

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 11 May 2017**

Case Number: T 1434/15 - 3.3.05

Application Number: 10156322.9

Publication Number: 2319605

IPC: B01D46/24

Language of the proceedings: EN

Title of invention:

Honeycomb filter

Patent Proprietor:

Ibiden Co., Ltd.

Opponents:

STRAWMAN LIMITED
Haldor Topsoe A/S

Headword:

Honycomb filter with large and small volume cells/IBIDEN

Relevant legal provisions:

EPC Art. 108, 123(2)
EPC R. 43(6), 99(2)
RPBA Art. 12(4), 13(1), 13(3), 15(1)

Keyword:

Admissibility of appeal - appeal sufficiently substantiated
(yes)

Main request - admitted (yes)

Amendments - main request - added subject-matter (yes)

Late-filed auxiliary requests - admitted (no)

Decisions cited:

T 0922/05, T 1807/07, T 0933/09, T 1634/09, T 2485/11,
T 0419/12

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 1434/15 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 11 May 2017

Appellant:
(Patent Proprietor)

Ibiden Co., Ltd.
1 Kandacho 2-chome
Ogaki-shi
Gifu 503-8604 (JP)

Representative:

Hoefler & Partner Patentanwälte mbB
Pilgersheimer Straße 20
81543 München (DE)

Respondent 1:
(Opponent 1)

STRAWMAN LIMITED
Orchard Lea
Horns Lane
Combe
Witney, Oxfordshire OX29 8NH (GB)

Representative:

Naylor, Matthew John
Mewburn Ellis LLP
City Tower
40 Basinghall Street
London EC2V 5DE (GB)

Respondent 2:
(Opponent 2)

Haldor Topsoe A/S
Nymollevvej 55, P.O.Box 213
DK-2800 Lyngby (DK)

Representative:

Inspicos P/S
Kogle Allé 2
2970 Hørsholm (DK)

Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted on 10 June 2015
revoking European patent No. 2319605 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman E. Bendl
Members: A. Haderlein
 O. Loizou

Summary of Facts and Submissions

- I. The present appeal lies from the decision of the opposition division to revoke European patent EP 2 319 605. The patent in suit concerns a honeycomb filter.
- II. The opposition division revoked the patent. It held *inter alia* that the ground for opposition pursuant to Article 100(c) EPC prejudiced the maintenance of the patent as granted. The auxiliary requests were either found not to meet the requirement of Article 123(2) EPC or were not admitted into the proceedings for lack of *prima facie* allowability under that provision.
- III. The patent proprietor (appellant) lodged an appeal against this decision. With its grounds of appeal it filed a main and three auxiliary requests.
- IV. The board issued a communication pursuant to Article 15(1) RPBA.
- V. With letter dated 11 April 2017, the appellant filed amended main and auxiliary requests 1 to 3 and an auxiliary request 4.
- VI. At the oral proceedings before the board, the appellant withdrew the previously filed auxiliary requests 1 to 3, filed a new auxiliary request 1 and declared its previously filed auxiliary request 4 to be its auxiliary request 2.
- VII. Claim 1 of the main request reads as follows:

"1. A honeycomb filter comprising:

a honeycomb structured body (10) which is provided by bonding a plurality of honeycomb fired bodies (20) each made of a porous ceramic with one another by interposing an adhesive layer (11) therebetween to construct a ceramic block (13), and then forming a coat layer (12) for preventing leak of exhaust gases around the ceramic block (13), wherein

the main component of constituent materials of the honeycomb structured body is silicon carbide, wherein

the honeycomb structured body (10) includes a plurality of cells placed in parallel with one another with a cell wall interposed therebetween in a longitudinal direction, a first end face (14) and a second end face (15), wherein

in the honeycomb fired bodies (20), the plurality of cells include large volume cells (21a) each having a relatively larger cross-sectional area perpendicular to the longitudinal direction thereof than small volume cells (21b), and the small volume cells (21b) each having a relatively smaller cross-sectional area perpendicular to the longitudinal direction thereof than the large volume cells (21a), and the large volume cells (21a) and the small volume cells (21b) are alternately disposed one by one; wherein

the large volume cell (21a) has a (sic) octagonal shape in the cross section perpendicular to the longitudinal direction thereof and the small volume cell (21b) has a quadrangular shape in the cross section perpendicular to the longitudinal direction thereof; wherein

the honeycomb fired bodies (20) have a first end face

(24) and a second end face (25); wherein the large volume cell (21a) is open at an end portion on the first end face (24) side of the honeycomb fired body (20) and is sealed with a sealing material (22a) at an end portion on the second end face (25) side of the honeycomb fired body (20); and the small volume cell (21b) is open at an end portion on the second end face (25) side of the honeycomb fired body (20) and is sealed with a sealing material (22b) at an end portion on the first end face (24) side of the honeycomb fired body (20); wherein

the cell wall (23) interposed between the large volume cell (21a) and the small volume cell (21b) functions as a filter, namely exhaust gases (G) introduced to the large volume cell (21a) pass through the cell wall (23) interposed between the large volume cell (21a) and the small volume cell (21b) and then flow out from the small volume cell (21b); wherein

the honeycomb structured body (10) includes the plurality of the honeycomb fired bodies (20) which are arranged and bonded with one another in a manner that the first end face (24) of each of the honeycomb filter bodies (20) forms the first end surface (14) of the honeycomb structured body (10), and the second end face (25) of each of the honeycomb fired body (20) forms the second end face (15) of the honeycomb structure body (10);

wherein a zeolite is supported on the cell wall (23) of the honeycomb structured body, wherein

an amount of the zeolite supported on the cell wall (23) is 80 to 150 g/L,

a porosity of the cell wall (23) of the honeycomb structured body is 55 to 65%,

a cell density in a cross section perpendicular to the longitudinal direction of the honeycomb structured body (10) is 46.5 to 62.0 pcs/cm²,

a thickness of the cell wall (23) of the honeycomb structured body (10) is 0.2 to 0.3 mm, and

an area ratio of a cross sectional area of each of the large volume cells (21a) perpendicular to the longitudinal direction relative to a cross sectional area of each of the small volume cells (21b) perpendicular to the longitudinal direction is 1.4 to 2.4."

VIII. Claim 1 of auxiliary request 1 corresponds to claim 1 of the main request with *inter alia* the following amendments:

- in line 3 of claim 1 "illustrated by Fig. 2a" is inserted after "honeycomb fired bodies (20)";

- the paragraph following the paragraph starting with "in the honeycomb fired bodies (20)" is amended as follows (amendments underlined or struck through):

"the large volume cells (21a) each ~~have~~s a the same octagonal shape in the cross section perpendicular to the longitudinal direction thereof and the small volume cells (21b) each ~~have~~s a the same quadrangular shape..."

IX. Claim 1 of auxiliary request 2 (submitted in writing as auxiliary request 4) reads as follows (only particular

passages thereof being reproduced below):

"characterised in that...

first, base materials having different porosity from one another are manufactured;

base materials 1a, 1b, 1c, 1d, 1e, 2 and 3 having a different cell cross-sectional shape from one another are manufactured as a base materials 1 as follows:... to obtain Examples 2 to 9 honeycomb filters are manufactured by... using the base materials shown in Table 2 below..." (Table 2 corresponds to Table 2 on page 31 of the application as filed).

- X. The arguments of the appellant, as far as relevant to the present decision, may be summarised as follows:

Main request - Article 123(2) EPC

The amendments were based on the embodiment disclosed in the application as filed in paragraphs [0032] et seq. and in Figures 2(a) and 2(b). In this embodiment the features whereby all large volume cells (21a) had the same cross-sectional area and shape and all small volume cells (21b) had the same cross-sectional area and shape were disclosed as being inextricably linked with the remaining features thereof. These features were however at least implicitly present in claim 1 of the main request.

Admissibility of auxiliary requests 1 and 2

Auxiliary request 1 was filed in reaction to the outcome of the discussions at the oral proceedings before the board. The reference to the figures was introduced in reaction to the objections raised by the respondent 1 at the oral proceedings before the board.

Auxiliary request 2 was filed as a direct reaction to the preliminary opinion contained in the communication pursuant to Article 15(1) RPBA. Claim 1 was supported by claim 1 as granted and by paragraphs [0058] to [0086] of the application as filed. Claim 1 was compliant *inter alia* with the requirement of Article 84 EPC because it was clear that it required the preparation of only one single base material.

XI. The arguments of respondents 1 and 2 (opponents 1 and 2) may be summarised as follows:

Admissibility of the appeal

According to respondent 2, the appeal was inadmissible in particular because in the grounds of appeal the appellant had not set out why the amendments carried out in the claim requests submitted with the grounds of appeal addressed the objections under Article 123(2) EPC as set out in the decision under appeal.

Admissibility of the main request

According to respondent 2, the main request could and should have been filed in the proceedings before the opposition division. It should not be admitted into the proceedings pursuant to Article 12(4) RPBA. In particular, in the proceedings before the opposition division, the proprietor had incorporated increasing amounts of text from paragraphs [0030] to [0033] of the patent in a piecemeal manner. However, the entirety of these paragraphs had never been incorporated into a request before the opposition division. Incorporating substantially the entire text of these passages amounted to a further step in the sequence of the eight auxiliary requests submitted before the opposition

division. Since the appeal proceedings were not a continuation of the first-instance proceedings, the main request should not be admitted into the proceedings.

Main request - Article 123(2) EPC

The subject-matter of claim 1 went beyond the content of the application documents as filed, in particular because claim 1 required neither that all large volume cells had the same cross-sectional area and shape nor that all small volume cells had the same cross-sectional area and shape.

Admissibility of auxiliary requests 1 and 2

Auxiliary request 1 should not be admitted into the proceedings because it did not overcome the objections raised and moreover introduced an unallowable reference to the drawings.

Auxiliary request 2 should not be admitted into the proceedings because of a number of objections as to lack of clarity. In particular, it was not clear whether protection was sought only for a plurality of honeycomb filters being manufactured from base materials having different porosities. Also, the inclusion of a table containing data for comparative examples left the reader in doubt whether protection was also sought for the comparative examples.

XII. Requests

The appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request filed with letter dated

11 April 2017 or, in the alternative, auxiliary request 1 filed during oral proceedings or auxiliary request 2, previously filed with letter dated 11 April 2017 as auxiliary request 4.

Respondent 1 requested that the appeal be dismissed. Respondent 2 requested that the appeal be rejected as inadmissible or dismissed.

Reasons for the Decision

1. Admissibility of the appeal
 - 1.1 With respect to the admissibility of the appeal, the only contentious issue is whether the requirement of Article 108, third sentence, EPC in conjunction with Rule 99(2) EPC is complied with, i.e. whether the statement of grounds indicates the reasons for setting aside the decision impugned, or the extent to which it is to be amended, and the facts and evidence on which the appeal is based.
 - 1.2 According to respondent 2, the appeal should be rejected as inadmissible because in the grounds of appeal the appellant had not set out why the amendments carried out in the claim requests submitted with the grounds of appeal addressed the objections under Article 123(2) EPC as set out in the decision under appeal. The grounds of appeal "[n]either clearly and concisely set out why the first-instance decision was incorrect nor stated how the features of claim 1 might overcome" the objections set out in the decision under appeal. It was not apparent "how the amendments to the claims can overcome the reasons for the opposition

division's refusal under Article 123(2) EPC".

- 1.3 The board observes that the mere filing of amended claims may indeed be insufficient to meet the requirements of Article 108 and Rule 99(2) EPC. Reference is made to the decisions cited in Case Law of the Boards of Appeal, 8th ed., IV.E.2.6.5b, page 1106, and also referred to by respondent 2 in its written submissions.
- 1.4 In the case at hand, in the decision under appeal the opposition division found all requests underlying the decision to (*prima facie*) contain added subject-matter. With its grounds of appeal, the appellant not only filed amended sets of claims, but also explicitly stated that the "present main request and auxiliary requests 1 to 3 are filed to address the Article 123(2) EPC objections raised by the opposition division... see in particular item 5.1 of the decision" (see page 3, section 4 of the grounds of appeal). Section 5.1 of the reasons of the impugned decision deals with the *prima facie* non-compliance with Article 123(2) EPC of the then pending fifth auxiliary request and in particular with the issue of incorporating passages from paragraph [0033] of the originally filed application without incorporating features disclosed in paragraph [0032] thereof. In the grounds of appeal, explicit reference is made to parts of the application as filed including said paragraph [0032] which appear, at first sight, to be, at least in part, literally incorporated into independent claim 1 (see section 2.1 of the grounds of appeal).
- 1.5 Thus, in the present case the grounds of appeal, apart from amended claim requests, also contain explicit reasons "for setting aside the decision impugned" as

required in Rule 99(2) EPC.

- 1.6 The decisions referred to by respondent 2 relate to cases wherein the underlying facts were substantially different from those of the present case.

In T 933/09 (see reasons 3 and 4), a general reference to in total 26 pages of description and newly drafted features replacing those features objected to by the first-instance department was found not to be sufficient in order to comply with Rule 99(2) EPC. In the case at hand, as stated above, reference is made in the grounds of appeal to specific paragraphs (paragraphs "[0032] to [0034] and [0036]") which appear to be literally incorporated into claim 1, i.e. whose features have not been newly drafted.

In T 922/05, the patent had been revoked by the opposition division on several grounds including the compliance of the claims with Article 100(c) EPC. In the grounds of appeal, claims different from those submitted at first instance were submitted, but the amendments were not identified by the appellant (T 922/05, reasons 6 and 7). That case is therefore substantially different from the one underlying the present case in that in the latter the first-instance decision only dealt with (*prima facie*) compliance with Article 123(2) EPC and in that the amendments in the requests filed with the grounds of appeal are clearly identified.

2. For the above reasons, the board concludes that the requirements of Article 108, third sentence, and Rule 99(2) EPC are met. The appeal is therefore admissible.

3. Main request - admissibility
 - 3.1 Respondent 2 objected to the admissibility of the main request filed with the grounds of appeal under Article 12(4) RPBA.
 - 3.2 The present main request was filed in response to the preliminary opinion contained in the communication under Article 15(1) RPBA and essentially corresponds to the main request filed with the grounds of appeal (the expressions "substantially" and "surely" being deleted). Its admission into the proceedings is therefore at the discretion of the board (Article 13(1), (3) RPBA).
 - 3.3 The board notes that none of the requests submitted by the appellant before the opposition division corresponds to the present main request. The board however also observes that the appellant made various attempts to overcome the objections under Article 100(c) or Article 123(2) EPC raised by the respondents or the opposition division, in particular by submitting at the oral proceedings before the opposition division no fewer than eight auxiliary requests (see impugned decision, point 10 of the facts and submissions). The board also notes that the oral proceedings before the opposition division opened at 9.00 hrs and were closed at 16.30 hrs. In view of the filing of eight auxiliary requests at the oral proceedings in an attempt to overcome the objections raised by the respondents or the opposition division and considering the duration of the proceedings, it cannot be said that, from an objective point of view, the appellant was prompted to file yet another request and in particular to file the

present main request (or the main request filed with the grounds of appeal) in its specific form which could already have been filed in the proceedings before the first instance (cf. T 419/12, reasons 2.1.2; see also T 2485/11, reasons 2.3.3).

Thus, the main request is admitted into the proceedings.

4. Main request - Article 123(2) EPC

4.1 The appellant did not contest that the amendments were based on the embodiment disclosed in the application as filed in paragraphs [0032] et seq. and in Figures 2(a) and 2(b) and that in this embodiment the feature whereby all large volume cells (21a) had the same cross-sectional area and shape and all small volume cells (21b) had the same cross-sectional area and shape was disclosed in this embodiment as being inextricably linked with the remaining features thereof. The appellant however contended that this feature was at least implicitly present in claim 1 of the main request. This was clear to the skilled person, in particular because the honeycomb structured bodies referred to in claim 1 were to be produced by an extrusion dye which resulted in large volume cells all having the same cross-sectional area and shape and, likewise, in small volume cells all having the same cross-sectional area and shape. Moreover, this feature was inherently present in claim 1 of the main request because of the use of the expression "each" in line 3 thereof. The use of this expression made it clear that all large volume cells had the same features and all small volume cells had also the same features, i.e. including cross-sectional area and shape. Likewise, the expression "each" was used in the paragraph in claim 1

starting with "in the honeycomb fired bodies (20)...". The skilled person would therefore construe claim 1 so as to refer to honeycomb fired bodies containing the contentious feature. This view was also supported because the large and small volume cells in the singular and in the plural bore the same reference numeral.

- 4.2 The board observes that in claim 1 the word "each" is mentioned at several instances. In the paragraph starting with "a honeycomb structured body" it is said that "each [honeycomb fired body] is made of a porous ceramic" (line 3 of claim 1). From this passage, however, it cannot be inferred that the contentious feature, i.e. all large volume cells having the same cross-sectional area and shape and all small volume cells having the same cross-sectional area and shape, is present in claim 1. Also, the feature "each having a relatively larger cross-sectional area... and... each having a relatively smaller cross-sectional area..." does not imply that the single cells of the two types of cells each have the same cross-sectional area and shape. Rather, this passage also extends to a number of large volume cells having for instance different cross-sectional areas which are all larger than the cross-sectional area of the largest small volume cell. The board also notes that the paragraph "the large volume cell (21a) has a (sic) octagonal shape..." makes reference to the singular ("the... cell") and thus can also be construed so as to refer to only one of the plurality of large volume cells referred to further above in the claim. In this respect, the fact that the same reference signs are used for the large or small volume cell in the singular or the plural is of no assistance, because the reference signs do not have limiting character (see T 1807/07, reasons 2.1, fifth

paragraph). In any event, this passage refers to the cross-sectional shape only and is silent about the cross-sectional area and for instance covers embodiments having a plurality of large volume cells all having an octagonal shape but different cross-sectional areas.

In conclusion, the features which are referred to *supra* at 4.1, first sentence, and which are inextricably linked to the other features incorporated into claim 1 are neither explicitly nor implicitly present in that claim. The requirement of Article 123(2) EPC is therefore not met.

5. Auxiliary request 1 - admissibility

5.1 Auxiliary request 1 was filed only at the oral proceedings before the board. Its admission into the proceedings is therefore at the discretion of the board (Article 13(1), (3) RPBA).

5.2 According to the appellant, auxiliary request 1 was filed in reaction to the outcome of the discussions at the oral proceedings before the board. The appellant had not construed the preliminary opinion in the board's communication pursuant to Article 15(1) RPBA as raising doubts as to whether the feature of all large/small volume cells having the same size/shape was inherently implied in the wording of claim 1. The reference to a figure was introduced in reaction to the objections raised by respondent 1 at the oral proceedings before the board, i.e. that the passages relied upon for amendment referred to Figures 2(a) and 2(b).

5.3 The board notes that its communication pursuant to Article 15(1) RPBA contains the following passage:

"The amendments seem to be objectionable also under Article 123(2) EPC. In particular, it seems that the amendments stem from parts of the description relating to an embodiment (Fig. 2(a)) wherein all small volume cells have the same cross-sectional area/shape and all large volume cells have also the same cross-sectional area/shape.... However, it appears that claim 1 of all requests does neither specify that all small volume cells have the same cross-sectional area/shape nor that all large volume cells have the same cross-sectional area/shape." (see item 5.2).

For an objective reader there could not have been any doubt that the board was of the preliminary opinion that claim 1 of the then pending main request, corresponding essentially to the main request underlying the present decision (cf. 3.2 *supra*), did not meet the requirement of Article 123(2) EPC because its claim 1 did not specify that all small volume cells had the same cross-sectional area and shape and that all large volume cells had the same cross-sectional area and shape. The outcome of the discussion on the main request at the oral proceedings could therefore not have come as a surprise to the appellant.

The admission of auxiliary request 1 into the proceedings can therefore not be justified by a surprising, as alleged by the appellant, turn of the discussion at the oral proceedings.

5.4 As to the insertion of the expression "illustrated by Fig. 2a", the board observes that according to Rule 43(6) EPC, the claims "shall not contain such

expressions as ... 'as illustrated in figure... of the drawings'". The insertion of the aforementioned expression into claim 1 is therefore *prima facie* in contravention of this provision. Thus, auxiliary request 1 is not clearly or obviously allowable and its admission would extend the scope of discussion as determined by the grounds of appeal, i.e. the discussion would be extended to a provision which had never been discussed before (cf. T 1634/09, reasons 3.3.2).

5.5 For the above reasons, the board does not admit auxiliary request 1 into the proceedings.

6. Auxiliary request 2

6.1 Auxiliary request 2 was initially filed as auxiliary request 4 with letter dated 11 April 2017, i.e. it was filed after oral proceedings had been arranged. Its admission into the proceedings is therefore at the discretion of the board (Article 13(1), (3) RPBA).

6.2 According to the appellant, this request was filed as a direct reaction to the preliminary opinion contained in the communication pursuant to Article 15(1) RPBA. Claim 1 was directed to specific embodiments. Claim 1 was supported by claim 1 as granted and by paragraphs [0058] to [0086] of the application as filed and was compliant *inter alia* with the requirement of Article 84 EPC because it was clear that it required the preparation of only one single base material.

In contrast, respondent 1 argued that this request was objectionable for lack of clarity for a number of reasons and in particular required the preparation of base materials having different porosity. It was

therefore not clear whether protection was also sought for a single honeycomb filter made of a single base material.

- 6.3 The board observes that in the communication pursuant to Article 15(1) RPBA it was of the preliminary opinion that, although inextricably linked with other features incorporated into claim 1 and stemming from paragraphs [0032] to [0034] and [0036], the feature relating to the cross-sectional area and the cross-sectional shape of the large and small volume cells not being included in claim 1 led to an infringement of Article 123(2) EPC (see 5.3 *supra*).

In contrast, the appellant contends that claim 1 of auxiliary request 2 was based on granted claim 1 and paragraphs [0058] to [0086]. Thus the features that are now incorporated into claim 1, which replace the amendments carried out in the main request or auxiliary request 1, are based on entirely different passages of the application as filed, and furthermore it is not *prima facie* apparent that the objections raised in the board's communication are overcome. In particular, in claim 1 reference is again made to the singular and to the indefinite article "a" of the large or small volume cell when it comes to the definition of its cross-sectional shape (see in particular the upper half of page 2 of claim 1). From an objective perspective, such a replacement can therefore not constitute a legitimate reaction to the preliminary opinion of the board, i.e. that claim 1 does neither specify that all small volume cells have the same cross-sectional area/shape nor that all large volume cells have the same cross-sectional area/shape.

6.4 Moreover, the amendments are *prima facie* objectionable for lack of clarity for a number of reasons and are therefore *prima facie* not allowable (see T 1634/09 *supra*).

For instance, the wording of claim 1, a product claim, requires the process step of preparing base materials having a "different porosity from one another" (claim 1, page 1, upper half of the page). This appears to imply that claim 1 does not cover a honeycomb filter made of honeycomb structured bodies being made of a single base material. This however is at odds with the appellant's contention that claim 1 also covers honeycomb filters made of a single base material, i.e. a material having only one porosity.

Also, while the incorporation, for the first time in the proceedings, of large tables (e.g. Table 2) from the application documents as filed into claim 1 may not be objectionable *per se*, at least the fact that Table 2 on the last page of claim 1 contains rows labelled "comparative example..." leaves the reader in doubt whether the "comparative examples" mentioned therein are to be encompassed by the claims or not.

6.5 For these reasons, the board does not admit auxiliary request 2 into the proceedings.

7. Conclusion

As there is no allowable request, it follows that the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



C. Vodz

E. Bendl

Decision electronically authenticated