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Datasheet for the decision of 12 January 2026

Case Number: T 2007/23 - 3.4.02

Application Number: 13151696.5

Publication Number: 2584344

IPC: G01N21/25, G01N21/64, B01J19/00

Language of the proceedings: EN

Title of invention:
Optical System for Detecting Light from Polymerase Chain Reactions

Patent Proprietor:
IT-IS International Limited

Opponent:
Roche Diagnostics GmbH

Headword:
PCR apparatus/IT-IS INTERNATIONAL LTD

Relevant legal provisions:
EPC Art. 56, 123(2)
RPBA 2020 Art. 12(3), 12(4), 12(5), 12(6), 13(1), 13(2)

Keyword:
Inventive step - (no) - main request, auxiliary requests 1 to 7
Late-filed request - should have been submitted in first-instance proceedings (no) - admitted (yes) - auxiliary requests 1 to 12
Amendments - extension beyond the content of the application as filed (yes) - auxiliary requests 8 to 16
Reply to statement of grounds of appeal - reasons set out clearly and concisely (no) - auxiliary request 17 to 45
Amendment after summons - taken into account (no) - auxiliary requests 46 to 51

Decisions cited:
T 1756/16

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

Case Number: T 2007/23 - 3.4.02

D E C I S I O N
of Technical Board of Appeal 3.4.02
of 12 January 2026

Appellant: (Opponent)	Roche Diagnostics GmbH Sandhofer Straße 116 68305 Mannheim (DE)
Representative:	Simmons & Simmons LLP (Munich) Lehel Carré Gewürzmühlstraße 11 80538 Munich (DE)
Respondent: (Patent Proprietor)	IT-IS International Limited 1 Wainstones Court Stokesley Business Park Middlesbrough TS9 5JY (GB)
Representative:	Mathys & Squire 32 London Bridge Street The Shard London SE1 9SG (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 3 November 2023 concerning maintenance of the European Patent No. 2584344 in amended form.**

Composition of the Board:

Chairman	R. Bekkering
Members:	F. Giesen
	G. Decker

Summary of Facts and Submissions

I. The appeal by the opponent (appellant) is directed against the interlocutory decision of the opposition division dated 3 November 2023, finding that European patent No. 2 584 344, in the version of auxiliary request 2 (filed as auxiliary request 15 and promoted in rank during the oral proceedings on 22 September 2023), met the requirements of the Convention.

The opposed patent is based on a divisional application from the earlier application published as WO 2010/079338 A2.

II. The following documents will be referred to:

D1	RU 2 304 277 C2
D1a	English translation of D1 filed on 30 March 2022
D3	JP 63-298137
D3a	English translation of D3 filed on 30 March 2022
D6	US 6,015,674
D7	EP 0 953 379 A1
D8	US 5,830,134
D9	WO 01/08801 A1
D28	US 5,473,437
D29	Excerpt from "Analytical Techniques and Instrumentation" in: Burtis, C.A. and Ashwood E.R. (eds.) Tietz Fundamentals of Clinical Chemistry, Fifth Edition 2001 (cover, publisher information, pages 74 to 79)

X4 Screenshot of Thermofisher web site "PCR Plate Seals and Accessories" https://www.thermofisher.com/uk/en/home/brands/thermo-scientific/molecular-biology/thermo-scientific-pcr/pcr-plate-seals-accessories.html, submitted on 12 December 2025

X5 Screenshot of Thermofisher web site "Individual PCR Tubes, Strip Tubes, and Strip Caps" https://www.thermofisher.com/de/de/home/brands/thermo-scientific/molecular-biology/thermo-scientific-pcr/individual-pcr-tubes-strip-tubes.html#cap-strips,
submitted on 12 December 2025

III. Oral proceedings before the board took place on 12 January 2026.

The final requests of the parties were as follows:

The opponent requested

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

The patent proprietor requested

as a main request that the appeal be dismissed, i.e. that the patent be maintained in amended form on the basis of the claims according to auxiliary request 2 found allowable in the decision under appeal,

or alternatively, that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of the claims according to one of auxiliary requests 1 to 45 filed with the reply to the appeal dated 15 July 2024,

or of one of auxiliary requests 46 to 50 filed with the letter dated 12 December 2025

or of auxiliary request 51 filed during the oral proceedings before the board.

IV. For improved readability the wording of the claims of the different claim requests is reproduced in the reasons for the decision.

Reasons for the Decision

1. Admissibility of the appeal

The appeal meets the requirements of Articles 106 to 108 EPC and Rule 99 EPC. It is therefore admissible.

2. Main request - Article 56 EPC

2.1 The subject-matter of claim 1 of the main request does not involve an inventive step within the meaning of Article 56 EPC.

2.2 Claim 1 of the main request reads as follows:

1 *"Apparatus for detecting spectra of light*
1a *emanating from Polymerase Chain Reaction, PCR, reactions*

1b *occurring in a plurality of sealed reaction vessels (3),*

the apparatus comprising:

2 *a 48, 96 or 384 well plate*

2a *accommodating the plurality of sealed reaction vessels (3),*

3 *each sealed reaction vessel (3) comprising a receptacle portion*

3a *having an emitting area from which light can emanate;*

4 *a thermal cycler having a block heater (4);*

5 *a heated lid arranged to heat and apply pressure to a seal of each reaction vessel;*

6 *a masking element (5) having an array of apertures (6) through which light can pass,*

6a *each aperture (6) being smaller than the emitting area of the receptacle portion of the sealed reaction vessel (3),*

6b *there being one or more apertures (6) arranged adjacent* [sic] *each of the sealed reaction vessels (3);*

7 *a plurality of light waveguides (7),*

7a *each light waveguide arranged to guide light from a respective aperture (6) in the masking element (5) to a light detecting device (10)*

8 *comprising a CCD or CMOS detector,*

9 *wherein the well plate is held in the block heater (4) between the block heater and the masking element (5),*

10 *the light detecting device (10) being configured for simultaneously detecting the spectra in the light emanating from the PCR reactions via the array of apertures (6); and*

11 *a further light waveguide (31) for each reaction vessel (3)*

11a *arranged with a first end <u>mounted</u> ~~arranged~~ in or at a further aperture (37) in the masking element (5) adjacent* [sic] *each reaction vessel (3)*

11b *and an excitation light accepting end adjacent* [sic] *an excitation light source (32, 33) for guiding excitation light from the excitation light source (32, 33) to each of the reaction vessels (3),*

11c *the further light waveguides (31) being joined together at their excitation light accepting ends to receive the excitation light, and*

12 *wherein the excitation light source (32, 33) comprises a Light-Emitting Diode, LED."*

The board adopts the feature labelling used in the decision under appeal. The board added the underlining and strike-through to identify amendments with respect to claim 1 as granted.

2.3 Starting point

The board accepts - and the patent proprietor has not contested - that D1a is an accurate translation of D1. In the following discussion, reference is made to D1a.

The board considers D1 to be a suitable starting point for the assessment of inventive step, since its disclosure is also concerned with an instrument for optical PCR.

2.4 Distinguishing features

The distinguishing features of claim 1 over D1 are:

- feature 2, since D1 does not disclose a specific number of wells;
- feature 6a, since D1 discloses only a single aperture;
- feature 8, since D1 does not disclose whether the multichannel photodetector is a CMOS or CCD detector;
- feature 11a, since D1 discloses only a single aperture; and
- feature 12, since D1 discloses a halogen lamp rather than an LED.

2.4.1 Contrary to the opponent's argument, the reference in D1 to the ABI Prism 7700 as the "closest" device is not a direct and unambiguous disclosure of the number of wells in the sample section 2 (i.e. the well plate) of D1. Feature 2 is therefore a distinguishing feature.

2.4.2 The opposition division (decision under appeal, page 17, discussion of feature 5) and the patent proprietor (reply to the appeal, point 8.1.1.2) argued, in essence, that D1 did not disclose a heated lid in the sense of feature 5.

The board is not persuaded by this argument. The opponent correctly submitted (statement setting out the grounds of appeal, page 35, paragraph vii, to page 37, paragraph (6)) that claim 1 requires only a "heated" lid. Claim 1 does not require the heated lid to heat the seals actively (see decision under appeal, page 17, last paragraph of the discussion of feature 5). Nor does it specify any particular temperature increase by stating that the heated lid is "arranged to heat" the seals. Even if the thermal cover 12 in D1 is a passive device, it is nevertheless heated by the block heater sufficiently to equalise temperatures and prevent condensation in the vessel seals 16 (D1a, page 5, lines 42 to 44). Contrary to the patent proprietor's submission, a passively heated lid is also arranged to heat the seals simply by being in thermal contact with them, since temperature equalisation means that the thermal cover raises the temperature of the seals.

Feature 5 is therefore disclosed in D1.

2.4.3 As regards feature 6, the board notes that, at first glance, the wording of claim 1 appears to define the masking plate and the heated lid as separate elements. However, claim 5 of the main request, which is indirectly dependent on claim 1, defines that the masking element 5 is provided by the heated lid. The thermal cover 12 of D1 is a heated lid and has apertures for the coaxial fibres. In the board's view, a skilled person would understand the thermal cover 12 of D1 to be optically opaque. Any other arrangement would allow ambient light to enter the vessels and would more than offset the effort made in aperture matching. It would therefore be unrealistic to understand D1 otherwise. The patent proprietor has not presented any argument to the contrary.

Feature 6 is therefore disclosed in D1.

2.4.4 The opponent argued that feature 6a was disclosed in D1. This argument is based on subdividing the single aperture per vessel disclosed in D1 (e.g. in figure 2) into virtual sub-apertures. On a proper construction, claim 1 cannot be understood as defining virtual regions of an aperture, but rather two or more physically distinguishable apertures. Feature 6b, which defines "one or more apertures in the masking element", and feature 11a, which defines a "further aperture in the masking element", both refer to physical structural entities. They cannot be construed as abstract "aperture means" or as notional regions defined merely by their function. The claim language therefore requires the presence of two or more physically distinguishable apertures in the masking element. This is not disclosed in D1. The board reaches this conclusion even taking into account the opponent's submissions not considered by the opposition division (statement setting out the grounds of appeal, page 37, penultimate paragraph ix, to page 42, first paragraph).

The board has also taken note of the opponent's firm disagreement with the statement recorded in the minutes that they agreed that feature 6a was not disclosed in D1. That disagreement is of little relevance, since the corresponding arguments do not persuade the board.

2.4.5 The opponent argued that D1 disclosed a CCD or CMOS photodetector because it refers to the ABI Prism (c) 7700. The board is not persuaded that this reference directly and unambiguously discloses that the apparatus according to D1 uses a CCD or CMOS photodetector. Nor is such a detector implicitly disclosed in D1, since multichannel photodetectors other than CCD or CMOS detectors are available for PCR dyes, including photomultiplier and avalanche detectors, which rely on different materials or physical conversion mechanisms.

Feature 8 is therefore a distinguishing feature.

2.4.6 The opponent's argument that D1 disclosed feature 11a (a further light waveguide with a first end mounted in or at a further aperture; see statement setting out the grounds of appeal, page 44, first paragraph xvi) is based, just like the argument concerning feature 6a, on a subdivision of the aperture into virtual sub-sections. It is not persuasive for the reasons set out in the context of feature 6a.

Feature 11a is therefore a distinguishing feature.

2.4.7 It was undisputed between the parties that feature 12 is a distinguishing feature.

2.5 Technical effect

2.5.1 The distinguishing features identified above, with the exception of features 6a and 11a, contribute to different technical effects, and do not show any synergy.

2.5.2 Feature 2: The particular number of wells defined in feature 2 does not provide any specific technical advantage. D1 already discloses the simultaneous detection of different PCR reactions (for example, in claim 1, "multiple amplifications") and refers to the ABI Prism 7700 apparatus, which is also capable of detecting multiple PCR reactions simultaneously from 96 reaction vessels (see D1a, page 4, lines 6 and 7). The specific number of 96 wells is simply a standard for bioassays.

2.5.3 Features 6a and 11a: The patent proprietor asserted that the side-by-side arrangement of the excitation and detection light waveguides, as defined in features 6a and 11a, achieved the following technical effects:

(a) The fibre arrangement resulted in a more compact apparatus. This was accepted by the opposition division (decision under appeal, paragraph 25.1.3, second and last paragraphs). The patent proprietor added at the oral proceedings before the board that, because of the arrangement of the optical fibres, the fibres could be arranged more compactly on the aperture plate. Therefore, the detection area could be smaller.

(b) The patent proprietor also argued that optical coupling of light to the detector was improved. In D1, the coaxial fibres meant that probe light with an annular beam shape had to be focused onto the detector. This was more difficult and would lead to reflections and losses. Moreover, the central region of the probe light coming from each reaction vessel would contain no light because of the central excitation light fibre. This represented a waste of space on the detector. A larger detector would therefore be needed to detect the same amount of light.

(c) According to the patent proprietor, the combination of features 6a and 11a also increased the accuracy of the measurements, since the small apertures in the masking element minimised crosstalk between reaction vessels.

(d) Since the apertures were smaller than the emitting area, this provided space for a further aperture (feature 11a). This could, for example, allow additional apertures for guiding light to different portions of the detector, as shown in figures 3 and 4. The combination of features 6a and 11a therefore provided flexibility in the system.

2.5.4 The board is not persuaded by the patent proprietor's reasoning concerning features 6a and 11a.

(a) The compactness of a complex PCR instrument (see point 2.5.3(a)), which consists of many different parts, cannot be measured by the size of one of its components, such as the aperture plate or the detection area, to both of which claim 1 is not limited. The arrangement of the optical fibres claimed in features 6a and 11a does not necessarily have an influence on the compactness of the instrument.

As regards the alleged more compact arrangement of the optical fibres on the aperture plate and the smaller detection area, it is immediately apparent that claim 1 is not limited to the presence of an aperture plate, the arrangement of fibres on such a plate, the imaging optics or the size of the detection area. It is an established principle in the case law (Case Law of the Boards of Appeal of the European Patent Office ("CLBA"), 11th edition, July 2025, I.D.4.1.3) that, to be taken into account, a technical effect must be achieved over the entire scope of the claim. Claim 1 manifestly does not achieve the advantage of a smaller detection area over its entire scope, since it contains no limitation from which such a smaller detection area would necessarily follow.

(b) As regards the alleged improved optical coupling (see point 2.5.3(b)), the board does not find the patent proprietor's submissions technically convincing. The patent proprietor was unable to explain why focusing an annular beam would be "more difficult" than focusing a Gaussian beam. The vague expression "more difficult" leaves the board in doubt as to the technical meaning of that assertion. Nor is it plausible that focusing an annular beam would lead to more reflections and losses than focusing a Gaussian beam. In the board's view, this is merely a speculative assertion.

The patent proprietor again argued that the detector area could be smaller due to the Gaussian beam shape according to claim 1. According to the patent proprietor, focusing an annular beam inherently wasted pixels on the detector. This assertion raises several issues.

- First, claim 1 does not define the detection area. An argument in support of inventive step cannot therefore be based on a "smaller" detection area. The formulation repeatedly used by the patent proprietor, according to which the features "allowed" the detection area to be smaller, indicates that the alleged technical effect is not achieved over the entire claimed scope. If it were, the detection area would necessarily be smaller, rather than merely being allowed to be smaller.

- Second, the board shares the opponent's doubts, expressed at the oral proceedings, that D1 can be understood as disclosing coaxial fibres up to the detector optics. In that case, the excitation light would have to be coupled into the fibre at the distal end from which the probe light also exits for detection. This is technically unrealistic and contrary to the upper panel of figure 3 of D1. Rather, a skilled person would understand D1 to mean that the outer fibres guiding the probe light are coupled to further fibres, for example by tapered or fused transitions. On that technically more realistic understanding of D1, the shape of the light imaged onto the detector would be Gaussian.

- Third, the argument is speculative since it assumes that annular beams could not be imaged onto a single pixel, whereas a Gaussian beam could. The size of the focal spot depends on many further aspects, such as the numerical aperture of the focussing lenses, which are not defined in the claim.

- Lastly, the patent proprietor's entire line of argument concerning a smaller detector area largely ignores that the salient aspect of the invention as originally disclosed concerns spectrally splitting the detection light into a spectrum for each vessel. For this purpose, the original disclosure states that the detection light is passed through a prism. It follows that this spectrally spread light would necessarily have to be imaged onto several pixels of the detector in order to be properly detected. The patent proprietor's argument relies on an alleged technical advantage that is not originally disclosed and is in direct contrast with the disclosed purpose of the invention.

(c) The alleged minimised crosstalk (see point 2.5.3(c)) is again technically speculative. The patent proprietor maintained that the dome-shaped cap of D1 could guide light to adjacent vessels, without explaining how light could couple from the fibre into that cap so as to be guided along it. The patent proprietor was also unable to explain how stray light could pass through the opaque thermal cover 12 and the reflectively coated walls of the wells (see D1a, page 6, lines 15 to 19). It is therefore not persuasive to assert reduced crosstalk due to the side-by-side arrangement of the fibres.

(d) Lastly, the asserted more flexible arrangement (see point 2.5.3(d)) did not persuade the board. Claim 1 contains no limitation, but merely the possibility, that the two apertures are so much smaller than the emitting area of the vessel that further fibres could be added. Even if more fibres could be added, this would result in an apparatus that is effectively different, rather than more flexible. The expression "more flexible" may sound positive but, as the opponent pointed out, has little objective meaning in the context of the claim. Any meaningful improvement in flexibility would require that a further fibre could, but need not, be added without compromising the functioning of the instrument. Claim 1, and indeed the entire application as filed, contains no definition of such an allegedly more flexible arrangement.

(e) Still as regards the technical effect of features 6a and 11a, the fibre arrangement in D1 (page 6, lines 5 to 19) is aperture-matched to the volume of fluid in the vessel. D1 explains that the entire volume is completely illuminated with high-intensity light and that multiple reflections from the walls of the test tube and the reflective coating of the test tube wells further increase the excitation intensity. This enables maximum use of the luminous flux for exciting the reaction mixture and avoids any loss of light in the test tube, thereby ensuring optimal fluorescence excitation and high analytical sensitivity.

By contrast, in claim 1 of the main request, the side-by-side arrangement of the fibres cannot be aperture-matched. The subject-matter of claim 1 therefore accepts reduced excitation efficiency in favour of an alternative arrangement.

(f) In conclusion, the board considers the technical effect of the side-by-side arrangement of the fibres according to features 6a and 11a to lie in a constructional alternative that accepts the predictable drawback of reduced aperture matching.

2.5.5 Feature 8: CMOS and CCD cameras are common and readily available photodetectors operating in the wavelength range appropriate for PCR fluorescent dyes.

2.5.6 Feature 12: An LED as an excitation source has the advantage over the halogen lamp disclosed in D1a of being more energy-efficient, generating less heat, thereby reducing the need for cooling, and providing more stable emission intensity.

2.6 The objective partial technical problems are therefore:

(a) to provide a suitable number of wells (feature 2);
(b) to provide an alternative arrangement of the fibres (features 6a and 11a);
(c) to provide a suitable photodetector (feature 8); and
(d) to provide an efficient and stable excitation light source (feature 12).

2.7 Assessment of the solution

2.7.1 The board considers the claimed solutions to the partial problems to have been obvious.

2.7.2 The claimed solutions to partial problems (a), (c) and (d) would have been obvious. The patent proprietor did not argue, either in the reply to the appeal, point 8.1.2, or elsewhere, that features 2, 8 and 12 involved an inventive step when used to solve the respective objective partial technical problems.

2.7.3 The choice in feature 2 amounts to filling a gap in the teaching of D1 by adopting a common well-plate format, for example that used in the ABI Prism 7700 apparatus, which is itself suggested in D1 (see D1a, page 4, lines 2 to 7).

2.7.4 CMOS and CCD are widely available types of multichannel photodetectors and would be selected for their well-known advantages, without any surprising additional benefit arising from that choice. A CCD detector is already suggested in D1 (see D1a, page 4, lines 6 to 11).

2.7.5 The same applies to the choice of an LED in view of its commonly recognised technical advantages.

2.7.6 As regards the solution to partial problem (b), the opponent argued (statement setting out the grounds of appeal, page 58, paragraph (6)) that a side-by-side arrangement of light waveguides was an obvious solution whenever two such waveguides were needed. While a coaxial or bifurcated arrangement according to the prior art may have advantages, those advantages were not achieved by the side-by-side arrangement.

The board agrees. It adds that numerous arrangements of excitation and detection fibres were already known in the state of the art (see, for example, coaxial arrangements in reflection geometry as in D1, figure 1, or D6, figures 1 and 2, and arrangements in transmission geometry as in D7, figure 3). This supports the view that a skilled person could have devised many such arrangements just using their ordinary skill. Moreover, the opposed patent itself states neither an advantage nor a disadvantage of combining the fibres close to the reaction vessel "in any known way" (see paragraph [0061] and figure 11), as compared with arranging the detection and excitation fibres side by side. This shows that the claimed arrangement is merely one of several obvious geometric choices. To arrive at that particular solution, a skilled person would have needed to apply only ordinary skill.

2.8 Since the board reaches this conclusion without relying on documents D28 or D29, there is no need to decide on their admittance.

3. Auxiliary requests 1 to 12 - Admittance

3.1 The board admitted auxiliary requests 1 to 12 into the appeal proceedings.

3.2 Auxiliary requests 1 to 12 are based on auxiliary requests 2 and 4 to 14, filed on 23 August 2022 in reply to the notice of opposition, amended to take account of the finding in the decision under appeal concerning added subject-matter in granted claims 1 and 3 (decision under appeal, points 16.5 and 19). They were filed for the first time with the reply to the appeal, and the decision under appeal was not based on them. Their admittance is therefore at the board's discretion under Articles 12(4) or 12(6) RPBA.

3.3 The board observes that auxiliary requests 2 and 4 to 14 were admissibly raised in the proceedings leading to the decision under appeal within the meaning of Article 12(4), first sentence, RPBA. If the patent proprietor had re-filed these requests on appeal in unamended form, the board would not have had any discretion to disregard them. However, the patent proprietor amended these requests in response to a finding of added subject-matter in the decision under appeal, and thereby no longer disputed the issue on appeal. The board considers that the patent proprietor should not be disadvantaged, by non-admission of the respective requests, for accepting as settled an issue that had been disputed in the proceedings leading to the decision under appeal. This is not to say that claim requests should be admitted solely because an applicant or patent proprietor seeks to address a issue. However, where it is only the acceptance of an issue as settled that brings the request within the board's discretion, the exercise of that discretion should take favourable account of the purpose of the amendment.

4. Auxiliary request 1 - Inventive step

4.1 The subject-matter of claim 1 of auxiliary request 1 does not involve an inventive step within the meaning of Article 56 EPC.

4.2 Claim 1 of auxiliary request 1 was amended with respect to the main request by modifying feature 5 to read:

> "*a heated lid arranged to heat and apply pressure to a seal <u>at a rim</u> of each reaction vessel*"

(here and in the following, underlining added by the board).

4.3 According to point 9.1 of the patent proprietor's reply to the opponent's appeal, this amendment is intended to address an objection of added subject-matter. However, the opponent is correct in arguing that the modified feature is not a further distinguishing feature over D1 (letter dated 18 November 2024, page 19, point 1.4). Figure 2 of D1 confirms this view.
It follows that the subject-matter of claim 1 of auxiliary request 1 does not involve an inventive step for the same reasons as claim 1 of the main request.

5. Auxiliary request 2 - Inventive step

5.1 The subject-matter of claim 1 of auxiliary request 2 does not involve an inventive step within the meaning of Article 56 EPC.

5.2 Claim 1 of auxiliary request 2 was amended with respect to the main request by modifying feature 10 to read:

> "*the light detecting device (10) being configured <u>for simultaneously receiving the light from each of the plurality of sealed reaction vessels (3) and</u> for simultaneously detecting the spectra in the light emanating from the PCR reactions via the array of apertures (6); and*"

5.3 According to point 9.2 of the reply to the appeal, this amendment is intended to establish inventive step over document D6. However, the objection to be overcome is the one based on D1. In point 10.7 on page 30 of the letter dated 18 November 2024, the opponent argued that this amendment was not suitable to overcome that objection. The board agrees. D1 discloses a light detector that receives light from all vessels and analyses all PCR reactions simultaneously.

6. Auxiliary request 3 - Inventive step

6.1 The subject-matter of claim 1 of auxiliary request 3 does not involve an inventive step within the meaning of Article 56 EPC.

6.2 Claim 1 of auxiliary request 3 was amended with respect to the main request by inserting the following feature between features 8 and 9:

> "*each light waveguide (7) having a light receiving end mounted in or at a respective aperture (6) in the masking element (5) and a light emitting end, wherein the light emitting ends of the light waveguides (7) form an array smaller than the array of apertures (6) in the masking element (5)*".

6.3 The board agrees with the opponent (letter dated 18 November 2024, page 21, point 3.9) that the amendment cannot establish inventive step.

6.4 The patent proprietor argued that in D1 it would not be possible to form a smaller array from the peripheral portion of the light guide 14 because the outer diameter would still be equal to the size of the emitting area.

In the board's view, the added feature is not a distinguishing feature over D1. The imaging areas of photodetectors, as well as optical components such as prisms and lenses, are always smaller than a well plate for PCR assays. A skilled person would not understand D1 otherwise than in accordance with the amended feature. Moreover, the patent proprietor's argument rests on the assumption that the detection fibres remain annular up to the detection optics. The board has explained in point 2.5.4(b), first dash, above why it is not persuaded by this assumption. Furthermore, the second added feature concerns the area of the array of output apertures, which is determined both by the diameter of the apertures and by their spacing. The patent proprietor's argument, according to which it would be impossible to make the array of output apertures smaller because the peripheral portions of the light waveguides in D1 would still correspond to the area of the emitting apertures, does not take the spacing into account and is therefore not persuasive. In fact, the spacing of the output apertures on the array plate is not defined in claim 1. The patent proprietor therefore seeks to rely, in support of inventive step, on a technical effect that does not necessarily follow from the claimed features and is therefore not achieved over the entire scope of the claim.

7. Auxiliary request 4 - Inventive step

7.1 The subject-matter of claim 1 of auxiliary request 4 does not involve an inventive step within the meaning of Article 56 EPC.

7.2 Claim 1 of auxiliary request 4 was amended with respect to the main request by modifying feature 2a to read:

> "*accommodating the plurality of sealed reaction vessels (3) <u>in an array (1) of sealed reaction vessels (3)</u>*",

and by inserting the following feature between features 8 and 9:

> "*each light waveguide (7) having a light receiving end mounted in or at a respective aperture (6) in the masking element (5) and a light emitting end mounted in or at an output aperture (30) provided in an array plate (9), the array plate (9) forming an array of output apertures (30), wherein the array of output apertures (30) has a smaller area than the array (1) of sealed reaction vessels (3)*".

7.3 The board considers that neither of the added features is a further distinguishing feature over D1.

The board is not aware of any well plate in which the reaction vessels are not arranged in an array (see also the opponent's letter dated 18 November 2024, page 22, points 4.3 and 4.4). The first added feature is, thus, not a further distinguishing feature over D1 (see also point 2.4.1 above), and the arguments of the patent proprietor in point 9.4 of the reply to the appeal do not address this feature.

The board has already addressed the second feature and the corresponding arguments of the patent proprietor in the discussion of auxiliary request 3 and come to the conclusion that it is also not a distinguishing feature over D1.

8. Auxiliary request 5 - Inventive step

8.1 The subject-matter of claim 1 of auxiliary request 5 does not involve an inventive step within the meaning of Article 56 EPC.

8.2 Claim 1 of auxiliary request 5 was amended by adding the following feature at the end of claim 1 of the main request:

> "*and one or more additional light waveguides arranged to guide light from the excitation light source (32, 33) to the light detecting device (10)*".

8.3 The board agrees with the opponent that this feature does not overcome the objection of lack of inventive step starting from D1 (letter dated 18 November 2024, page 23, points 5.2 and 5.3). The patent proprietor argued that this additional feature increased accuracy, referring to paragraph 2 on page 8 of the earlier application.

8.4 However, the described effect concerns a ratiometric measurement, to which claim 1 is not limited. In the absence of further limitations specifying a ratiometric measurement, the added feature is merely a non-functional modification.

8.5 Even if, for the sake of argument, the technical effect of improved accuracy were taken into account, despite not being achieved over the entire scope of the claim, the opponent is correct in arguing that this would solve a further partial problem. The board is persuaded by the opponent's reference to D3, figure 1, showing outer fibres that do not pass through the vessels, and in particular by the reference to document D8. D8 describes, in column 9, lines 11 to 29, a direct connection labelled A in figure 2, a ratiometric measurement, referred to there as a calibration, and states that such calibration was "entirely obvious".

9. Auxiliary request 6 - Inventive step

9.1 The subject-matter of claim 1 of auxiliary request 6 does not involve an inventive step within the meaning of Article 56 EPC.

9.2 Claim 1 of auxiliary request 6 was amended by adding, between features 3a and 4, the following feature with respect to the main request:

> ", *wherein each of the plurality of sealed reaction vessels (3) is formed in a generally tapered configuration, and wherein the emitting area is at a top of the receptacle portion*"

9.3 This feature is not a distinguishing feature over D1, figure 2. D1 discloses a reaction vessel with a generally tapered configuration with the emitting area at the top (see figures 2 and 3). Even if D1 were not considered to disclose this feature, the opponent is correct in arguing that such a limitation is met by the use of a conventional Eppendorf tube and would therefore have been obvious (letter dated 18 November 2024, page 23, point 6.2).

10. Auxiliary request 7 - Inventive step

10.1 The subject-matter of claim 1 of auxiliary request 7 does not involve an inventive step within the meaning of Article 56 EPC.

10.2 Claim 1 of auxiliary request 7 was amended with respect to the main request by inserting the following feature between features 6b and 7:

> ", *wherein the masking element (5) is positioned over the heated lid*"

10.3 The patent proprietor merely asserted that this feature was disclosed neither in D1 nor in D7.

While that may be correct, the board agrees with the opponent (letter dated 18 November 2024, page 24, points 7.3 and 7.4) that this feature is merely an obvious alternative known from D9 (see figures 4 and 5, page 18, lines 13 to 31). The board considers that replacing the combined function of the thermal cover with two separate elements - a heated lid and a masking element - each performing the same function, would be an obvious constructional modification even without consulting a further document, particularly since the patent proprietor has not identified any non-apparent advantage.

11. Concerning all auxiliary requests, the board notes that the opponent based its objections regarding added

subject-matter on both Articles 76(1) EPC and 123(2) EPC, and that the parties systematically referred to the earlier application. The board decided on auxiliary requests 8 to 16 on the basis of Article 123(2) EPC and, in that context, considered the parts of the application as filed that are identical to the earlier application.

12. Auxiliary request 8 - Added subject-matter

12.1 Claim 1 of auxiliary request 8 was amended such that it contains subject-matter which extends beyond the content of the application as filed within the meaning of Article 123(2) EPC.

12.2 Claim 1 of auxiliary request 8 was amended with respect to the main request by adding, between features 10 and 11, the feature:

> "*a plurality of filters (24, 25, 26) each for passing a different spectrum of light, wherein a light emitting end of each of the light waveguides (7) is arranged adjacent to a filter of the plurality of filters (24, 25, 26) so as to limit the light reaching the light detecting device (10) from each of the light waveguides (7) to a specific spectrum;*"

12.3 The board agrees with the opponent (letter dated 18 November 2024, page 25, point 8.3, and page 26, point 8.4) that the amendment introduces added subject-matter. The passage on page 5, second paragraph, of the earlier application (identical to page 4, lines 22 to 24 in the application as filed) relates to the embodiment shown in figure 3 or 4, in which several light waveguides are provided for each vessel, the light collected from each vessel is passed through respective filters and the light detecting device has portions sensitive to different wavelengths.

Since claim 1 is not limited to a light detecting device having portions sensitive to different wavelengths, it constitutes an unallowable intermediate generalisation. The paragraph bridging pages 7 and 8, and the first full paragraph on page 8 of the earlier application (identical to page 7, second and third paragraphs of the application as filed), to which the patent proprietor referred (reply to the appeal dated 15 July 2024 item 9.8, third paragraph), concern aspects largely unrelated to the added feature. The passage on page 15, penultimate paragraph, as well as claim 12 and figure 3 of the earlier application (identical to the paragraph bridging pages 14 and 15, figure 3 of the application as filed; there is no claim in the application as filed that is identical to claim 12 of the earlier application) also disclose a light detecting device with portions sensitive to different wavelengths. Figure 3 has to be read in the context of the description and does not provide a basis for omitting a light detecting device with portions sensitive to different wavelengths.

13. Auxiliary request 9 - Added subject-matter

13.1 Claim 1 of auxiliary request 9 was amended in such a way that it contains subject-matter extending beyond the content of the application as originally filed within the meaning of Article 123(2) EPC.

13.2 Claim 1 of auxiliary request 9 was amended with respect to the main request by inserting between features 10 and 11 the words:

> "*a plurality of filters (24, 25, 26) each for passing a different spectrum of light <u>and arranged in relation to different portions of the light detecting device (10),</u> wherein a light emitting end of each of the light waveguides (7) is arranged adjacent to a filter of the plurality of filters (24, 25, 26) so as to limit the light reaching the light detecting device (10) from each of the light waveguides (7) to a specific spectrum;*"

The board added the underlining to highlight the difference from auxiliary request 8.

13.3 This amendment still adds subject-matter extending beyond the content of the application as filed, since the claimed subject-matter is still not limited to a light detecting device having sensors sensitive to different wavelengths and two or more apertures for detecting light, rather than excitation light (see earlier application, page 4, penultimate paragraph, which corresponds to page 4, lines 13 to 19 of the application as filed). The added feature is disclosed only in that context (see also opponent's letter, page 28, point 9.3). The same applies to claim 12 of the earlier application as a basis (there is no corresponding claim in the application as filed). That claim depends on claim 10, the elements of which were omitted.

14. Auxiliary request 10 - Added subject-matter

14.1 Claim 1 of auxiliary request 10 was amended in such a way that it contains subject-matter extending beyond the content of the application as originally filed within the meaning of Article 123(2) EPC.

14.2 Claim 1 of auxiliary request 10 was amended with respect to the main request by modifying feature 10 to read as follows:

> "*the light detecting device (10) being configured for simultaneously detecting multiple different ~~the~~ spectra in the light emanating from each sealed reaction vessel (3) from the PCR reactions via the array of apertures (6); and*"

14.3 The board agrees with the opponent's argument (letter dated 18 November 2024, pages 31 to 33, points 11.2 to 11.4). A spectrum is a distribution of radiation intensity as a function of wavelength. It is not clear how a single PCR reaction taking place in a vessel could produce "multiple spectra", i.e. multiple different distributions of light intensity as a function of wavelength. Even if several PCR reactions were to take place in a vessel, for example using different markers, the light emanating from the vessel would still have only one spectrum, namely the superposition of the spectra of the different reactions taking place simultaneously.

The opponent correctly analysed the passages cited by the patent proprietor as a basis for the amendment and concluded that those passages disclosed only that the apparatus can detect one full spectrum per reaction vessel. There is only a disclosure of a separation of the full spectrum into wavelength bands, but not of a separation into sub-spectra according to different PCR reactions. The opponent also pointed out correctly that such a spectral analysis is originally only disclosed in the context of using a light dispersing element (see letter dated 18 November 2024, page 31, item 11.3, third sentence) to which claim 1 is not limited, thereby constituting an unallowable intermediate generalisation.

15. Auxiliary request 11 - Added subject-matter

15.1 Claim 1 of auxiliary request 11 was amended in such a way that it contains subject-matter which extends beyond the content of the application as originally filed within the meaning of Article 123(2) EPC.

15.2 Claim 1 of auxiliary request 11 was amended with respect to the main request by modifying feature 7a in the following manner:

> "*each light waveguide arranged to guide light from a respective aperture (6) in the masking element (5) <u>to a light dispersing element (8) for dispersing the light into a dispersed spectrum (12) and</u> to a light detecting device (10)*"

15.3 This is not the feature that gives rise to the added subject-matter objection. Rather, it is features 1b, 2a and 3, which define "sealed reaction vessels", and feature 5, which reads "a heated lid arranged to heat and apply pressure to a seal of each reaction vessel".

15.4 The patent proprietor argued that page 11, penultimate paragraph of the earlier application (identical to page 10, lines 28 to 35 of the application as filed) provided a basis for the amendment. That passage relates to the embodiment shown in figure 1 and discloses that:

> "*[t]he seal is usually of transparent plastics material which is adhered to the rim of the reaction vessel and the heated lid, which is usually arranged so as to provide pressure on the seal at the rim of the reaction vessel, and heated to reduce condensation on the inside of the seal is also usually transparent or provided with appropriate apertures to allow light from the reaction vessel to escape. These elements are not shown since they are not part of the invention and are well known.*"

Feature 5 defines neither that the seal is transparent or provided with suitable apertures allowing light to escape from the reaction vessel, nor that the heated lid applies pressure to the seal at the rim of the reaction vessel, nor that the heater heats the seal so as to reduce condensation.

15.5 Claim 1 as a whole defines an arrangement in which the vessels are placed in a well plate on a block heater and are covered by a seal, a heated lid and a masking element. Claim 1 also defines that the waveguides guide light from the apertures in the masking element, see in particular features 6, 6b and 7a. Claim 1 was therefore restricted during examination to arrangements in which the light necessarily passes through the seal.

15.6 This was contested by the patent proprietor (letter dated 12 December 2025, section 2.2.1, page 7, second and third paragraphs). According to the patent proprietor, the emitting area being at the top of the vessels was defined only in dependent claim 4 and was therefore optional in claim 1. The patent proprietor also referred, on pages 7 and 8 of the above-mentioned letter, to the possibility of sealing vessels with an aluminium film, citing website X4.

15.7 The argument that claim 1 does not require light to pass through the seal is manifestly incompatible with its wording. Dependent claim 4 is simply inconsistent with the definitions of claim 1. The examining division should have required the appellant to remove claim 4 before grant. It cannot therefore be relied on to cast doubt on the limitations of claim 1.

15.8 The patent proprietor's reference to a website merely confirms the board's view. The website shows a figure with two panels, figures 1A and 1B, the former showing a transparent sealing film on a well plate and the latter an aluminium film. Figure 1A is captioned: "Clear films used in qPCR applications must be of high optical clarity for reliable data collection (Figure 1A)." Note that qPCR involves optical detection of PCR. The caption thus states in other words that, in optical PCR, the film must be transparent. The caption to figure 1B reads: "Aluminum films are excellent for light-sensitive samples and are pierceable for sample transfer in PCR (Figure 1B)." It is apparent that the aluminium seal is intended to shield samples from ambient light and is used in classical PCR rather than qPCR.

15.9 The term "usually" in the passage reproduced in point 15.4 above may have been chosen when drafting the application in an attempt to include arrangements that no longer fall within the wording of the amended claim. However, it does not convey any plausible technical teaching as to the compatibility of the claimed light guide arrangement with an opaque seal. The assessment of compliance with Article 123(2) EPC is not merely a linguistic exercise, but a technical one directed to the actual technical teaching conveyed by the application. Accordingly, even where the wording of the application could be read as presenting a technically necessary feature as optional, that wording does not necessarily provide a basis for omitting that feature in an amendment.

15.10 Therefore, by defining a seal but omitting that it is transparent or has apertures, claim 1 constitutes an unallowable intermediate generalisation and thereby adds subject-matter extending beyond the content of the application as filed.

15.11 Furthermore, the above-mentioned passage discloses that the heated lid is usually arranged to apply pressure to the seal at the rim.

The patent proprietor referred to website X5 showing a variety of cap shapes for PCR vessels, such as domed caps (similar in shape, but not in function, to that of D1) and flat caps. The patent proprietor's essential line of argument appears to be that, when reading the application as filed, a skilled person would understand the word "usually" to convey a meaningful technical teaching of a heated lid that does not apply pressure at the rim of the vessels.

However, the reference merely shows what cap shapes may exist. It does not disclose the parts of the seal to which a masking element, which is not mentioned anywhere in that reference, would apply pressure if placed on those caps, even assuming that they could be used together with a masking element in optical PCR at all. The conclusion which the patent proprietor seeks to draw is therefore speculative. The board cannot identify any meaningful situation in which the heated lid applies no pressure, or does not apply pressure at the rim of the vessel, even taking into account the patent proprietor's explanations. Omitting that the heated lid applies pressure to the seal at the rim of the vessel therefore adds subject-matter extending beyond the content of the application as filed, contrary to Article 123(2) EPC.

15.12 In addition, the above-mentioned passage (see section 15.4 supra)in the earlier application (and in the application as filed) states that the heated lid is heated "to reduce condensation on the inside of the seal". Feature 5 was generalised without any limitation as to the purpose of the heating, namely reducing condensation.

The patent proprietor argued that any degree of heating of the seal would inherently reduce condensation. It was therefore sufficient for the claim merely to define heating of the lid, without specifying the purpose of reducing condensation. However, this is not how a skilled person would understand the disclosure. For a skilled person, heating the seal is essential to allow unimpaired optical transmission. To that end, seals in qPCR are typically heated to above 100°C. By contrast, a skilled person would see no useful purpose in heating the seal by an arbitrary amount.

The patent proprietor again relied on the word "usually", arguing that the feature of reducing condensation was optional. For essentially the same reasons as those given in relation to the alleged optionality of the transparency of the seal, this argument does not persuade the board. The word "usually" must again be read in the context of originally disclosed embodiments that are no longer compatible with the definition in claim 1. Reading the application as filed through the eyes of the skilled person leads to the conclusion that reducing condensation is essential in the claimed arrangement.

Omitting this feature therefore adds subject-matter extending beyond the content of the application as filed, contrary to Article 123(2) EPC.

16. Auxiliary request 12 - Added subject-matter

16.1 Claim 1 of auxiliary request 12 was amended in such a way that it contains subject-matter which extends beyond the content of the application as filed within the meaning of Article 123(2) EPC.

16.2 Claim 1 of auxiliary request 12 was amended with respect to the main request by modifying feature 6b in the following manner:

> "*there being at least <u>two</u> ~~one or more~~ apertures (6) arranged adjacent each of the sealed reaction vessels (3)*"

modifying feature 7 in the following manner:

> "*a plurality of light waveguides (7) <u>comprising at least two light waveguides (7) for each sealed reaction vessel (3)</u>*"

and adding, between features 10 and 11, the words:

> "*, wherein a first waveguide per sealed reaction vessel (3) is arranged to guide the light to a first portion of the light detecting device (10) for detecting a first specific spectrum of the light and a second waveguide per sealed reaction vessel (3) is arranged to guide the light to a second portion of the light detecting device (10) for detecting a second specific spectrum of the light*"

16.3 These amendments do not address the added subject-matter issues identified in claim 1 of auxiliary request 11.

16.4 The patent proprietor made no further submissions on this point.

16.5 The same reasoning therefore applies to claim 1 of auxiliary request 12, which adds subject-matter extending beyond the content of the application as filed within the meaning of Article 123(2) EPC.

17. Auxiliary requests 13 to 16 - Added subject-matter

17.1 Irrespective of whether or not auxiliary requests 13 to 16 are to be admitted, the respective amendments do not overcome all the added subject-matter issues identified for auxiliary request 11.

- Claim 1 of auxiliary request 13 does not include, in amended feature 5, the definition that the seal is transparent.
- Claim 1 of auxiliary requests 14 to 16 contains feature 5 of the main request in identical form.

The patent proprietor made no submissions on this point.

17.2 Therefore, claim 1 of auxiliary requests 13 to 16 was amended so as to contain subject-matter extending beyond the content of the application as filed within the meaning of Article 123(2) EPC.

18. Auxiliary requests 17 to 45 - Admittance

18.1 Auxiliary requests 17 to 45 do not meet the requirements of Article 12(3) RPBA and were therefore not admitted under Article 12(5) RPBA.

18.2 The patent proprietor argued that auxiliary requests 17 to 45 merely represented various combinations of features from auxiliary requests 1 to 16. According to the patent proprietor, these amendments had a basis in the earlier application and in the application as filed for the same reasons as the auxiliary requests from which the features were taken, and overcame the objections for the same reasons as those given in relation to those auxiliary requests.

18.3 However, an amendment directed to a combination of features does not comply with Article 123(2) EPC, or

Article 76(1) EPC, merely because the individual features were originally disclosed. The features may not have been originally disclosed in combination. As a rule, it is therefore not sufficient, for a lower-ranking auxiliary request combining features from higher-ranking requests, to merely refer to the bases relied on for those higher-ranking requests in order to show compliance with Article 123(2)EPC or Article 76(1) EPC.

18.4 Furthermore, an attempt to overcome objections of lack of inventive step, found persuasive against the claims of higher-ranking requests, by combining their features can succeed only if the combination shows synergy. If the combination merely results in an aggregation of features solving partial technical problems, the objections of lack of inventive step remain valid against the amended claim. As a rule, it is therefore not sufficient, for a lower-ranking auxiliary request combining features from higher-ranking requests, merely to refer to the arguments relied on for those higher-ranking requests in order to show compliance with Article 56 EPC.

18.5 However, the patent proprietor's substantiation is confined to references to the substantiation of the higher-ranking requests and thus fails to set out essential elements required for a complete substantiation as required by Article 12(3) RPBA.

18.6 The board therefore did not admit auxiliary requests 17 to 45 under Article 12(5) RPBA.

19. Auxiliary requests 46 to 50 - Admittance

19.1 Auxiliary requests 46 to 50 were filed with the letter dated 12 December 2025. They therefore constitute an amendment to the patent proprietor's appeal case after filing of its reply to the opponent's statement setting out the grounds of appeal. Their admittance is thus subject to the patent proprietor's justification for the amendment and lies within the board's discretion. Leaving aside the requirements under Article 13(2) RPBA, the board must exercise its discretion having regard to whether, in the case of an amendment to a patent, the party has shown that the amendment, prima facie, overcomes the issues raised by another party in the appeal proceedings or by the board and does not give rise to new objections (Article 13(1), fourth sentence, RPBA).

19.2 The added-subject-matter issues identified in the context of auxiliary request 11 still apply to auxiliary requests 46 to 49:

- Auxiliary request 46: amended feature 5 of claim 1 still does not define that the seal is heated to reduce condensation or that pressure is applied at the rim.
- Auxiliary request 47: amended feature 5 of claim 1 still does not define that the seal is transparent and heated to reduce condensation.
- Auxiliary request 48: amended feature 5 of claim 1 still does not define that pressure is applied at the rim.
- Auxiliary request 49: amended feature 5 of claim 1 still does not define that the seal is heated to reduce condensation.

The patent proprietor made no further submissions in this respect.

19.3 Since the amendments to the patent according to auxiliary requests 46 to 49 do not overcome the issues identified for auxiliary request 11, the board did not admit these auxiliary requests under Article 13(1) RPBA.

19.4 Claim 1 of auxiliary request 50 resolves the added-subject-matter issues, but still does not overcome the lack-of-inventive-step objection raised against the main request.

Amended feature 5 of claim 1 of auxiliary request 50 reads:

> "*a heated lid arranged to heat and apply pressure to a seal <u>at a rim</u> of each reaction vessel, <u>wherein the seal is of transparent plastics material and is adhered to the rim of the reaction vessel, and wherein the heated lid is heated to reduce condensation on the inside of the seal</u>;*"

The added features are not distinguishing features over D1. Figure 2 of D1 implicitly discloses that pressure is applied to the seal at the rim (see also section on auxiliary request 1 above) and that the cap material is transparent, since otherwise light could not pass through it. D1 already discloses reducing condensation on the seal by heating (see D1a, page 5, lines 42 to 45; see also discussion in point 2.4.2 above).

19.5 Even if D1 were considered not to disclose plastic as the cap material, this would merely amount to filling a gap in the teaching of D1 in an obvious manner.

19.6 The patent proprietor made no further submissions in that respect.

19.7 Since claim 1 of auxiliary request 50 also did not overcome the lack-of-inventive-step objection raised against the main request, the board did not admit it under Article 13(1), fourth sentence, RPBA.

20. Auxiliary request 51 - Admittance

20.1 The board did not take auxiliary request 51 into account under Article 13(2) RPBA.

20.2 After the discussion of auxiliary request 50 at the oral proceedings before the board, the patent proprietor requested an opportunity to file auxiliary request 51, combining auxiliary requests 11 and 50.

20.3 Since auxiliary request 51 was filed after notification of the board's communication under Article 15(1) RPBA, it constitutes an amendment to the patent proprietor's appeal case. Under Article 13(2) RPBA, such an amendment shall, in principle, not be taken into account unless there are exceptional circumstances, justified by cogent reasons by the party concerned.

20.4 The patent proprietor argued that the board had raised added-subject-matter objections that had never been raised by the opponent. Referring to CLBA, V.A.4.5.4(b) and decision T 1756/16, the patent proprietor submitted that this amounted to exceptional circumstances within the meaning of Article 13(2) RPBA. The patent proprietor further argued that the board had expressed an intention to remit the case to the opposition division for substantive discussion of inventive step of claim 1 of auxiliary request 11. Auxiliary request 51 should therefore be admitted because it resolved the added-subject-matter issues and would allow inventive step to be examined by the opposition division.

20.5 The board did not take auxiliary request 51 into account for the following reasons.

20.5.1 The patent proprietor argued that the board's new objection constituted exceptional circumstances. However, even if it were accepted, *arguendo*, that this objection was raised for the first time by the board, it had already been communicated to the parties in the board's communication under Article 15(1) RPBA, section 4.4.4.

After notification of that communication, the patent proprietor filed auxiliary requests 46 to 50 in writing before the oral proceedings. Those requests addressed the three added-subject-matter issues individually or in part, but did not address the lack-of-inventive-step objection against the main request. Only after the board had concluded at the oral proceedings that none of those requests resolved all pending issues did the patent proprietor request an opportunity to file auxiliary request 51.

According to the case law, see CLBA, V.A.4.5.1(d)(i), where a party seeks to amend its case at a very late stage of the proceedings, the cogent reasons referred to in Article 13(2) RPBA should include reasons why it was not possible to file the amendment earlier. Nothing in the debate during the oral proceedings was surprising or amounted to further exceptional circumstances. In particular, a party cannot simply wait until a board confirms its preliminary opinion and only then file a further amendment that, for the first time, addresses all issues of which that party had been fully informed. Auxiliary request 51 should therefore have been filed in writing as early as possible after notification of the communication under Article 15(1) RPBA.

20.5.2 Moreover, the criteria of the second and third levels of convergence apply cumulatively (see CLBA, V.A.4.5.1(a), last paragraph). Article 13(1), fourth sentence, RPBA identifies, as criteria for admittance,

- whether the amendment is suitable to resolve the issues admissibly raised by another party in the appeal proceedings or by the board, and
- whether the amendment is detrimental to procedural economy.

It is apparent that the patent proprietor's approach of filing 50 auxiliary requests at various stages of the proceedings, while still addressing only the added-subject-matter issues, is fundamentally incompatible with the need for procedural economy.

20.6 The patent proprietor argued at the oral proceedings before the board that there was no need to address inventive step in order for auxiliary request 51 to be admitted. According to the patent proprietor, inventive step was a matter to be discussed only after remittal to the opposition division.

It is clear that such procedural conduct is detrimental to procedural economy. If auxiliary request 51 had at least been filed in writing before the oral proceedings, there would still have been some prospect of bringing the case to a close. Filing it only at the end of the oral proceedings virtually forced a remittal. This is clearly not compatible with the requirement of procedural economy.

20.7 The board notes that decision T 1756/16 concerns a different factual situation and is not relevant here. The board in that case admitted a minor editorial amendment filed at the oral proceedings, which could have been filed in writing before the oral proceedings, in response to an objection raised for the first time by the board in its communication under Article 15(1) RPBA. By contrast, admitting auxiliary request 51 in the present case would, for the first time, have opened a full new discussion on inventive step.

20.8 The board therefore did not take auxiliary request 51 into account.

21. Since there was no allowable claim request, the board had to accede to the opponent's request.

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:

L. Gabor R. Bekkering

Decision electronically authenticated