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**Datasheet for the decision
of 6 March 2025**

Case Number: T 2333/22 - 3.2.04

Application Number: 14830517.0

Publication Number: 3076815

IPC: A24F47/00

Language of the proceedings: EN

Title of invention:

AEROSOL-GENERATING ARTICLE WITH LOW RESISTANCE AIR FLOW PATH

Patent Proprietor:

Philip Morris Products S.A.

Opponent:

Nicoventures Trading Limited

Headword:

Relevant legal provisions:

EPC Art. 56, 83, 123(2)

Keyword:

Inventive step - main request (no) - auxiliary request (yes)

Sufficiency of disclosure - (yes)

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

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
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Case Number: T 2333/22 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 6 March 2025

Appellant: Nicoventures Trading Limited
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 14 July 2022
rejecting the opposition filed against European
patent No. 3076815 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman A. Pieracci
Members: S. Hillebrand
M. Millet

Summary of Facts and Submissions

- I. The appeal was filed by the opponent against the decision of the Opposition Division to reject the opposition filed against the patent in suit.

In this decision, the Opposition Division held i.a. that

- the patent disclosed the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art,
- the subject-matter of claim 1 did not extend beyond the content of the application as filed,
- the subject-matter of claims 1, 9 and 15 was novel and involved an inventive step.

- II. The appellant (opponent) requests that the decision under appeal be set aside and that the patent be revoked.

The respondent (proprietor) requests that the appeal be dismissed or, in the alternative, that the patent be maintained on the basis of one of four auxiliary requests filed during opposition proceedings and refiled with his reply to the appeal.

- III. In a communication according to Article 15(1) RPBA, the Board preliminarily confirmed the findings of the Opposition Division with regard to sufficiency, disclosure and added subject-matter, but considered the subject-matter of granted claim 1 not to involve an inventive step.

IV. Oral proceedings in form of a videoconference were held before the Board in the presence of all parties.

V. Claim 1 of the main request reads as follows (features only present in this independent claim of the main request highlighted by the Board):

"A heated aerosol-generating article (10) *having lowered propensity for flame ignition for use with an aerosol-generating device (110)*, the heated aerosol-generating article comprising a plurality of components including an aerosol-forming substrate (20) assembled within a wrapper (60) to form a rod having a mouth end (70) and a distal end (80) upstream from the mouth end, the heated aerosol-generating article defining a first air-flow path in which air drawn into the aerosol-generating article through the mouth end (70) passes through the aerosol-forming substrate, and a second air-flow path in which air drawn into the aerosol-generating article through the mouth end (70) does not pass through the aerosol-forming substrate, the resistance to draw (RTD) of the second air-flow path being lower than the RTD of the first air-flow path, *in which the RTD of the second air-flow path is less than 10 mm WG.*"

Claim 9 of the main requests reads as follows (features differing from claim 1 highlighted by the Board):

"A *heated aerosol-generating system (100) comprising*, a heated aerosol-generating article (10) comprising a plurality of components including an aerosol-forming substrate (20) assembled within a wrapper (60) to form a rod having a mouth end and a distal end upstream from the mouth end, the heated aerosol-generating article defining a first air-flow path in which air drawn into the aerosol-generating article through the mouth end

(70) passes through the aerosol-forming substrate, and a second air-flow path in which air drawn into the aerosol-generating article through the mouth end (70) does not pass through the aerosol-forming substrate, the resistance to draw (RTD) of the second air-flow path being lower than the RTD of the first air-flow path *when the heated aerosol-generating article is not coupled to an aerosol-generating device (110), and an aerosol-generating device (110) comprising means for heating (120) the aerosol-forming substrate, the aerosol-generating device arranged to engage with the heated aerosol-generating article such that the second air flow path is disrupted to allow air to be drawn through the aerosol-forming substrate when a user draws on the mouth end of the rod.*"

Claim 15 of the main requests reads as follows (features differing from claim 1 highlighted by the Board):

"A method of smoking a heated aerosol-generating article (10) comprising a plurality of components including an aerosol-forming substrate (20) assembled within a wrapper (60) to form a rod having a mouth end and a distal end upstream from the mouth end, the heated aerosol-generating article defining a first air-flow path in which air drawn into the aerosol-generating article through the mouth end passes through the aerosol-forming substrate, and a second air-flow path in which air drawn into the aerosol-generating article through the mouth end does not pass through the aerosol-forming substrate, the resistance to draw (RTD) of the second air-flow path being lower than the RTD of the first air-flow path when the heated aerosol-generating article is not coupled to an aerosol-generating device, the method comprising the steps of;

a. engaging the heated aerosol-generating article (10) with an aerosol-generating device (110) such that the second air-flow path is disrupted,
b. actuating the aerosol-generating device to heat the aerosol-forming substrate, and
c. drawing on the mouth end of the rod to cause air to flow along the first air-flow path, an aerosol generated by heating of the aerosol-forming substrate being entrained in the air as it passes through the aerosol-forming substrate."

Claim 1 of auxiliary request 1 comprises the following additional features compared to claim 1 of the main request:

"a support element (30) is located downstream of the aerosol-forming substrate, a hole (37) defined through a radial wall of the support element forming part of the second air-flow path,".

Independent claims 8 and 14 of auxiliary request 1 correspond to independent claims 9 and 15 of the main request.

VI. In the present decision, reference is made to the following documents:

D1: WO 2103/098405 A2
D2: WO 94/14346 A1
D4: US 5 033 484
D5: EP 1 754 419 A1
D6: US 6 443 161 B1
D7: ISO 6565:2002.

The appellant's arguments can be summarised as follows: The subject-matter of original claim 1 has been generalised without any basis in the original disclosure. It is not sufficiently disclosed in the

patent how to provide an article in which the resistance to draw of the second air-flow path is less than 10 mm WG. The subject-matter of the independent claims according to the main request and auxiliary request 1 does not involve an inventive step.

The respondent's arguments can be summarised as follows:

The subject-matter of claim 1 according to the main and auxiliary request 1 complies with all requirements of the EPC. Objections against the other independent claims have not been substantiated and should not be admitted.

Reasons for the Decision

1. The appeal is admissible.
2. **The patent and its technical background**
 - 2.1 The patent relates to electronic cigarettes consisting of aerosol generating articles introduced for use into an aerosol generating device. The device heats tobacco containing aerosol formers such as glycerine or propylene glycol in order to produce an aerosol. It is not desirable that the tobacco containing these products is burned and inhaled when smoking the article like a traditional cigarette. Therefore it should be difficult or impossible to light the article with a lighter or other flame producing device.
 - 2.2 In order to achieve this, the article provides in addition to the usual first air-flow path passing through the tobacco / aerosol-forming substrate for a second air-flow path, which does not pass through the tobacco / aerosol-forming substrate and has a lower flow resistance. Thus, air drawn by a user through the mouth end of the article will not enter the article from the opposite end, where the aerosol-forming substrate is located, which consequently cannot be ignited. However, when the article is inserted in the device, the device will block the access of air to the second air-flow path so that air drawn by the user passes through the first air-flow path, i.e. through the heated aerosol-generating substrate, and transports the produced aerosols to the mouth end of the article, where they can be consumed by the user.

3. **Main request - interpretation of claim 1**

3.1 Granted claim 1 relates to a *heated* aerosol-generating article "*for use with an aerosol-generating device*". The Board agrees with the Opposition Division that the claimed subject-matter is the article as such, which is merely *adapted* in terms of dimensions and structure *to be coupled to and heated* (not combusted) *in* an aerosol-generating device not being part of the article. In the words of the Opposition Division, it is "implicit" that the article as claimed is not coupled to such device, irrespective of any possible lack of clarity in granted dependent claims 2 and 4 presenting these implicit features of claim 1 as optional and defining the subject-matter of claim 1 by reference to external features, respectively.

3.2 The article itself "defines" a first and a second air-flow path, i.e. fixes and marks their limits, determines their boundaries and spatial extent (<https://www.merriam-webster.com/dictionary/define>, [https://www.oed.com/dictionary/define v?tl=true](https://www.oed.com/dictionary/define_v?tl=true)). The paths thus run *inside* the article, starting and ending where air enters and leaves the article. The mouth end (surface 70) of the article, through which air is drawn and where it exits the article, represents a common end of both air-flow paths. Their respective opposite ends, i.e. their air entry surfaces, do not seem to be defined in claim 1, only that the first path includes in contrast to the second path the aerosol-forming substrate. However, since they are part of the article, the air-flow paths with their respective entry and exit surfaces on the article are not altered by interaction with another device.

3.3 Consequently, the respective original resistance to draw (RTD) value of the unaltered air-flow paths which represents a physical parameter of the paths as present in the article can also not be changed by such interaction.

Determining the RTD value of an air-flow path in an article in an objective and reproducible manner requires a specific arrangement of the article in a specific measuring device, whereby the entry and exit openings of the air-flow paths as provided in the article are not obstructed by any external element, which might influence the measurement. Once determined in this way, the RTD values represent characterising parameters of the air-flow paths and thus features of the article, such as the maximum RTD value of 10 mm WG claimed for the second air-flow path. Only by manipulating the article, e.g. by restricting air access to the entry openings in the article, the RTD values of the article can be changed from its characteristic values to different ones. The patent describes such kind of manipulation by placing an article inside an aerosol-generating device which leads to block air access to the entry of its second air-flow path and results in a change of its original RTD value in paragraphs [0009] and [0015].

4. **Main request - inventive step**

4.1 D1 represents the most promising starting point for obtaining the subject-matter of claim 1 because it discloses other than D2, D5 and D6 a heated aerosol-generating article. Although, as set out further below, it is not excluded that the person skilled in the art applies teachings from other aerosol-generating articles to a heated article, the conversion of these

articles into articles releasing a satisfying amount of aerosols already at lower than ignition temperature is seen as an artificial approach constructed with hindsight.

Moreover, the article according to D1 is of similar structure as the embodiment of the patent and has in particular a first and a second air-flow path in the sense of claim 1, see page 20, line 15 to page 21, line 24, Figures 1, 2.

The appellant did not present further arguments against inventive step starting from D5 and D2 in the oral proceedings.

- 4.2 D1 is silent about many factors determining the airflows through and the RTDs along the first and second air-flow path, i.e. size and number of perforations, permeability of the plug, porosity of the aerosol-forming substrate, thickness of the crimped tobacco sheets (paragraph [0132] of the patent). Therefore, it is not directly and unambiguously disclosed in D1 that the resistance to draw (RTD) of the second air-flow path is lower than the RTD of the first air-flow path and is less than 10 mm WG. Moreover, if these features were actually present, the embodiment of D1, figure 1 could not be used properly as the main air-flow would still take the second air-flow path, which is not obstructed by the device 110 holding the article 10, instead of flowing through the aerosol-generating substrate 20. The RTD of the article inside the device is, however, the same as in the patent (between 80 and 140 mm WG, page 19, lines 34/35) due to a wrapper 60 made from cigarette paper (page 18, lines 27 - 31) and providing a relatively high resistance to draw so that the main air flow must pass through the tip end of the article and via the substrate as in figure 3 of the patent.

In line with paragraphs [0005] to [0008] of the patent, the problem to be solved can thus be considered as lowering the article's propensity for flame ignition or, as expressed by the Opposition Division, making it difficult to light the aerosol-generating article in the manner of a traditional cigarette.

4.3 In D1 itself, there does not seem to be any suggestion to this purpose so that the skilled person would look for a solution into other prior art documents. In the Board's view, the skilled person is an engineer having basic knowledge of fluid mechanics and specific experience in the design and production of aerosol-generating articles. Because the problem is based on a comparison with "traditional" cigarettes, which serve also as reference several times in paragraphs [0005] and [0007] of the patent, it points the skilled person to look for possible solutions to the problem in tobacco containing, cigarette-like articles other than "electronic" cigarettes as well. Nevertheless, since D4 does not hint at the problem, there is no reason for taking it into account. By contrast, D6 mentions a non-smokeable cigarette which can be rendered smokeable prominently in the abstract.

4.4 It emerges already from column 1, lines 22 to 55 of D6 that the same problem is addressed and a workable solution for smoking and thus aerosol-generating articles in general is provided: The connection system of tobacco rod and filter, for example a tipping paper, has to be modified to provide a nonsmokeable cigarette. In particular, it "may be rendered porous by forming holes in the paper or using a porous wrapper" (column 2, lines 46 - 48) such that, when the user draws on the cigarette, principally *all of the air* drawn passes

through the porous filter rather than along the length of the tobacco rod, column 2, lines 57 - 64. The connection system of the article according to D1, figure 1 is not a tipping paper, but a continuous wrapper 60 forming the rod from four elements, see page 20, lines 15 - 19, page 21, lines 20 - 24. It has already perforations opening up a second air-flow path which circumvents the aerosol-forming substrate 21 through a support element 30. Increasing the number and/or size of these perforations and thus the porosity of the wrapper in this region to an extent that substantially *all of the air* drawn through the mouthpiece passes through the perforations prevents flame ignition according to the teaching of D6 and solves thus the problem in an obvious way. Replacing the wrapper 60 by a highly porous wrapper has the same effect as demonstrated by figure 1 of the patent, see paragraphs [0117], [0124]. If substantially all of the air passes through the second air-flow path, its RTD is not only lower than that of the first air-flow path including the substrate 21, but close to zero and less than 10 mm WG (i.e. substantially no resistance to air flow) as it is the case for the comparable embodiment of the patent.

- 4.5 Even when alternatively considering the teaching of D6 as providing specifically a perforated tipping paper, it would be obviously transferred to the article of D1 for solving the problem. This is, because this article also comprises a band of tipping paper circumscribing the wrapper 60 for decorative purposes (page 18, lines 32 - 35; page 21, lines 25/26), albeit its connecting function being fulfilled by the wrapper 60. Like in D6, a second air-flow path with the claimed RTD characteristics can be established in the region of the tipping paper covering

an end portion of the article by means of a porous, perforated tipping paper. Of course, in this case corresponding perforations in the additional underlying wrapper layers 60, 90 have additionally to be foreseen so that both air-flow paths can join each other in and shortly upstream of the filter in the same way as in D6.

- 4.6 According to the respondent, the skilled person would refrain from these measures because additional steps for rendering the article smokeable were necessary, which are not compatible with the article and its use in the device of D1.

The Board disagrees.

For a start, only the article is claimed in claim 1 without any limitation regarding a later interaction with the device in use. Also the embodiment of claim 1 according to figure 1 of the patent could not be consumed with the device shown in figure 2 of D1. Furthermore, the teaching of D6 about how to render the article smokeable is equally transferable to and compatible with the embodiment of D1. As suggested in D6, column 2, line 65 to column 3, line 13, a sleeve 22 can be slid over the article such that it extends from the filter end up to and over the perforated region. This region may either be located close to the filter or at the support element 30 or all along the article. The sleeve blocks the air entry into the second air-flow path and allows air only to be drawn through the first air-flow path. If the article together with the sleeve is pushed into the device of D1, the sleeve is held in place by the (air-)tight contact between the article and the device shown in figure 2 of D1. The transitional sloping portion 16 between filter plug 14 and tobacco rod 12 of the preferred embodiment according to D6, figure 2 (column 3, lines 23 - 40) is

not necessary for securing the sleeve, and the simple design having adjacent components of the same diameter as described in column 3, lines 19 - 23 is fit to purpose.

4.7 For these reasons the subject-matter of claim 1 according to the main request does not involve an inventive step in the sense of Article 56 EPC in the light of the disclosure of D1 combined with that of D6.

5. **Auxiliary request 1 - admission**

5.1 In point 5.1 of its communication according to Article 15(1) RPBA, the Board gave the following preliminary opinion on the admission of the auxiliary requests filed by the respondent with their reply to the appeal.

"Auxiliary requests 1 - 4 have already been submitted during opposition proceedings and substantiated in the reply to the appeal. Since the Opposition Division held in their annex to the summons that the patent as granted complied with the provisions with the EPC and refrained therefore from commenting on the auxiliary requests, there was no need for the proprietor to substantiate the auxiliary requests earlier. The Board intends to admit the substantiated auxiliary requests as a timely and commensurate reaction to the appeal, Article 12(2), (4) RPBA."

5.2 Since the appellant did not comment on this preliminary opinion in writing and referred during oral only to their written submissions, the Board admitted auxiliary request 1 after a further review.

6. **Auxiliary request 1 - inventive step**

6.1 According to claim 1 of auxiliary request 1, a hole is defined through a radial wall of a support element forming part of the second air-flow path.

6.2 Although the article of D1 comprises a tubular support element 30 located immediately downstream of the aerosol-forming substrate 20 and having a radial wall (see page 20, lines 35 -37, figure 1), this specific solution to the problem is not suggested by D6. As an alternative to the porous connection system, a circumferential band 38 is proposed in column 4, line 56 to column 5, line 15, figure 5, which surrounds the adjacent end regions of tobacco rod 12 and filter plug 14 as well as a space 41 between them only partially so that a gap 40 is provided along the length of rod and plug between spaced apart ends 42, 44 of the band 38. Gap 40 and space 41 build a second-air flow path. Using this band as a specific form of the tipping paper in the article of D1 in order to solve the problem might also be an obvious alternative to the modification of the perforations in the wrapper 60 surrounding the support element 30, but does not lead to the subject-matter of claim 1. Neither the gap 40, nor the space 41 can be considered as hole in the radial wall of a support element. The gap 40 extends axially, not radially. The space would also correspond to an *axial* distance between the filter plug 50 and the cooling element 40 in D1, figure 1, not to a radial hole in the cooling element 40, even if the latter was seen to be a support element.

6.3 In the Board's view the skilled person would not consider D5 to offer an obvious solution for the problem and the article of D1.

D5 deals with releasing liquid flavour from a capsule into a smoking article, see abstract, which is basically also envisaged for the article of D1, see page 7, lines 22 - 26.

The liquid release mechanism of D5 includes a second air-flow path through which air is drawn directly to the mouthpiece. This prevents flame ignition of tobacco, until the capsule containing the flavoured liquid is ruptured and the liquid released. The capsule is ruptured by moving an element, thereby increasing the resistance to the air-flow through the second path and allowing sufficient air to flow through the tobacco, which can then be ignited, paragraph [0018]. An example arrangement of the capsule 34, the mobile element 22 and the second air-flow path comprising perforation 56 and annular chamber 54 at the end of the smoking article 210 downstream of a filter 26 is shown in figure 2, see paragraph [0047]. Pushing the mobile element 22 to the left in figure 2, thereby simultaneously breaking the capsule 34, releasing the liquid and interrupting the second air-flow path by cutting off the perforation 56 from the chamber 56 is the prerequisite for later ignition of the tobacco rod 12.

This liquid release mechanism including a second air-flow path is, however, not compatible with the liquid release foreseen for the article of D1. Here, the capsule is contained in the aerosol-forming substrate and melts during heating of the substrate so that contrary to D5 ignition of the substrate is the prerequisite for liquid release and any (second) air-flow path through which a significant amount of air could bypass the substrate would have to be closed prior to liquid release.

- 6.4 Therefore, the subject-matter of claim 1 according to auxiliary request 1 involves an inventive step in the light of the cited prior art.
- 6.5 For independent claims 8 and 14, the appellant refers in their letter of 3 November 2023 (page 3) to the submissions made for corresponding granted claims 9 and 15 of the main request. These submissions are limited to the statements on page 40 of their appeal brief according to which the subject-matter of claim 9 lacks inventive step in view of D1 in combination with D5 and D6 and the subject-matter of claim 15 is at least known from D6. The notice of opposition contained the same statements.
- 6.5.1 The appellant considers their written objections against claims 8 and 14 of auxiliary request 1 to be sufficiently substantiated because the Opposition Division also found in section 4.7 of the impugned decision that the reasons provided for inventive step of claim 1 would apply "mutatis mutandis" to the other independent claims.
- 6.5.2 First of all, this argument would presently lead directly to the wrong assumption that claims 8 and 14 were also inventive for the same reasons as given for claim 1. But it does of course not apply, because inventive step of claim 1 according to auxiliary request 1 is based on a feature only present in claim 1, not in the other independent claims. By contrast, the Opposition Division had identified a common feature of all the independent claims according to the main request which established inventive step of their subject-matter. In this case, it would only be sufficient to demonstrate that the Opposition Division erred in this singular aspect, if claims 8 and 14 did

not contain further features not present in claim 1, which might render their subject-matter inventive for other reasons.

6.5.3 Since independent claims 8 and 14 as well as granted claims 9 and 15 do comprise such features, in particular with regard to an aerosol-generating device and its interaction with an aerosol-generating article, which have, however, not been addressed by the appellant, the Board did not admit the appellant's objections against claims 8 and 14 of auxiliary request 1 for being not substantiated, Article 12(3), (5) RPBA.

7. **Auxiliary request 1 - added subject-matter**

7.1 Claim 1 is based on original claims 1, 2 and 7, whereby the qualifying expression for the RTD characteristics of the flow paths "when the heated aerosol-generating article is not coupled to an aerosol-generating device" from original claims 1 and 2 has been omitted. For the reasons given in point 3, above, from the perspective of a skilled reader, this omission appears rather to have rendered original claims 1 and 2 more concise than to extend their subject-matter, because the omitted expression does not have any limiting effect on the article. Although the Board does not see any necessity to apply the former so-called "essentiality test", it follows from the above that the omitted features are not considered to be essential, nor does their omission require any change.

7.2 The characteristic "having lowered propensity for flame ignition", which has furthermore been added to claim 1, is disclosed on page 1, line 31 to page 2, third paragraph as the technical effect obtained or the problem to be solved by means of the article according

to original claim 1, i.e. when not being coupled to an aerosol-generating device.

For corresponding reasons, i.e. the article being claimed as such and not as coupled to an external device, neither the scope, nor the subject-matter of claim 1 is extended by the omission of this implicit coupling feature.

7.3 Therefore, the subject-matter of claim 1 does not extend beyond the content of the application as filed, Article 123(2) EPC.

8. **Auxiliary request 1 - sufficiency of disclosure**

8.1 The patent identifies in paragraph [0110] a standard ISO 6565:2002 (D7) for measuring RTD. It goes without saying that a patent can only rely on versions of standards already available at its priority date and not refer to future versions with changes yet unknown. Moreover, it is up to the proprietor to choose whatever version of a standard he sees fit for defining a measurement method in order to provide an enabling disclosure and determine the scope of protection. The Board does therefore not share the appellant's objection against the cited standard as being outdated and superseded, in particular since former versions of industrial standards are archived and easily accessible.

8.2 The RTD of the article as such (paragraph [0109] of the patent), i.e. a combined RTD of both air-flow paths, can be measured according to ISO 6565:2002 in a manner analogous to that for a cigarette, in particular without any ventilation opening being covered, sections 3.1, 3.2, NOTE 1 and 2, section 4.2. Even if the article was only 30 mm long (paragraph [0099] of the

patent), there would still be a cylindrical outer surface of the article, which is not covered by the measurement device extending over a length of 9 mm (D7, sections 3.2, 4.2). The freely exposed part of the article would have a length of 21 mm, i.e. more than 2/3 of its entire length, in which an aerosol-forming substrate and a support element with respective preferred lengths of 12 mm and 8 mm according to paragraphs [0067], [0074] can be accommodated. The main access into the second air-flow path via the hole in the support element is thus not impaired by the measurement device.

8.3 The ratio of volumetric airflows through the first and through the second path can be adjusted according to paragraphs [0128] to [0131] of the patent so that the air flow volume through the first path is substantially lower than that through the second path. In order to do so, it appears to be sufficient to use a wrapper made from "highly perforated paper providing little or no resistance to air-flow through the paper" all along the article as in the preferred embodiment of figure 1, paragraphs [0117], [0124]. The ratios of RTD of the second-air flow path compared to that of the first air-flow path according to paragraph [0112] and claim 3 of the patent must then be obtained merely by the different RTD values of the aerosol-forming substrate circumscribed by its own wrapper, the support element and the cooling element including its wrapper 90. Moreover, even a small difference in RTD of both air-flow paths such as 10% seems to cause already the main portion of air drawn to take the path of lower resistance.

If the cumulated RTD of the article (both air-flow paths) measured according to D7 is then clearly less than 10 mm WG, the RTD of the second air flow path

should also be lower than 10 mm WG in the Board's opinion.

Therefore, the skilled person should not encounter any difficulties to put into practise the article defined in claim 1 so that the desired technical effect of low(ered) propensity for flame ignition is realised.

8.4 It is another question, namely that of clarity, if it can be determined with certainty whether an article would fall into the scope of claim 1. It is not defined in the patent how exactly the RTD of the second air-flow path as such is measured when applying ISO 6565:2002. The influence of the first air-flow path could be considered as generally negligible as suggested in paragraph [0124] and in paragraph [0109] of the patent indicating the same upper RTD boundary value for the whole article as claimed for the second air-flow path. Only the surrounding cylindrical surface of the aerosol-forming substrate could be considered as negligible as argued by the Opposition Division and the respondent. Because the patent attributes in paragraph [0133] an influence on the first air-flow path's RTD to the length of the substrate, this appears, however only to be possible if the substrate is circumscribed and sealed off by its own wrapper having a high RTD. Otherwise, the entry surface into the first air-flow path would have to be blocked completely in order to measure the RTD of the second flow path accurately (and vice versa).

8.5 But all these options and uncertainties do not affect sufficiency of disclosure, because the person skilled in the art is able to put into practise the subject-matter of claim 1 over the claimed range between 0 and 10 mm WG within realistic tolerance margins, i.e.

"close to zero" and close to 10.

8.6 The objection with regard to the relative feature "lowered propensity for flame ignition" relates to clarity of granted claim 1 rather than to sufficiency of disclosure, as confirmed by the appellant in section 3.2 of their reply of 4 December 2023. It is therefore not relevant for opposition and appeal proceedings. Furthermore, it is the inherent technical effect of the claimed RTD features, which is automatically obtained, when these features are realised, see point 7.2 and end of point 8.3, above.

8.7 For the above reasons the subject-matter of claim 1 according to auxiliary request 1 is sufficiently disclosed to be carried out by a person skilled in the art, Article 83 EPC.

9. **Auxiliary request 1 - description**

9.1 Paragraph [0006] of the patent specification neither pretends that the article defined therein was claimed, nor that it corresponded to the invention. It had already not been adapted to the wording of granted claim 1.

9.2 Other than in claim 1 of auxiliary request 1, the support element having a hole in its radial wall is presented as merely optional feature in paragraph [0012] of the patent specification. This statement can nevertheless remain unchanged, since paragraph [0012] does not only relate to the article as such, but also to the system according to claim 8, in which the article is not restricted by the features of the support element. In particular, the interaction between article and device within the system is already subject

of preceding paragraph [0009] and the system comprises according to subsequent paragraph [0014] an article "according to any embodiment described above", i.e. also without support element.

9.3 Although figure 1 shows an article, which is not encompassed by claim 1, there is no need to change the wording of paragraph [0116], in which the figures are briefly described. This is, because paragraph [0016] refers in a general manner to "an embodiment of a heated aerosol-generating article", not "of the invention".
By the same token, paragraphs [0125] and [0135] of the patent specification can remain unchanged.

9.4 Taking into account the amendment of paragraph [0117] in columns 13 and 14 of the description submitted during oral proceedings, the adapted description complies therefore with the provisions of Article 84, Rule 42(1)c) EPC.

10. **Result**

That the subject-matter of granted claim 1 does not involve an inventive step, Article 100a), 56 EPC leads to setting aside the decision of the Opposition Division to reject the opposition.

Since, taking into consideration the amendments made by the proprietor in auxiliary request 1, the patent meets the requirements of the EPC, in particular those of Articles 56, 83 and 123(2), the patent can be maintained as amended in auxiliary request 1, Article 101(3)a) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division with the order to maintain the patent in amended form on the basis of the following documents:

Claims: Nr 1 to 15 of auxiliary request 1
filed with letter of 3. April 2023

Description: columns 1 to 12 and 15 to 19 of the published patent specification,
columns 13 to 14 as filed at the oral proceedings before the Board

Figures: 1 to 4 of the published patent specification.

The Registrar:

The Chairman:



G. Magouliotis

A. Pieracci

Decision electronically authenticated