a correction of the patent on the basis of Article 14(2) EPC was possible.

However, both points are not persuasive for the following reasons.

2.2 Procedural events which led to the main request

2.2.1 The Euro-PCT application underlying the current patent is based on international application PCT/JP2017/010678, published as WO 2017/169850, which was originally filed in Japanese, and therefore not in an official language

of the European Patent Office pursuant to Article 14(1) EPC.

2.2.2 A translation into English was filed pursuant to Article 14(2), first sentence, EPC, a provision which under Article 153(2) EPC also applies to this Euro-PCT application not originally filed in an EPO official language (see also T 700/05, Reasons 4.1.1). This translation was published as A-publication EP 3 418 272 A1 and encompasses, *inter alia*, the following wording of claim 1 (emphasis added):

"one or more heaters provided to one or more **inner surfaces** of the inner case and an inner wall surface of the heat-insulated door to heat the culture space"

2.2.3 In its notice of opposition, the opponent argued with reference to the ground for opposition under Article 100(b) EPC that the wording "one or more heaters provided to one or more inner surfaces of the inner case", which was also part of claim 1 as granted, was not in conformity with the embodiments of the patent, since no heaters on the inner surface of the inner case were described anywhere in the disclosure.

2.2.4 In response to the notice of opposition, the patent proprietor submitted a new translation of the originally filed application documents (D22) from Japanese to English. On the basis of this new translation, the patent proprietor requested a correction of the text of the patent pursuant to Article 14(2) EPC and submitted an amended new main request to replace the text of the patent as granted. It was common ground that this new translation is the correct one and is therefore the authentic text of the

Euro-PCT application (Articles 70(1) and (2) and 153 (2) EPC).

2.3 In the main request, the translation was brought into conformity with the original text according to the corrected translation D22. This encompasses the following amendments with respect to the documents as granted (marked in bold and strike-through):

- paragraph [0019]: "One or more heaters 28 (one or more culture heaters 28A, one or more sterilization heaters 28B, which will be described later) to heat the culture space 6 are disposed on one or more outer surfaces (**rear surfaces** ~~inner surfaces~~) 15 of the inner case 20"
- claim 1: "one or more heaters provided to one or more **rear surfaces** ~~inner surfaces~~ of the inner case and an inner wall surface of the heat-insulated door to heat the culture space"

2.4 No correction under Article 14(2) EPC possible

Article 14 (2) EPC reads:

"A European patent application shall be filed in one of the official languages or, if filed in any other language, translated into one of the official languages in accordance with the Implementing Regulations. Throughout the proceedings before the European Patent Office, such translation may be brought into conformity with the application as filed".

Article 14(2) EPC applies to the patent application. Therefore, the second sentence of Article 14(2) EPC refers to an act bringing **the patent application**

documents into conformity with the application as filed, for example, if evidence is provided that the translation filed is not in conformity with the original text of the application (see Rule 7 EPC). Contrary to the patent proprietor's assertion, this provision thus provides no basis for bringing the wording of the **patent as granted** into conformity with the original text.

As also explained in a similar case in T 700/05, (Reasons 5), Article 70(1) EPC provides that the text of a European patent in the language of the proceedings must be the authentic text in any proceedings before the EPO and Article 70(2) EPC provides that if the European application was filed in a language which is not an official language, that text must be the application as filed within the meaning of the Convention. A change made to the text of a European patent is an amendment to this text within the meaning of Article 123 EPC and, therefore, its second **and** third paragraphs apply. See also T 516/12, Reasons 1.6, and T 700/05, Reasons 5.3. In both of these cases, in contrast to in the case in hand, the corrected term was a restriction compared to the term as granted. See also T 1585/12, Reasons 3.2, and T 1185/23, Reasons 2.6 and 2.7, in which it was found that the corrected translation does not change the subject-matter claimed.

This remains the case even if, as in the current case, the change of the text is caused by a correction made to the translation of the application as filed to bring the text of the translation into conformity with the originally filed Japanese language PCT application.

The corrected text of the application as filed thus serves as the reference point for determining whether

the subject-matter of the patent extends beyond the content of the application as filed (see Rule 7 EPC and Case Law of the Boards of Appeal of the EPO, 11th edn., 2025, II.E.1.2.3). However, this is irrelevant to whether an amended main request in opposition complies with Article 123(3) EPC (see also in this respect T 700/05, Reasons 5.1).

2.5 The amendments made to the patent as granted extend the scope of protection.

The amendments made to claim 1 of the main request compared to claim 1 as granted, are as follows (emphasis added): "one or more heaters (28) provided to one or more ~~inner~~ **rear** surfaces of the inner case and **a rear surface of** an inner wall surface of the heat-insulated door". Similar amendments are made to dependent claims 2 and 3.

These amendments extend the protection of the patent since the location of the heaters is, where amended, inverted from the inner to the outer surface of the case and the door, thus creating an *aliud*. This is explained in the following paragraphs.

2.5.1 The patent proprietor argued that the term "provided to [...] the inner surface of the inner case" in claim 1 as granted was broad and encompassed both the inner and outer (or rear) surfaces of the inner case. This was because the wording "provided to" (contrary to a wording like "provided **on**") had the meaning of placing the heaters such that they make heat available to a rear surface, which, however, does not specify the location of the heater on the rear surface. Moreover, as far as claim 1 as granted refers to "inner

surfaces", this concerned all surfaces interior of the culture apparatus.

In addition, given the whole disclosure of the patent, the skilled person was always aware that the rear surface of the inner case was meant. Even in this case, the heaters were still located at an inner surface of the culture apparatus as shown in the embodiments of Figures 3 and 6, i.e. from the perspective of a user in front of the open door "further inside".

Furthermore, there was an obvious contradiction between the wording of claims 1 and 2 as granted. The skilled person, by referring to the description and drawings (e.g. Figures 3 and 6), understood that the "inner surface" in granted claim 1 in fact refers to the "rear surface of the inner case". Therefore, the amended claims of the main request were in line with the requirements of Article 123(3) EPC.

These arguments are not persuasive.

- 2.5.2 The common understanding of the skilled person of an "inner surface of the inner case" relates to surfaces of the interior of the inner case (not the culture apparatus as a whole), i.e. those that delimit the inner volume of the inner case. It is not persuasive that a skilled person with a mind willing to understand the patent would understand the claim feature "inner surface of the inner case" as the exact opposite, i.e. as the "outer surface of the inner case".

This understanding is also not, as alleged by the patent proprietor, an *a posteriori* understanding but is in line with the interpretation principles of G 1/24 (see headnote), i.e. this understanding of the claim

wording also holds when consulting the description and drawings of the patent. Throughout the patent specification, the term "inner surface" is understood to refer to the interior surface of the inner case. For example, paragraphs [0018] and [0019] define an "inner surface of the outer case" and an "outer surface of the inner case". This outer surface is in paragraph [0018] also called "rear surface". According to paragraph [0080], "thermal insulating material is disposed on the inner surface of the outer case, and [...] the outer surface of the inner case".

- 2.5.3 The patent proprietor's argument that according to the statement in paragraph [0019] ("outer surfaces (inner surfaces) of the inner case") the terms "outer surfaces" and "inner surfaces" were synonymous does not hold. If it is not a mere clerical error due to the reasons explained above, the ambiguous statement in paragraph [0019] of the patent can - seen in the context of the whole patent specification - indicate at most the possibility of placing one or more heaters on the inner surface of the inner case in addition to those on the outer (rear) surface.

In addition, this understanding does not imply that claim 1 as granted also contains such an error or that it was immediately evident that, with respect to the term "inner surface", nothing other than the exact opposite of its common meaning could have been intended.

- 2.5.4 In a further line of argument, the patent proprietor argued that the wording "provided to" (instead of "provided on") in claim 1 had to be construed as "made available to", which was a functional definition

related merely to which surface the heat of the heaters can be provided, independent of their location.

However, this is not convincing. It is unambiguously the "one or more heaters" for which the location is defined, i.e. the location of a technical element and not of the mere function of providing heat.

2.5.5 Claim 2 as granted defines a location of the first heaters ("rear surface") in contradiction with claim 1. However, this constitutes a clarity issue under Article 84 EPC not objectionable in opposition appeal proceedings (G 3/14).

Moreover, the definition in claim 1 applies to all heaters, including both first and second heaters. The second heaters are still defined as being located on the "inner surface" (as is also done in claim 3). Therefore, even if the "mirror drafting" of claim 2 were taken into account, it would not lead to the conclusion that all heaters (first and second) are located at the rear surface.

It is also not true that the opponent confirmed the patent proprietor's interpretation during the opposition proceedings. In the notice of opposition, the opponent drew attention to a discrepancy between the claim wording (i.e. interpreted according to its actual meaning) and the description of the patent. It noted that, for this reason, the patent was objectionable under the ground for opposition under Article 100(b) EPC. Even though the opponent based its objections of lack of patentability on the interpretation of the claim wording so that it would be in conformity with the description, i.e. with the heater located on the rear surface, this does not prove

(and this was not argued by the opponent either) that such an interpretation was indeed apparent from claim 1 as granted.

- 2.5.6 The patent proprietor also argued that all claims should be considered when assessing the provisions of Article 123(3) EPC. Since method claim 7 was broader than device claim 1 as it did not define the position of the heaters, the device defined in claim 1 would - independent of the location of the heaters - fall within the scope of the claims as granted.

This is not persuasive either.

The patent as granted contains two independent claims, each in a different category. In the present case, the requirements of Article 123(3) EPC must be met for each of these independent claims individually, because method claim 7, regardless of its scope, does not protect the device used to carry out this method.

- 2.5.7 The amendment to "rear surfaces" according to the main request is, therefore, at least for the second heaters an *aliud*, which extends the protection of the patent and is thus not in compliance with the requirement of Article 123(3) EPC.

3. Auxiliary requests 1 to 5

- 3.1 Auxiliary requests 1 and 2 encompass the same amendments compared with the patent as granted as the main request. They are thus not allowable under Article 123(3) EPC for the same reasons.

3.2 In auxiliary requests 3 to 5, claims 1 to 3 were amended by re-introducing the wording "inner surface of the inner case" in accordance with the wording of the patent as granted.

However, the issue under Article 123(3) EPC concerning the main request cannot be resolved by way of amendment without violating the requirements of Article 123(2) EPC. The amended wording of auxiliary requests 3 to 5 has no basis in the authentic text of the application as filed (see translation D22). The re-introduction of the wording "inner surface of the inner case" in auxiliary requests 3, 4 and 5 (as according to the wording used in the patent as granted) thus extends the subject-matter beyond that as originally filed, a situation commonly referred to as an "inescapable trap" (see Case Law of the Boards of Appeal of the EPO, 11th edn., 2025, II.E.3.1).

Therefore, none of claim requests 3 to 5 complies with Article 123(2) EPC.

3.3 As none of auxiliary requests 1 to 5 are allowable, the question of admitting auxiliary requests 3 to 5 can be left unanswered, as can the patent proprietor's conditional request for remittal if auxiliary requests 2 or 3 were to be discussed for patentability.

4. Auxiliary request 6 - novelty

Claim 1 of auxiliary request 6 corresponds to claim 7 as granted. This request was referred to as "auxiliary request 4" in the contested decision.

The opposition division concluded that the subject-matter of claim 1 was not novel in view of the disclosure of D10. In addition, the opponent argued that the subject-matter of claim 1 of auxiliary request 6 was not novel in view of, *inter alia*, D7, D8 and D10.

As can be seen below, these novelty objections are not persuasive.

- 4.1 The opponent raised further novelty objections against claim 1 of auxiliary request 6 based on D5, D6 and D9. However, as shown below, the subject-matter of auxiliary requests 6 and 7 does not involve an inventive step in view of D7 as the starting point. In addition, no novelty or inventive-step objections involving D5, D6 and D9 were raised by the opponent against auxiliary request 8. For these reasons, the novelty objections based on D5, D6 and D9 are not relevant for this decision.
- 4.2 Novelty over the disclosure of D10
 - 4.2.1 D10 is directed to a method of disinfecting an incubator (claim 1). Phases I to V in Figure 2 all relate to a sterilisation ("disinfection") operation.
 - 4.2.2 Phases II and III form the core of the sterilisation ("disinfection") process, which involves the step of raising the temperature to 90°C (the second temperature according to feature [F3]) and maintaining it there for 9 hours, a step which "kills practically all cells" (column 4, lines 57 to 63). This step renders the culture space sterile (see point 4.2.3 below), as required by feature [F3].

During these periods, at least the heating elements 14 mounted against the back wall 11, the side walls 12 and the ceiling area 13 are in operation (first heaters; see Figure 1). Step II also involves floor heating by second heaters. Therefore, at least step II anticipates features [F1] and [F3]. The fact that the floor heaters are switched off during Phase III is thus not relevant for novelty.

- 4.2.3 The patent proprietor argued that the sterilisation process step defined by feature [F3] of claim 1 required specific sterilisation conditions as defined in paragraph [0044] of the patent, i.e. a temperature equal to or higher than 100°C, which were not disclosed in D10. Considering the understanding of sterilisation as in the patent description, claim 1 had to be construed accordingly, in line with the principles of G 1/24.

However, while G 1/24 does state that the description and drawings should always be consulted when interpreting the claims, this does not justify reading restrictions into the claims for which the skilled person, applying their technical knowledge, would have no reason to do when reading the claim. "Consulting" the description may well lead to the claim being interpreted as including the teaching of the patent specification (i.e. to sterilise at or above 100°C). However, the claim is then not necessarily limited to this teaching alone. This is because, when interpreting the claim, the skilled person's understanding of the claim, based on their common general knowledge (that the culture space has to be made sterile independent of the means to achieve this), cannot be disregarded.

In addition, paragraph [0044] of the patent does not provide a comprehensive definition of specific sterilisation conditions achieving a defined sterilisation result. Although a temperature requirement of at least 100°C is mentioned, paragraph [0044] does not provide information on other relevant parameters, such as the time interval of treatment, the use of additives, the quantitative sterilisation target (such as log reduction) or the target species (e.g. viruses, bacteria and fungi).

- 4.2.4 Contrary to the opponent's arguments, it is not convincing that Phase V as disclosed in D10 corresponds to an incubation process as defined by feature [F2].

The process step according to Phase V ("post-heating phase") is carried out, for example, at 37°C and at a high humidity. In this phase, the floor heater is turned off while the side wall heaters are turned on. In Phase III, the "heating elements 14 against floor area 10 are turned off" (column 5, lines 1, 2), while in step IV, all "heating elements 14 [...] are turned off" (column 5, lines 17 to 19), and in step V, only heating elements 14 of the back wall and side walls and ceiling are turned on again (column 5, lines 35 to 39). Thus, most of the requirements of the step defined in feature [F2] are disclosed, and the Board agrees with the opponent that Phase V defines process conditions, which would generally be suitable for incubating a culture.

However, in the absence of a culture to be cultivated in Phase V of D10, feature [F2] cannot be anticipated. This is because, contrary to the conclusion of the opposition division and the opponent's assertion, a

process of incubating a culture is required by feature [F2].

The opposition division concluded that the wording "to incubate a culture in the culture space" of feature [F2] only required that the operational parameters be such that a culture can be incubated, i.e. that only process conditions suitable for a possible incubation be present. The opponent further argued that there was no requirement in the claim that an incubation or cultivation of a culture occurred in this step, which was only a notion of purpose. In the opponent's view, this understanding was also in line with established case law (Case Law of the Boards of Appeal of the EPO, 11th edn., 2025, I.C.8.1.3 d)) and decision T 1822/12, in accordance with which there was no basis for regarding the purpose of carrying out a process as having the effect of a functional technical feature.

However, this understanding of feature [F2] is not convincing.

Claim 1 is a method claim, and the feature in question is not only a functional capability (suitability) of the incubation device used, but a functional feature of cultivating the culture (see Case Law of the Boards of Appeal of the EPO, 11th edn., 2025, I.C.8.1.3 c)). Method step [F2] defines that a temperature control must be performed to incubate a culture in the culture space. In other words, the incubation process (including the culture) is part of the method step defined by feature [F2]. The skilled person would thus not construe the whole phrase in question as merely a notion of suitability.

The opponent's references concern case law directed to use claims which is not relevant for the case at hand. T 1822/12 relates to a food processing method in which the objective of the process is further defined in the claim in terms of a quality of the process food (i.e. the suitability of the method to achieve this quality). T 1399/16 concerns a method for producing a product of specific properties. In the case at hand, a cultivation step is defined, requiring at least a culture to be present, which is not a question of suitability.

Besides the fact that no culture is mentioned and that Phase V is defined in D10 as part of the disinfection process, the "post-heating" Phase V is disclosed for drying the wet surfaces **to prevent contamination** by a user (see column 5, lines 24 to 35). Therefore, opening the culturing device to place a culture within the culture space before the end of Phase V is in contradiction to the teaching of D10.

Therefore, D10 does not disclose a step of incubating a culture according to feature [F2].

4.2.5 The purpose of a culturing device (including the one in D10) is to incubate a culture. Therefore, D10 discloses at least implicitly an incubation step at a temperature below the second temperature following the sterilisation cycle (to be carried out after Phase V). However, D10 does not describe how temperature control is carried out during such an incubation step, or which heaters are used.

4.3 Novelty over the disclosure of D7

It was uncontested that D7 constitutes prior art under Article 54(2) EPC.

D7 discloses, *inter alia*, a cultivation device "CO2Cell 190D Standard". The device can be operated in an incubation mode at a first temperature of up to 60°C (page 8) and a sterilisation ("decontamination") mode at a second, higher, temperature of 160°C (see page 3, chapter 2 and page 10, chapter 6.1: "regulate [...] at 160°C"). During the culturing operation, the temperature is controlled by a first set of heaters (a "unique MMM designed five-sided direct-heating element" and an independently controlled door heater, see page 3, chapter 2). These heaters have a temperature control range for the incubation step of between 5 and 60°C (see page 13, chapter 12.1, "Temperature Management"), and this heating system is disclosed for all devices described.

According to chapter 2 (last paragraph on page 3) the 190D device comprises second ("extra") heaters, allowing for the high sterilisation temperature of 160°C. Page 10, chapter 6.1, describes the sterilisation mode in more detail. In an initial phase, "maximum power is applied to the heating elements", after which the heater power is reduced to control the 160°C dwell phase. The patent proprietor's argument that the second heaters could be part of the first heaters, i.e. only a single set of heaters was disclosed, and that the temperature modes are simply controlled via the power applied to the heaters is not persuasive as this would be at odds with the term "extra". This is confirmed by the fact that the data sheet on page 13 mentions an additional power source exclusively for the 190D device, envisaged for a "decon cycle" (see chapter 12.1, "Electrical Data"). In view of the range of cultivation temperature set-points, it

is also implicit that the extra heaters are not operated during the cultivation mode.

However, the Board agrees with the patent proprietor that D7 does not disclose that all heaters are applied in the sterilisation mode. While "the heating elements" referred to in the "Heat-up" step in chapter 6.1 on page 10 could indeed include both the first and second heaters, it is also possible that this statement solely refers to the extra heaters described on page 3.

Therefore, it is not directly and unambiguously disclosed in D7 that both the first and second heaters are in operation in the sterilisation mode defined by feature [F3], which is thus the only distinguishing feature over D7.

4.4 Novelty over the disclosure of D8

It was uncontested that D8 is prior art under Article 54(2) EPC.

D8 discloses a culture apparatus which can be operated in an incubation mode and a sterilisation mode; see page 7, "Overnight decontamination cycle", including the application of "moist heat [that] kills most microorganisms" at temperatures of "90°C to 94°C", i.e. sterilisation conditions in accordance with feature [F3] (see point 4.2.3 above). According to page 6, several conditions are envisaged, namely a "[d]irect heating [...] air jacket" and precise heating for three zones (main, bottom and outer door heater). The opponent identified the main heater as the first heater and the bottom heater as the second heater.

However, it is not defined in D8 which heaters are applied in which mode. Even if the second heater in D8 is applied in the sterilisation mode, it can also be applied in the incubation mode to provide and control the required humidity. Therefore, the condition "without driving the second heaters" in feature [F2] cannot be derived directly and unambiguously from D8. Moreover, although page 6 states that the first heater "provides precise temperature control", this is not direct and unambiguous disclosure that such a precise temperature is required or carried out in the decontamination step.

Moreover, the opponent's assertion that the bottom heater (see page 4, "Water pan") must remain on without further control during the decontamination phase is merely an allegation and cannot be directly and unambiguously derived from D8. In fact, the statement "precisely controlled by base heater" on page 4 does not rule out the possibility of the second heater being switched off when the desired humidity range is reached.

The opponent also argued that, for the humidity control during the incubation mode, there were situations in which no heat from the second heater was required, meaning that the condition in feature [F2] was met. However, it is not disclosed in D8 whether, in such a situation, the second heater is switched off (i.e. via an on-off control) or controlled continuously by applying a reduced heating power.

5. Auxiliary request 6 - inventive step

The subject-matter of claim 1 is obvious when starting from D7 in combination with the skilled person's common technical knowledge.

5.1 As explained in point 4.3 above, it is not disclosed in D7 that both the first and second heaters are in operation in the sterilisation mode defined by feature [F3]. In other words, it is not disclosed whether the first heaters are also applied in the sterilisation mode.

5.2 In view of this sole distinguishing feature, the technical problem suggested by the patent proprietor to "more efficiently control the culture apparatus in which a culture space can be made sterile by heating" is not persuasive. Given that D7 requires applying all heaters in the sterilisation mode and that it is not apparent to which heaters this statement applies, the skilled person has only two options:

- (a) applying all available heaters
- (b) applying only the extra heaters for the sterilisation mode

No reasons are apparent to support the patent proprietor's assertion that option (a) has an extra effect over option (b) in terms of efficiency. The number of heaters used to reach 160°C in the sterilisation mode does not affect the required heating power.

The patent proprietor's argument that using only one heater (option b) is simpler and therefore the preferred choice of the skilled person is also not

convincing since both heaters are already present in the device. Moreover, as also argued by the patent proprietor, option a) allows for a smaller size of the extra heater. However, these are considerations within the common routine practice of the skilled person.

As far as the patent proprietor additionally refers to a possible decrease in the electromagnetic noise (patent, paragraph [0006]), this effect is related to cycle control ("running and stopping a larger current"), which is not part of the subject-matter of claim 1.

Therefore, the objective technical problem must be formulated as how to implement the temperature control for the sterilisation mode for the device disclosed in D7.

5.3 As options a) and b) are both equally suitable alternatives and both within the common practice of the skilled person, the subject-matter of claim 1 does not involve an inventive step.

6. Auxiliary request 7 - inventive step

Compared to claim 1 of auxiliary request 6, the two process steps defined by features [F2'] and [F3'] include the specifications "incubation mode" and "sterilization mode". However, as discussed above for auxiliary request 6, it was already at least implicit that feature [F2] defines an incubation mode and feature [F3] defines a sterilisation mode (see points 4.2.3 and 4.2.4 above). Therefore, the amendments do not alter the subject-matter claimed compared to claim 1 of auxiliary request 6.

Therefore, the subject-matter of claim 1 does not involve an inventive step for the same reasons as explained above for auxiliary request 6 (see point 5.).

The question of admittance of auxiliary request 7 can thus be left unanswered.

7. Auxiliary request 8 (patent as maintained)

The opponent raised objections under Articles 83, 84, 123(2), 54 and 56 EPC against auxiliary request 8. None of these objections is convincing for the following reasons.

7.1 Admittance of D17, D18 and D23

The patent proprietor requested that D17 and D18 not be considered in the appeal proceedings and asserted that their late filing constituted an abuse of procedure.

The opposition division decided not to admit D17 and D18 into the opposition proceedings for being late filed without the subject of the proceedings having changed. D17 and D18 thus constitute amendments under Article 12(4) RPBA, and their admittance is to be further considered under the provisions of Article 12(6), first sentence, RPBA.

D23 was not invoked by the opponent against the patentability of auxiliary request 8 and the question of its admittance can thus be left unanswered.

7.1.1 D17 is a Wikipedia page on the term "Tastgrad" (duty factor) and was submitted by the opponent with respect

to the understanding of new features [F4] and [F5] of claim 1 of auxiliary request 8.

The Board decided to consider D17 since it represents common general knowledge for the understanding of the feature "duty control". There is no procedural abuse in the fact that the opponent's assertion of common general knowledge is supplemented by a relatively short (2 pages) document early in the appeal proceedings.

- 7.1.2 Contrary to the opponent's view, patent document D18 does not represent common technical knowledge. Therefore, the Board sees no reason to set aside the opposition division's decision and does not consider D18 in the appeal proceedings (Article 12(6), first sentence, RPBA).

7.2 Understanding of features [F4] and [F5]

Features [F4] and [F5] read:

"[F4] when performing the temperature control in the first mode and in the second mode, the culture apparatus performs duty control of repeating an ON state and an OFF state to the first heater at a predetermined cycle and

[F5] when performing the temperature control in the second mode, the culture apparatus performs control so that the second heaters are kept in an ON state"

The Board understands the term "duty control [...] at predetermined cycle" to be in line with the definition of the "Tastgrad" as described in D17, i.e. the ratio of the time τ the heater is switched on and the period length T . This results, over several periods in a certain mean duty power supply depending on this duty

cycle ratio. The ratio can thus be used for temperature control. This understanding is in line with what is explained in paragraphs [0064] to [0069] and [0145] to [0150] of the patent.

The opponent argued that the wording defining the control of the second heater ("control so that the second heaters are kept in an ON state") also encompassed duty-cycle on-off control, but for a case in which the cycle ratio (the manipulating variable) is calculated to be 1.

This is not persuasive. Feature [5] requires the second heater to be switched on in the sterilisation mode without any further condition to be fulfilled. It is true that for duty-cycle control a resulting continuous on state is possible if the controller continuously determines, over a certain period, a 100% duty requirement. However, duty-cycle control as defined by feature [F4] also includes the possibility for the controller to deviate from 100% when necessary. In contrast, Feature [F5] requires something different, namely that the second heater be switched on independently of any further control signal. Once in the on state, the second heater remains uncontrolled; the control action is restricted to its activation.

7.3 Article 83 EPC

- 7.3.1 The opponent argued that the feature "duty control [is performed] at a predetermined cycle" was not enabled. The control of the temperature required continuous adaptation of the duty cycle for both the sterilisation and the incubation modes. This could not be achieved with a single predetermined value. There was also no

teaching on how the different temperatures of the modes could be controlled using one predetermined cycle.

However, this is not persuasive for the reasons explained below. The opponent's request that the patent proprietor's arguments on the understanding of the term "predetermined" (feature [F4]) not be admitted is also not persuasive. The claim wording has to be construed in any case. Thus, the common general knowledge of the skilled person (illustrated by D17) must be taken into account.

- 7.3.2 The wording of the claim must be construed from the viewpoint of a skilled person who has a mind willing to understand the claim. The skilled person, who reads features [F4] and [F5] of claim 1, understands that the term "predetermined cycle" refers to the calculated value for the manipulating variable to be continuously recalculated by the controller.

This understanding is supported by the description of the patent. Paragraph [0042] reads: "When turning on the culture heater 28A, the control device 62 performs duty control of repeating an ON state (ON) and an OFF state (OFF) at a predetermined cycle". According to this statement, the predetermined cycle (which is the control variable of the control cycle) corresponds to the above-mentioned duty cycle ratio, i.e. the period in which the heater is switched on during a certain cycle time interval T (i.e. a period which is addressed in D17 as "Periodendauer"). The patent refers to the length of time that the heater is switched on during this cycle as the "duty cycle" (i.e. a period which is addressed in D17 as "Impulsdauer", see for example paragraph [0067] of the patent: the control unit

"reduces" or "increases" the duty cycle). The duty cycle correlates with the actual heating power applied.

The duty cycle is continuously determined by the controller in response to the difference between the set and measured temperatures (the controlled variable). Throughout the patent specification (see e.g. paragraphs [0042] and [0045]), this duty-controlled heater is disclosed as operating at a "predetermined cycle". Therefore, the "predetermined duty cycle" refers to the actual duty cycle determined by the controller (i.e. the actual value of the manipulating variable). This is independent of the different temperature set-points (the control targets) in the incubation and sterilisation modes.

Therefore, there is no lack of sufficient disclosure.

7.4 Article 84 EPC

The amendment "and in the second mode" is the only amendment that goes beyond the mere combination of the wording of granted claims 7 to 9. The lack-of-clarity objection against this amendment was based on the understanding that feature [F4] referred to one single predetermined cycle. As this understanding is not what a skilled person would understand (see point 7.3), the lack-of-clarity objection is not persuasive.

7.5 Article 123(2) EPC

The Board sees no violation of the requirements of Article 123(2) EPC by the addition that the first heaters (culture heater) have an on-off duty-cycle control in the second mode (sterilisation mode). The control scheme as defined in claim 1 is e.g. disclosed

in Figure 9 as originally filed as an embodiment of the control scheme for the first and second heaters, i.e. with both features [F4] and [F5].

The opponent's argument that features from Figure 9 and paragraphs [0044] and [0045] were omitted, thus constituting an unallowable intermediate generalisation, is not persuasive as Figure 9 is a representation of the temperature control for the first ("culture mode") and second mode ("sterilisation mode") as defined by features [F4] and [F5], the control unit being at least implicit to process claim 1.

7.6 Novelty

The only novelty objection against auxiliary request 8 was based on D8.

However, as the novelty objection against claim 1 of auxiliary request 6 based on D8 was found not convincing (see point 4.4 above), the subject-matter of the further restricted claim 1 of auxiliary request 1 is also novel. In addition, the temperature control as defined by the further features [F4] and [F5] is also not disclosed in D8.

7.7 Inventive step

The opponent argued that the subject-matter of claim 1 of auxiliary request 1 was not inventive in view of any of the following combinations:

- D7 in combination with common general knowledge as, for example, represented by D17
- D8 in combination with common general knowledge

- D10 in combination with common general knowledge represented by document D17
- D10 in combination with D16

7.8 Admittance of the D7 inventive-step objection in combination with common general knowledge

The inventive-step objection starting from D7 in combination with common general knowledge is not admitted into the appeal proceedings.

This objection was part of the decision under appeal. However, it was not raised as a part of the opponent's written appeal case. It was only during oral proceedings before the Board that the opponent raised this objection again. This objection constitutes an amendment under Article 13(2) RPBA.

There are no exceptional circumstances present that justify to consider this objection.

The opponent only argued that the objection was the same as the one in the appealed decision. However, this does not constitute exceptional circumstances for raising an objection for the first time on appeal at the oral proceedings before the Board against auxiliary request 8, which has been in the appeal proceedings from the beginning.

7.9 Consideration of the D10 inventive-step objection in combination with D16

The opponent argued that the subject-matter of claim 1 of auxiliary request 6 (i.e. claim 7 as granted) did not validly claim priority from documents D20 and D21. This applied equally for auxiliary request 8.

Therefore, document D16, which is published after the priority but before the filing date of the patent, was prior art under Article 54(2) EPC and could be used in an inventive-step attack.

The opposition division decided that the argument of invalidity of the priority (documents D20 and D21) was not admitted into the opposition proceedings as this argument was raised for the first time during the oral proceedings and was furthermore not substantiated. As a consequence, the inventive-step attack using D16 was also not considered due to its prior-art status under Article 54(3) EPC.

The opponent requested that this decision be overturned and that the inventive-step attack with the involvement of D16 be considered as the priority of the patent (claimed from documents D20 and D21) was invalidly claimed and D16 was prior art under Article 54(2) EPC.

- 7.9.1 The opponent's request falls within the scope of Article 12(6), first sentence, EPC, in accordance with which a board shall, *inter alia*, not admit facts, objections or evidence which were not admitted in the proceedings leading to the decision under appeal, unless the decision not to admit them suffered from an error in the use of discretion or unless the circumstances of the appeal case justify their admittance.

In the case at hand, none of these requirements is fulfilled.

- 7.9.2 The opponent argued that the decision of the opposition division not to admit the opponent's argument that the validity of the patent was invalid suffered from an

error in the use of discretion. The burden of proof to demonstrate that the priority is validly claimed was with the patent proprietor, and this was not considered by the opposition division.

The Board sees no error in the exercise of discretion by the opposition division. According to the minutes (see point 142), the fact that D16 was published after the priority date only surfaced during opposition oral proceedings. The immediate argument of the opponent that the priority had to be declared invalid (see minutes, point 143) was also put forward for the first time during the opposition oral proceedings, although D16 had been used in attacks of lack of inventive step against the features related to cycle control in the notice of opposition.

As outlined above, the opposition division had discretion to admit the novel argument of an allegedly invalid priority claim.

However, the fact that the issue of the publication date of D16 had not been raised by any party before the date of oral proceedings while the opponent had relied on it as allegedly being state of the art under Article 54(2) EPC cannot be considered in favour of the opponent.

It is the responsibility of the opponent to submit the grounds on which the opposition is based, as well as the facts and evidence presented in support of these grounds (Rule 76(2)(c) EPC) within the period specified in Article 99(1) EPC in a substantiated manner. The indication of grounds includes, *inter alia*, the duty to establish the prior-art status of the documents held against the patent under Article 54 and 56 EPC.

In accordance with the boards' established case law, each party to the proceedings bears the burden of proof for the facts it alleges (see Case Law of the Boards of appeal of the EPO, 11th edn., 2025, III.G.5.1.1). This includes establishing the validity or non-validity of relevant dates, and thus also the relevant date of priority (see Case Law of the Boards of Appeal of the EPO, 11th edn., 2025, III.G.5.1.2 e). In relation to the objections of lack of inventive step, the opponent implicitly asserted that D16 was prior art under Article 54 (2) EPC, despite being filed after the priority date of the patent, and that the validity of the priority was not relevant here. Hence, the opposition division was not required to invite the patent proprietor to file a translation in accordance with Rule 53(3) EPC. The opponent's possible failure to check the prior-art status of D16 when filing the notice of opposition does not shift the burden of proof for the validity of the priority to the patent proprietor.

7.9.3 Even if the priority were found invalid, it is, *prima facie*, not apparent that the teaching of D16 could render a control scheme in accordance with features [F4] and [F5] obvious. While D16 indeed discloses duty-cycle control using an on-off switch, this control scheme is applied to all heaters, in particular the first and second heaters. This is in contradiction to the requirement of feature [F5] which requires the second heater (sterilisation heater) to be kept in the on state in the second (sterilisation) mode.

7.9.4 Hence, the Board sees no circumstances of the appeal case (Article 12(6), first sentence, RPBA) that justify

admitting the arguments on the validity of the priority into the appeal proceedings. For this reason, the prior-art status of D16 under Article 54(3) EPC cannot be challenged, and the D10 inventive-step objection in combination with D16 is not considered.

7.10 Objections based on D8 and D10 as the starting point

For the following reasons, the objections starting from D8 or D10, each in combination with common general knowledge, are also not persuasive.

7.10.1 It was uncontested that D10 does not disclose a duty cycle control.

With respect to D8, the opponent argued by reference to the PID controller mentioned in the general specification table on page 19 of D8 ("Temperature") that in "the broadest reasonable interpretation", such a PID controller implied duty-cycle control via repeating on-off states. However, this argument is not persuasive. In a PID (feedback) controller, the manipulating variable "heating power" does not have to be adjusted via a discrete on-and-off cycling. The heater can also be controlled by continuous variation of the power supplied to the heater. There is thus no implicit disclosure of duty-cycle control in D8.

Therefore, neither D8 nor D10 discloses a temperature control involving an on-off duty-cycle control scheme, let alone one in accordance with the combination of features [F4] and [F5], i.e. with a second heater simply switched on during the sterilisation mode, while the temperature is controlled by duty-cycle control of the first heater in both modes.

7.10.2 Effect and technical problem

The effect identified by the opposition division, namely providing precise drive control of the first heater and simple drive control of the second heater, is persuasive as it corresponds to what is described in paragraph [0069] of the patent: "The heater control unit 62B drives the sterilization heater 28B [the second heater] **to promote increase in the internal temperature**, while it controls the internal temperature to make it the second temperature by controlling the duty cycle of the culture heater 28A [the first heater]" (emphasis added). According to this, the second heater provides the majority of the heat supply during sterilisation, while the first heater fine-tunes the temperature to the set-point (as in the incubation phase).

In addition, switching only the first (lower-power) heaters on and off avoids the need for frequently switching the second (higher-power) heater on and off and prevents negative effects such as the generation of electromagnetic noise as described in paragraph [0006] of the patent.

The Board also agrees with the objective technical problem identified by the opposition division, which is to simplify the temperature and humidity control for a culture apparatus.

7.10.3 The solution to this technical problem by the combination of features [F4] and [F5] (i.e. one uncontrolled second heater to substantially raise the temperature and a controlled heater to control the temperature to the set-point) is not obvious from the common technical knowledge as, for example, illustrated

by D17. While the skilled person is aware of the possibility of duty-cycle control, which could be an obvious embodiment for the control scheme of the incubation mode, there is no indication that in the devices disclosed in D8 or D10, the heating power in the sterilisation mode can be controlled by a combination of simply switching the uncontrolled main power second heater on, combined with a duty-cycle-controlled first heater.

In addition, D8 teaches the skilled person to use the second heater also during the incubation mode since the incubator allows for precise "humidity control" by means of the second ("base" or "bottom") heater (see page 4, "Water pan" and page 5, "Humidity recovery").

7.10.4 To conclude, the subject-matter of claim 1 of auxiliary request 8 involves an inventive step.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar:

The Chairman:



C. Spira

C. Herberhold

Decision electronically authenticated