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**Datasheet for the decision
of 29 August 2023**

Case Number: T 2051/21 - 3.2.01

Application Number: 16179347.6

Publication Number: 3108760

IPC: A24F47/00

Language of the proceedings: EN

Title of invention:

HEATING ASSEMBLY FOR AN AEROSOL GENERATING SYSTEM

Patent Proprietor:

Philip Morris Products S.A.

Opponent:

Nicoventures Trading Limited

Headword:

Relevant legal provisions:

EPC Art. 76(1), 83, 54, 56

RPBA 2020 Art. 12(4), 12(6), 11

Keyword:

Divisional application - subject-matter extends beyond content of earlier application (no)

Sufficiency of disclosure - enabling disclosure (yes)

Novelty - main request (yes)

Inventive step - main request (no) - obvious combination of known features

Amendment to case - amendment admitted (yes) - reasons for submitting amendment in appeal proceedings (yes)

Remittal - (yes) - special reasons for remittal

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 2051/21 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 29 August 2023

Appellant: Philip Morris Products S.A.
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 4 October 2021
revoking European patent No. 3108760 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman G. Pricolo
Members: A. Wagner
O. Loizou

Summary of Facts and Submissions

I. The appeal of the patent proprietor lies against the decision of the Opposition Division to revoke the European patent No. 3108760 pursuant to Article 101(3) (b) EPC.

II. In its decision, the Opposition Division held inter alia that the ground for opposition under Article 100(c) (having regard to the requirements of Article 76(1) EPC) was prejudicial to the maintenance of the patent as granted (main request). Claim 1 of the sole auxiliary request, which was filed during oral proceedings, was held not to meet the requirements of Article 56 EPC.

In order to come to these conclusions the opposition division considered, among others, the document US 6,681,769 B2 (E2).

III. Oral proceedings by videoconference were held before the Board on 29 August 2023.

The appellant (patent proprietor) requested that the decision under appeal be set aside and the patent be maintained as granted (main request) or in alternative that the patent be maintained in amended form on the basis of one of the auxiliary requests 1 to 7 filed with the statement of grounds of appeal.

The respondent (opponent) requested that the appeal be dismissed.

During oral proceedings both parties requested a

remittal of the case to the opposition division.

- IV. Claim 1 of the main request and of auxiliary request 1 reads as follows:

A heating assembly for heating an aerosol-forming substrate, the heating assembly comprising:
a heater (14) comprising an electrically resistive heating element (82); and
a heater mount (26) coupled to the heater(14);
wherein the heating element comprises a first portion (84) and a second portion (86) configured such that, when an electrical current is passed through the heating element the first portion is heated to a higher temperature than the second portion as a result of the electrical current; and
wherein the heater mount (26) surrounds the second portion (86) of the heating element and is formed from a moulded polymeric material.

Claim 1 of auxiliary request 2 differs from claim 1 of the main request in that the feature of granted claim 8 is added as follows:

"wherein the first portion (84) of the heating element is spaced from the heater mount (26)".

- V. The appellant's (patent proprietor's) arguments relevant to the present decision may be summarized as follows:

Added subject-matter

The patent in suit was a divisional application based on the parent application published as WO 2014/102092 A1. The opposition division was wrong in concluding

that, in the parent application, a heater assembly according to claim 1 was not disclosed in combination with the features of any of the dependent claims 2 to 14.

Instead,

a) the skilled person would not read the sixth aspect of the invention as claimed in claim 1 - and undisputedly disclosed on page 10, lines 25 to 33 - entirely isolated from the remainder of the disclosure. The opposition division's reasoning was based on an artificial reading of the parent application.

b) Page 10, line 34 to page 11, line 2, explicitly explained that *"it should be clear that features described in relation to one aspect of the disclosure may be applied to the other aspects of the disclosure"*. The opposition division wrongly argued that this passage would be an "omnibus statement" not providing support for the combination of claim 1 (sixth aspect of the invention) with any of the dependent claims 2 to 14 described together with the first aspect of the invention.

c) The features as defined in claims 2 to 11 were not structurally or functionally linked to the heater substrate included in the first aspect of the invention. The heating assembly was clearly operable with or without a heater substrate as it became clear from the sixth aspect of the invention.

d) With regard to the device claims 12 to 14, reference was made to the title and the aim of the invention (page 1, lines 21 to 23). The whole patent was directed to a *"heating assembly for an aerosol generating*

system". It would be illogical that a heater assembly according to the sixth aspect without the need of a heater substrate was not suitable for an aerosol generating device.

Sufficiency of disclosure

No serious doubts were raised why a skilled person should not be able to put a heater assembly according to any of the dependent claims into practice without providing a heater substrate. As soon as a skilled person was able to make the assembly of claim 1 - what was not disputed - the skilled person had no problems with the implementation of the features defined in the dependent claims.

Novelty/ Inventive step

Contrary to the opposition division's opinion, claim 1 not only differed from E2 (figures 2, 3) by a heater mount formed from a moulded polymeric material.

Additionally the first portion (heating zone 40) was not heated to a higher temperature than the second portion (heating zone 41) as a result of electrical current. The fact that the first heating zone was heated faster than the second zone did not mean that the first zone was heated to a higher temperature. Instead both zones in E2 heated up to the same temperature.

The faster heating of the fluid in the first flow path 45 as described in column 3, lines 25 to 42, was not due to the current but due to the relative smaller volume of fluid to be heated as the first flow path had a smaller cross-sectional than the second flow path.

Furthermore the heater mount 24 did not surround the second portion of the heating element. As could be seen in figure 2, there was a gap at intermediate zone 42. The term "surrounds" had to be understood as "fully enclosed" which was obviously not the case.

None of the distinguishing features was obvious when starting from E2. In particular, E2 did not comprise any pointer to a heater mount formed from a "moulded polymeric material". Instead, in column 3, lines 47 to 51, a ceramic heater mount with laser machined flow paths was promoted. The skilled person would not form the heater mount of a moulded polymeric material which would not be suitable for the dimensions of the flow paths mentioned in column 3, lines 51 to 65.

Admission of the auxiliary requests

The appeal proceedings were the first opportunity to file auxiliary requests 1 to 7, since the objections resulting in the opposition division's conclusion to revoke the patent in suit (impugned decision, points 12 and 16) were raised late in the first instance proceedings. Thus, the new objections could not be addressed at an earlier stage of the proceedings. Given the nature of the opposition division's findings it also did not make sense to file any of the auxiliary requests 1 to 7 during the first instance hearing.

- VI. The respondent's (opponent's) arguments relevant to the present decision may be summarised as follows:

Added subject-matter

The opposition division correctly found that in the parent application (WO 2014/102092 A1) the features of

dependent claims 2 to 14 were only disclosed in conjunction with the first aspect of the invention. Claim 1 as granted referred to a sixth aspect of the invention (page 10, lines 25 to 33). In the first aspect, the heater assembly additionally comprised a heater substrate. Omitting the heater substrate when combining claim 1 with any of the dependent claims resulted in an unallowable intermediate generalisation.

ad a) Obviously, there was no explicit disclosure of the features of claims 2 to 14 in conjunction with a heating assembly as set out in the sixth aspect of the invention. It was pure speculation as to which, if any, features disclosed in relation to the first to fifth aspect might be applicable to the sixth aspect.

ad b) The passage on page 10, line 34 to page 11, line 4 was too vague and generic to provide support for the disputed, specific feature combinations.

ad c) A number of features of the first aspect were described in a manner inextricably linked to the presence of a heater substrate. For example, the protective layer of claims 2, 3, disclosed on page 5, lines 5 to 7, or the heater element as defined in claims 4 and 6, were only described in context with the heater substrate being a structural support (page 4, lines 3 to 7).

Throughout the parent application the portions of the heating element were disclosed as being deposited onto a heater substrate that defined the shape of the heating element (page 13, lines 17 to 19).

ad d) With regard to claims 12 to 14, claim 12 required that the heater mount was coupled to the housing. According to the first aspect, the heater mount was

fixed to the holding area of the heater substrate. Thus, there was a structural link between the heater substrate and the heater mount, and in turn, between the heater mount and the housing of the device.

Sufficiency of disclosure

The finding of the opposition division under point 14.3 of the impugned decision with regard to claim 1 that the skilled person was able to provide heating elements of a suitable physical integrity, was not disputed. However, no information was provided as to how to provide the features of claims 2 to 8 and 10 in absence of a heater substrate which provided the mechanical support. The specific embodiment of the heater element given in the patent in suit was not self-supporting. The patent in suit did not contain any teaching of an embodiment with such a non self-supporting heating element but without a heater substrate. Therefore providing a heating device with the features of the dependent claims without using a heating substrate was not trivial.

Novelty/ Inventive step - E2

The opposition division was wrong in concluding that a heater mount formed from "*moulded polymeric material*" was not directly derivable from E2. Column 3, lines 45 to 47, disclosed that "*the flow paths 45, 46 can be formed in a ceramic or polymer base plate 24 by molding, machining or other suitable technique*". When using a polymer base plate, the only relevant option was by molding.

Should the feature "*heater mount formed from moulded polymeric material*" be seen as not being directly

disclosed in E2, it was an obvious choice out of equally presented alternatives.

Admission of the auxiliary requests

Auxiliary requests 2 to 7 addressed the lack of inventive step findings of the opposition division over E2. A novelty objection in view of E2 was already raised with the notice of opposition, thus an auxiliary request addressing this objection could and should have been filed in the initial response to the opposition. Furthermore the auxiliary requests were not convergent.

Reasons for the Decision

1. Article 100(c) EPC with Article 76(1) EPC

1.1 The set of claims as granted does not extend beyond the disclosure of the parent application (WO 2014/102092 A1).

1.2 It is undisputed that claim 1 finds a literal basis on page 10, lines 25 to 33, of the parent application mentioned therein as a "*further aspect of the invention*" and referred to by the parties as the "*sixth aspect of the invention*".

It is further undisputed that the dependent claims 2 to 14 also find a basis in the parent application (see page 5, lines 5 to 7 for claims 2 and 3, and originally filed claims 3 to 10 and 12 to 14 for granted claims 4 to 14).

What is disputed is that the subject-matter of claim 1 is disclosed in combination with the features of any one of the dependent claims.

1.3 The Board agrees with the respondent (opponent) that in the description, the features of the dependent claims were only mentioned in connection with the first aspect of the invention wherein the heater assembly comprises a heater substrate.

Furthermore, the opposition division correctly found that from the passage bridging page 10 and 11 ("*it should be clear that features described in relation to one aspect of the disclosure may be applied to the other aspects of the disclosure*") no unambiguous disclosure for the disputed feature combinations is derivable.

1.4 However, when reading the parent application as a whole it is clear for the skilled person that the application was not limited - on the one hand - to a heater assembly with a heater substrate in combination with all the other features and - on the other hand - to a stand-alone heater assembly not requiring a heater substrate without any of the optional features.

1.5 Additionally, the features of claims 2 to 14 are not structurally or functionally inextricably linked to the heater substrate.

1.5.1 Claim 1 defines a heating element and a heater mount, but does not comprise the heater substrate in accordance with the originally disclosed sixth aspect of the invention. Therefore, the skilled person is taught that a heater substrate is not necessary for providing a heating assembly with a heating element and a heater mount and understands that there is no structural or functional link to the heater substrate.

1.5.2 Such an inextricable link also does not arise in connection with the features of claims 2 to 8, which

are not related to the heater substrate but only define the heating element itself more in detail.

1.5.3 Even in the first aspect of the invention including the heater substrate, the function of the heater substrate is only described as optional. On page 4, lines 3 to 10 it is stated that "*the heater substrate may provide a mechanically stable support for the heating element over a wide range of temperatures and may provide a rigid structure suitable for insertion into an aerosol-forming substrate.*". The skilled person understands that the supportive function is not inextricably linked to the heating element or the heating mount.

1.5.4 Also for claim 9 and 11, which are directed to the temperature conditions in the first and second portion, the passage on page 4, line 27, to page 5, line 4, does not teach any functional link to the heater substrate.

1.5.5 With regard to claims 12 to 14, the skilled person understands from the parent application, in particular from the aim of the application to provide a heating assembly for an aerosol-generating device, that also the heating assembly defined in the sixth aspect of the invention (without the need of a heater substrate) is suitable for an aerosol generating device. The suitability is not given by the optional heater substrate but is given by the heater mount as described on page 2, lines 16, 17 ("*The heater mount provides structural support to the heater and allows it to be securely fixed within an aerosol-generating device.*").

2. Article 100(b) EPC with Article 83 EPC

2.1 The requirements of Article 83 EPC are met.

- 2.2 Regarding claim 1 as granted, the opposition division held that by merely providing heating elements of a suitable physical integrity - which is considered to be within the inherent knowledge of the skilled person - the heating assembly as set out in claim 1 can be arrived at. This statement is not disputed by the respondent (opponent).
- 2.3 However, a skilled person that is able to put the heating assembly of claim 1 into practice, can elaborate a heating assembly suitable for an aerosol generating device (see point 1.5.5 above) without a heater substrate with sufficient stability. As a consequence the skilled person is also able to e.g. cover the heating element with a protective layer (claim 2) or to form the heating element from a first and second material (claim 4) or to provide a heating element with a third portion (claims 6, 7), etc.
- 2.4 Therefore the respondent's (opponent's) argument that the features of the dependent claims 4 to 8 and 10 could not be put in practice in absence of a supporting heater substrate without any further information is not convincing in view of the fact that the invention as defined in claim 1 is itself already considered as being sufficiently disclosed.

3. Article 100(a) EPC

3.1 Novelty over E2

- 3.1.1 The Board confirms the opposition division's decision that the subject-matter of claim 1 as granted is novel over E2 as the feature that the heater mount is formed from a moulded polymeric material is not directly

disclosed.

3.1.2 E2, column 3, lines 45 to 47, discloses that "*The flow paths 45, 46 can be formed in a ceramic or polymer base plate 24 by molding, machining or other suitable technique*". The base plate 24 is seen as the heater mount. In column 3, lines 47 to 51, two examples are given with a base plate 24 made of ceramic.

3.1.3 Contrary to the respondent's (opponent's) opinion, the mentioned passage discloses a polymeric base plate, however as explained in the impugned decision, point 15.3, a polymer base plate does not inevitably comprise the feature "moulded" as not all polymeric materials are mouldable. Therefore E2 does not unambiguously disclose a moulded polymer base plate.

3.2 Inventive step starting from E2

3.2.1 The Board confirms the opposition division's decision that the subject-matter of claim 1 is not inventive over E2 alone for the reasons given in the impugned decision, point 16.1.

3.2.2 Claim 1 only differs from E2 in that the heater mount is formed by a moulded polymer. According to the patent in suit (page 2, lines 17 to 22), due to the use of a mouldable polymeric material the heater mount can be produced with a desired external shape in an inexpensive manner.

3.2.3 Contrary to the appellant's (patent proprietor's) opinion, the feature "*the first portion is heated to a higher temperature than the second portion as a result of the electrical current*" is disclosed in E2. E2, column 3, line 66 to column 4, line 4, describes that

the electrical arrangement as shown in figure 2 allows *"for a continuous electrical circuit within the multiple path heater and faster heating of the heating zone 40 due to its smaller cross section."* Applying the same current in both zones 40, 41 results not only in a faster heating of the first zone but also in a higher temperature in the narrower first zone. Furthermore, the faster heating necessarily includes a difference in temperature of the two heating zones 40, 41.

Also the argument of the appellant (patent proprietor) that the heater mount 24 did not surround the second portion 41 of the heating element because of the gap at intermediate zone 42 is not convincing.

The interpretation of the claim wording as presented by the appellant (patent proprietor), in particular that the heater mount had to directly surround the second portion completely, is too narrow. The claim wording does not exclude that further elements are additionally surrounded. As argued by the respondent (opponent), the rim of the base plate 24 (see figure 3) fully encloses both heating zones 40, 41 and thus also the second portion.

Even if the gap at the intermediate zone 42 would be seen as an interruption of the surrounding, the base plate with its rim still ("substantially") surrounds the second heating zone 41.

3.2.4 E2 directly discloses a polymer base plate (column 3, lines 45, 46). When starting from E2, the skilled person would be confronted with the problem of how to easily manufacture the described heater mount (polymer base plate 24).

3.2.5 The board agrees with the reasoning of the opposition division provided under point 16 of the impugned

decision that it is obvious for the skilled person to select a moulding process from the short list disclosed in E2, column 3, lines 45 to 47, to realise the polymer base plate. It is within the knowledge and experience of the skilled person to realise that moulding is a commonplace technique for providing mounts incorporating heating elements such as the ones set out in claim 1.

Moreover, no unexpected technical effect can be attributed to this particular choice besides the well-known advantages of this specific manufacturing method.

4. Admission of auxiliary requests 1 to 7

- 4.1 All auxiliary requests were filed for the first time with the statement of grounds of appeal.
- 4.2 Claim 1 of auxiliary request 1 corresponds to claim 1 as granted. Because of the findings with regard to inventive step for the main request (point 3.2 above) and as acknowledged during oral proceedings by the appellant, the admission of auxiliary request 1 into the appeal proceedings is of no relevance for the outcome of the decision.
- 4.3 The Board exercised its discretion under Article 12(4) and (6) RPBA 2020 and admitted auxiliary request 2 into the proceedings.
 - 4.3.1 In claim 1 of auxiliary request 2 the features of claim 8 as granted are added. As required by Article 12(4) RPBA, the appellant (patent proprietor) clearly identified the amendment which addresses the issues which led to the decision under appeal. The amendment is neither complex nor contrary to the need of

procedural economy.

- 4.3.2 The objection under Article 76(1) EPC resulting in the conclusion of the opposition division that none of the dependent claims originally were disclosed in combination with claim 1 as granted was raised only two months before the first instance hearing. The inventive step objection starting from E2 resulting in the conclusion of the opposition division to finally revoke the patent in suit was raised at an even later stage, namely during oral proceedings before the opposition division.

Auxiliary request 2 addresses this specific inventive step objection. Submitting auxiliary request 2 during the first instance oral proceedings would have made no sense after the opposition division's findings with regard to Article 76(1) EPC. Therefore, there was no reason for the patent proprietor to file auxiliary request 2 already during opposition proceedings (Article 12(6) 2nd sentence RPBA 2020).

- 4.3.3 The respondent (opponent) pointed to the novelty objection regarding E2 raised with the notice of opposition. However neither the opponent nor the opposition division substantiated an objection under Article 56 EPC starting from E2 prior to the first instance oral proceedings.
- 4.3.4 Under these circumstances, the Board decided to exercise its discretion in the sense to admit auxiliary request 2.

5. Article 11 RPBA 2020

5.1 Both parties requested the remittal to the first instance in case that prior art documents other than E2 needed to be considered and/or in case that one or more of the auxiliary requests was admitted.

5.2 The decision under appeal to revoke the patent is mainly based on the findings with regard to Article 76(1) EPC. The fact that the Board does not confirm these findings leads to a substantially different situation as compared to the one underlying the decision under appeal.

Under these circumstances, the Board considers that there are special reasons in the sense of Article 11 RPBA 2020 justifying a remittal of the case to the opposition division.

5.3 As a consequence of admitting auxiliary request 2 into the proceedings and of remitting the case to the first instance as requested by both parties, there is no necessity for the Board to decide on the admission of auxiliary request 3 to 7 which were objected by the respondent (opponent) in view of lack of convergence and conciseness.

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 for further prosecution.

The Registrar:

The Chairman:



A. Voyé

G. Pricolo

Decision electronically authenticated