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Datasheet for the decision of 15 October 2025

Case Number: T 1267/23 - 3.2.04

Application Number: 17892066.6

Publication Number: 3516972

IPC: A24F47/00, A61M15/06, A61M11/04, A24F40/44

Language of the proceedings: EN

Title of invention:
ELECTRONIC CIGARETTE AND ATOMIZER THEREOF

Patent Proprietor:
Shenzhen Smoore Technology Limited

Opponents:
Shenzhen Relx Technology Co., Ltd.
Imperial Tobacco Limited

Headword:

Relevant legal provisions:
EPC Art. 54, 56, 83, 84, 123(2)
RPBA 2020 Art. 12(3), 12(5), 12(6)

Keyword:
Novelty Main Request - (no)
Inventive step Auxiliairy Request - (yes)
Discretion not to admit submission - requirements of Art. 12(3) RPBA 2020 met (no)
Late-filed objection - should have been submitted in first-instance proceedings (yes)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

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Case Number: T 1267/23 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 15 October 2025

Appellant: (Patent Proprietor)	Shenzhen Smoore Technology Limited No. 16, Dongcai Industrial Park Gushu Town Xixiang Street, Baoan District Shenzhen, Guangdong 518102 (CN)
Representative:	Erdmann, Matthias Rootpatents Nordlehne 3 96450 Coburg (DE)
Appellant: (Opponent 2)	Imperial Tobacco Limited 121 Winterstoke Road Bristol BS3 2LL (GB)
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Party as of right: (Opponent 1)	Shenzhen Relx Technology Co., Ltd. Bodun Science Park B402 Room Chaguang Road No. 1044 Shuguang Community, Xili Street Nanshan District Shenzhen City, Guandong (CN)
Representative:	Klunker IP Patentanwälte PartG mbB Destouchesstraße 68 80796 München (DE)

Decision under appeal: **Interlocutory decision of the Opposition Division of the European Patent Office posted on 2 May 2023 concerning maintenance of the European Patent No. 3516972 in amended form.**

Composition of the Board:

Chairman A. Pieracci
Members: S. Oechsner de Coninck
T. Bokor

Summary of Facts and Submissions

I. The opponent 2 and the proprietor both appeal against the decision of the Opposition Division of the European Patent Office concerning maintenance of the European Patent No. 3516972 in amended form.

II. The Opposition Division held that the patent and the invention to which it related according to auxiliary request 1 met the requirements of the EPC, having regard in particular to the following documents:

D2: WO 2014/089283 A2
D3: CN205865992 U (and translations D3a and D3b)
D4: CN204409592 U (and translations D4a and D4b)
D5: WO 2015/077645 A1
D6: US 2016/0095354 A1
D11: US 2017/0215481 A1
D12: CN105559147 A (and translations D12a and D12b)

III. In a communication in preparation for oral proceedings the Board gave a provisional opinion on the relevant issues.

IV. Oral proceedings were held on 15 October 2025.

V. The appellant proprietor requests that the decision under appeal be set aside and the patent be maintained as granted (main request) or on an auxiliary basis to maintain the patent according to auxiliary request 1, patent as maintained by the opposition division, and further on to remit the case to the opposition division for the auxiliary requests 1.1 to 8, A.1 to A.8, B.1 to B.8, C.1 to C.8, D.1 to D.8.

VI. The appellant opponent 2 requests to set aside the Opposition Division's decision and to revoke the patent.

VII. The party as of right opponent 1 did not make any submissions or file requests during the appeal proceedings.

VIII. The independent claim 1 according to the relevant requests read as follows (Board's feature numbering):

Main request:

M1 *"a liquid reservoir (120) having a liquid storage cavity for receiving atomizing liquid,*

M2 *wherein the liquid reservoir (120) has an opening end (121 and the opening end (121) defines an opening in communication with the liquid storage cavity (122)*

M3 *a heating assembly (130) comprising a liquid conducting body (131) and a heating element (132),*

M4 *wherein the liquid conducting body (131) is located on the opening end (121),*

M5 *the conducting body (131) has a liquid absorbing surface (131a) facing an inside of the liquid storage cavity (122) and an atomizing surface (131b) located outside of the liquid storage cavity (122),*

M6 *the heating element (132) is formed on the atomizing surface (131b),*

M7 *the liquid conducting body (131) is configured to conduct the atomizing liquid in the liquid storage cavity (122) to the atomizing surface (131b),*

M8 and the heating element (132) is configured to atomize the atomizing liquid conducted to the atomizing surface (131b);

M9 the liquid absorbing surface (131a) defines a recess (131c) in communication with the liquid storage cavity (122).

M10 the recess is configured for being filled with the atomizing liquid flowed from the liquid storage cavity (122),

M11 and an minimum conduction distance (d3) of the atomizing liquid from a bottom wall of the recess (131c) to the atomizing surface (131b) is less than a minimum conduction distance (dl) of the atomizing liquid from the liquid absorbing surface (131a) to the atomizing surface (131 b)."

Claim 1 of Auxiliary request 1 adds to claim 1 of the main request the following expression as its last features:

"wherein the liquid absorbing surface (131a) and the atomizing surface (131b) are located on opposite sides of the liquid conducting body (131), respectively, and the liquid conducting body (131) further comprises a side surface (131d) connecting the liquid absorbing surface (131a) and the atomizing surface (131b), wherein the recess extends along a direction from the liquid absorbing surface (131a) to the atomizing surface (131b), wherein the liquid absorbing surface (131a) and the bottom wall of the recess (131c) are parallel to the atomizing surface (131b)."

IX. The relevant arguments of the parties are addressed in the following reasons for the decision.

Reasons for the Decision

1. Main request - novelty

1.1 D3 discloses a liquid reservoir having a cavity 5 and an opening end at its lower part, fig. 3g, a heating assembly comprising a liquid conducting body 41 fig. 3f, 3g and a heating element 42. The liquid conducting body is located on the opening end and has a liquid absorbing surface facing an inside of the liquid storage cavity 5. The heating element is formed on the atomizing surface and the liquid conducting body is configured to conduct the atomizing liquid in the liquid storage cavity to the atomizing surface [0042] of D3b. The disclosure of features M1 to M8 of claim 1 is not disputed.

1.2 The proprietor contests the appealed decision's finding that D3 also discloses features M9 to M11 on the basis of fig. 3(f), given the poor resolution of fig. 3(f).

1.2.1 The Board however observes that fig. 3(f) is supplemented by relevant explanations in paragraph 042. There it is explained that the reference 432 represents multiple microporous channels with an aperture of 0.8 mm accelerating the permeation of porous materials and the transmission rate of smoke oil. No matter how poor the quality of figure 3f may be, it nevertheless allows the skilled person to recognise without any doubt that the upper surface of the permeating element 41 has regularly spaced openings for these channels 432.

1.2.2 While it may be true that no bottom wall with continuous line is depicted in fig. 3(f), it is nevertheless clear that the lateral walls of the

channels terminate higher up than the atomizing surface as correctly submitted by the appellant-opponent. The representation of a lateral wall implies a bottom surface of undefined shape of the channels 432 located above the atomising surface. However small the channels might be, a diameter of 0,8 mm of their opening still is considered to be of macroscopic dimension, rather than of capillary nature, and the channels 432 may thus be identified as recesses.

1.2.3 In addition, the indication in paragraph 042 that the channels increase the transmission rate of oil imply a flow of oil through both the opening of the channels 432 and then through the porous material of the permeating element 41, even if such flow is of capillary nature, as submitted by the appellant-proprietor.

1.2.4 Once acknowledged that the channels are recesses, they must consequently have some bottom surface. Even if this bottom surface is not necessarily flat, it has to be closer to the atomizing surface, and thus realizes a minimum conduction distance d3 that is less than d1, as required by feature M11.

1.2.5 The Board is also unconvinced that the channels 432 may be through holes as further alleged by the appellant-proprietor. Indeed, even if the dotted shading in fig. 3f has no clear boundary, it is nevertheless clearly depicted in the lower most part as having a certain thickness close to the bottom atomizing surface, the vertical side walls being further depicted ending in the mid portion of the porous material. Thus the Board concludes that D3 directly and unambiguously discloses channels 432 having some bottom surface.

1.3 It follows that the opposition division correctly assessed the disclosure of features M9, M10 and M11 in item 12.3 of the decision, and thus correctly established lack of novelty with respect to D3.

2. Auxiliary request 1

2.1 This request corresponds to the version as upheld and adds to granted claim 1 the features of granted claims 2, 3 and 6 as its last features, as set out in point VIII. above.

2.2 Novelty with respect to D3

2.2.1 Whereas the Board concurs with the opponent that the channels visible in Figure 3(f) have a bottom surface somewhere above the atomising surface fulfilling the distance relationship of M11, as set out above in the examination of novelty for the main request, the more detailed configuration of the structure of this bottom surface cannot be directly and unambiguously derived, especially as whether it is flat at all, and even less whether it is parallel to any other surface. The Board disagrees that any visible end of the vertical walls depicted in fig. 3f could be clearly identified as being in the same plane as alleged by the appellant-opponent. Even under the assumption that the skilled person would recognise that the vertical walls end at such a common depth, the supplementary hint from paragraph 042 that the apertures accelerate permeation does not allow to infer any special shape of such bottom surface, whether flat, conical or uneven. Thus the Board concurs with the impugned decision's finding on novelty expressed in item 20 of the decision.

2.3 Further novelty objections with respect to D2, D4, D5, D6 and D11

2.3.1 The Board concurs with the opposition division that D2 fails to disclose all the features of claim 1. D2 especially fails to disclose at least a conducting body according to M4 and M5. In D2, a gasket 66 with liquid guide holes 68 slowly guide liquid to a liquid guide device 58, paragraphs 024, 025. Both the liquid guide device 58 and the gasket 66 are identified by the appellant-opponent as the liquid conducting body of claim 1 because such body would not need to be monolithic. The Board however rather concurs with the opposition division that in the present context of a liquid conducting body, in particular made of porous material, the skilled person understands the term "body" as a monolithic or one piece unit (as also expressed in item 11.3.1 of the decision). This is especially so as the gasket is not made of liquid conducting material and cannot be seen as a conducting body with an absorbing surface facing the storage cavity and thus forming part of the same "conducting body" between the two surfaces defined in M5.

The same conclusion must hold for the similar arrangement of filter cotton 233 and filter net 232 disclosed in D6, paragraph 022. In D5 the assembly of sponge 95, wick 100 and partition 60 are identified by the appellant-opponent as a body according to claim 1 and thus also fail to convince for the same reason as exposed above.

2.3.2 D4 at least fails to disclose a heating element according to feature M6. Figure 1 of D4 is an enlarged portion of the heating device and depicts a porous material 32 in contact with the upper surface of a

heating element 34 as further explained in paragraph 018 of the translation D4b. The appellant-opponent considers that the contact surface between the lower part of the porous material and the heater necessarily provides some atomisation of smoke oil because it is the hottest part where atomisation is expected to take place, further the oil is able to percolate through the porous body 32 whereupon it contacts the heating element 34 and is atomized.

The Board is unconvinced at least because D4 does not disclose on which surface of the porous material the "large amount of smoke" disclosed in paragraph 023 would be generated. Absent any such disclosure, it remains a speculation on which portion of the porous body 32 smoke oil is actually generated, given that several technically sensible locations on outer surfaces of the porous material are suitable candidates. The Board therefore rather concurs with the finding in item 13.3.2 of the appealed decision that the further reference of paragraph 023 does not allow to conclusively derive where the atomisation takes place. As a aside, it does not seem plausible that the "large amount of smoke" mentioned at the end of this paragraph would escape from the contact surface located between the heater 34 and porous element 32, given that this surface seems to be obstructed by the heat-insulating layer 31 over the whole undersurface of the element 32.

2.3.3 D11 at least lacks an opening according to feature M2 as well as a liquid conducting body located on said opening according to feature M4. On this question, the appellant-opponent argues that the opening end defined in M4 does not necessarily imply that this opening in communication with the storage cavity is at an

extremity of the liquid reservoir. As argued by the appellant-proprietor the reservoir of D11 is delimited by its outer housing 301, at the end of the atomizer 30, so that the opening end is rather in communication with the variable air inlets 306, 307, paragraph 027. Contextually reading M2 and M4 together the liquid conducting body should be located on the opening of the reservoir. This is not the case for the openings 204 on which the appellant-opponent rely. Although located in the lower part of the storage 309, they are located in the central atomizing unit 20 itself rather than the reservoir. Thus the opposition division also seems to have correctly concluded that D11 at least fails to directly and unambiguously disclose feature M2.

2.3.4 It follows from the above that the opposition division correctly concluded positively on the question of novelty with respect to these further disclosures of D2, D4, D5, D6 and D11.

2.4 Inventive step starting from D3

2.4.1 Based on the distinguishing feature identified in item 2.2.1 above, the objective technical problem should be derived from the technical effect of providing a flat or plan shaped recess with a bottom wall parallel to the atomizing surface.

2.4.2 It is undisputed that the patent identifies a technical effect in paragraph 019 that may be related to the parallel relationship between the bottom wall of the recess and the atomising surface. This paragraph 019 explains that the same minimum conduction distance between the bottom wall of the recess 131c and the atomizing surface 131b from any position at the bottom

wall of the recess further improves the conduction efficiency of the liquid conducting body.

2.4.3 The appellant-opponent however disputes the formulation of the objective technical problem as identified in the decision, item 21.1.4, i.e. providing a structure that achieves a uniform atomization of the liquid. Instead, they submit that the problem should target the improvement of uniformity of the conduction across the base wall of the recess.

2.4.4 The Board is unconvinced and rather considers that such a further formulation of the technical problem proposed by the appellant-opponent contains a pointer to the solution of working on the shape of the bottom wall and is thus inappropriate. Instead the Board retains the more general formulation directed at the uniformity of the atomization as suggested by the opposition division.

2.4.5 With the intent to improve the uniformity of the atomisation, the Board shares the appellant-proprietor's view that the skilled person would not obviously have contemplated to modify the bottom of the permeation channels. D3 only considers the size of the apertures of the channels themselves instead of their shape, distribution or location and for the sole purpose of accelerating permeation, paragraph 042. Thus contrary to the appellant-opponent's opinion, the skilled person would not have any obvious reason to consider the provision of a flat bottom surface rather than any other shape for the purpose of achieving a uniform atomisation. Furthermore the Board doubts that the skilled person would consider a flat end shape to be the easiest way to manufacture the channels of D3,

given their sub-millimetre size, which is unlikely to be easily drilled with a flat-ended tool.

2.4.6 The Board furthermore shares the opposition division conclusion expressed in item 21.4.1 of the decision that the skilled person would not have combined D3 with D4. In particular, as also observed by the appellant-proprietor, the groove 35 in D4 is not related to improve permeation but rather serves a different purpose of mechanical coupling with a protrusion 4 of the oil storage 2, paragraph 022. Irrespective of the question of size relied upon by the appellant-opponent, the different purposes and shape of the numerous microporous channels 432 in D3 and the single groove 35 in D4 render the use of one particular geometry aspect of D4 not readily applicable to the microporous channels of D3. Thus the Board concurs with the opposition division and appellant-proprietor that the cooperation of the groove 35 with a protrusion 4 as taught by D4 makes D4 essentially incompatible with the multiple microporous channels of D3. Thus taking D3 as a starting configuration and combining it with D4 is unlikely and anything but straightforward.

2.4.7 In view of the above the Board concludes that the subject-matter of claim 1 of auxiliary request 1, in accordance with the decision's positive assessment, involves an inventive step in the light of the cited prior art, as required by Articles 52(1) and 56 EPC.

2.5 Further objections

2.5.1 The appellant-opponent further refer to their objection on the grounds of Articles 83, 84 and 123(2) brought forward in their grounds of appeal.

2.5.2 In item 2.2.2. on page 7 of their grounds the appellant-opponent acknowledged that the feature M10 may not be attacked on the grounds of Article 84 EPC and broadly alleges that the wording of M10 encompasses many different configurations, many of which would represent a violation of Article 123(2) EPC.
The Board indeed agrees that feature M10 may not be objected to under Article 84 EPC. It further considers the above-mentioned allegation may not be considered as a complete case of the grounds under Article 123(2) EPC of the appellant-opponent as required by Article 12(3) RPBA, since the objection remains unspecified and thus unsubstantiated. For these reasons, the Board decided not to admit these objections under Articles 84 and 123(2) EPC, exercising its discretion under Article 12(5) RPBA.

2.5.3 As concerns the further objections submitted in writing such as the lack of clarity and added subject-matter in respect of feature M14, in particular the omission of the requirement that the perpendicular distance is meant as well as for features M9, M10: lack of clarity for the feature “in communication with” and insufficiency of disclosure for the feature “configured for being filled”, in its communication under Article 15(1) RPBA in preparation to the oral proceedings, the Board expressed its provisional opinion in relation to the main request under point 4 as follows:

"For the further objections brought forward against the main request, the Board observes as follows:

- According to the minutes, item 3.2 on page 1, it appears that the appellant-opponent did not maintain their objection of added subject-matter raised against feature M9 including the expression "in communication

with". Pursuant to Article 12(6) RPBA objections that were no longer maintained should not be admitted, unless justified by the circumstances of the appeal case.....

- For the question of sufficiency of disclosure, the appellant-opponent refers to their submissions made in the proceedings before the opposition division, such as mentioned on page 7, item 2.3 of the appellant-opponent's grounds of appeal. In the Board's view, such general reference to earlier submissions fails to present a complete case in the sense of Article 12(3) RPBA and will thus be disregarded pursuant to Article 12(5) RPBA, see also Case Law of the Boards of Appeal (CLBA), 10th edition 2022, V.A. 2.6.5."

For the auxiliary request 1 the provisional opinion was further expressed as follows (see 5.1):

"The appellant-opponent raises new objections with respect to this request. The Board observes that this request was only objected to for lack of novelty over D3 and lack of inventive step starting from the same D3, see items 18,19,20 and 21 of the decision. The appellant-opponent has not provided reasons why the new objections on the grounds of Articles 123(2), 83 and 84 EPC are brought forward only in appeal. Nor does the Board recognise any reasons why these objections have not been submitted, see also the item 4 of the minutes of the oral proceedings before the opposition division. As concerns added subject-matter, the appellant-opponent did not dispute this issue according to the decision, point 18.1, and also did not contest admissibility of the amendments under Rule 80 EPC, decision point 19.1.

The Board does not intend to admit such amendment of the appellant-opponent's appeal case. It appears that these objections should have been raised or maintained in opposition (Article 12(6) RPBA)."

2.5.4 Absent any further comment, the Board, after having reconsidered all the relevant legal and factual aspects of the case, sees no reason to change its provisional view that these amendments of the appellant-opponent's case should not be admitted into the proceedings.

3. It follows from the above that none of the appellants' challenges to the decision's findings for granted claim 1 and for claim 1 according to auxiliary request 1 succeed. Their respective appeals against the appealed decision therefore both fail.

Order

For these reasons it is decided that:

The appeals are dismissed

The Registrar: The Chairman:

G. Magouliotis A. Pieracci

Decision electronically authenticated