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**Datasheet for the decision  
of 23 March 2017**

**Case Number:** T 1007/13 - 3.2.06

**Application Number:** 04728192.8

**Publication Number:** 1613845

**IPC:** F01N3/022, F01N3/28

**Language of the proceedings:** EN

**Title of invention:**

POROUS SHEET AND SUBSTRATE HAVING POROUS SHEET(S) FOR TREATING  
EXHAUST GASES OF COMBUSTION ENGINES

**Patent Proprietor:**

Dinex Ecocat OY

**Opponent:**

Emitec Gesellschaft für Emissionstechnologie mbH

**Relevant legal provisions:**

EPC Art. 123(2)  
RPBA Art. 13(1)

**Keyword:**

Amendments - extension beyond the content of the application  
as filed (yes)  
Late-filed auxiliary requests - admitted (no)

**Decisions cited:**

G 0002/10, T 0514/88, T 0054/82



**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 1007/13 - 3.2.06

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.06**  
**of 23 March 2017**

**Appellant:** Emitec Gesellschaft für Emissionstechnologie mbH  
(Opponent) Hauptstraße 128  
D-53797 Lohmar (DE)

**Representative:** Rössler, Matthias  
KNH Patentanwälte Kahlhöfer Neumann  
Rößler Heine PartG mbB  
Postfach 10 33 63  
40024 Düsseldorf (DE)

**Respondent:** Dinex Ecocat OY  
(Patent Proprietor) P.O. Box 20  
41331 Vihtavuori (FI)

**Representative:** Teipel, Stephan  
Lederer & Keller  
Patentanwälte Partnerschaft mbB  
Unsöldstraße 2  
80538 München (DE)

**Decision under appeal:** **Interlocutory decision of the Opposition**  
**Division of the European Patent Office posted on**  
**15 March 2013 concerning maintenance of the**  
**European Patent No. 1613845 in amended form.**

**Composition of the Board:**

**Chairman** M. Harrison  
**Members:** G. de Crignis  
W. Ungler

## Summary of Facts and Submissions

- I. By way of its interlocutory decision, the opposition division held that European Patent No. 1 613 845 in an amended form met the requirements of the European Patent Convention (EPC).
- II. The appellant (opponent) filed an appeal against this decision and objected to the subject-matter of the claims *inter alia* under Article 123(2) EPC.
- III. With its reply to the appeal, the respondent (patent proprietor) requested dismissal of the appeal.
- IV. In a communication annexed to the summons to oral proceedings, the Board indicated *inter alia* its preliminary view that the requirement of Article 123(2) EPC appeared not to be met.
- V. In reply, the respondent maintained its previous request and submitted first to fourth auxiliary requests.
- VI. With a further letter of 13 March 2017, the respondent requested to continue the appeal proceedings but withdrew its request for oral proceedings and announced that in case oral proceedings were to take place, the respondent would not attend.
- VII. Oral proceedings were held before the Board on 23 March 2017. The respondent (patent proprietor) did not attend the oral proceedings as announced.

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

The respondent requested (in writing) that the appeal be dismissed (main request) or that the patent be maintained in an amended form according to one of the first to fourth auxiliary requests filed with letter dated 23 January 2017.

VIII. Claim 1 considered allowable by the opposition division (main request) reads as follows:

"A mesh sheet for treating exhaust gases of combustion engines in open channels, characterized in that wires (31) of said mesh sheet (3,3a,3b) has been covered and openings (32) of said mesh sheet (3,3a,3b) has been at least partially filled by a support (33) having the median pore size of pores (35) over 10 nm and having the median particles size from 2 to 10  $\mu\text{m}$  and having the area mass of support (33) from 20 to 200  $\text{g}/\text{m}^2$ ."

Claim 1 of auxiliary request 1 reads:

"A mesh sheet for treating exhaust gases of combustion engines in open channels, characterized in that the mesh sheet (3,3a,3b) has wires (31) and square openings (32), and wherein wires (31) of said mesh sheet (3,3a,3b) has been covered and openings (32) of said mesh sheet (3,3a,3b) has been at least partially filled by a support (33) having the median pore size of pores (35) over 10 nm and having the median particles size from 2 to 10  $\mu\text{m}$  and having the area mass of support (33) from 20 to 200  $\text{g}/\text{m}^2$ ."

Claim 1 of auxiliary request 2 reads:

"A mesh sheet for treating exhaust gases of combustion engines in open channels, characterized in that the mesh sheet (3,3a,3b) has wires (31) and square openings (32), and wherein wires (31) of said mesh sheet (3,3a,3b) has been covered and openings (32) of said mesh sheet (3,3a,3b) has been at least partially filled by a

support (33) having pores (35) and coarse particles, and wherein the median pore size of the pores (35) is over 10 nm and the median particles size is from 2 to 10  $\mu\text{m}$  and having the area mass of support (33) from 20 to 200  $\text{g}/\text{m}^2$ ."

Claim 1 of auxiliary request 3 reads:

"A mesh sheet for treating exhaust gases of combustion engines in open channels, characterized in that the mesh sheet (3,3a,3b) has wires (31) and square openings (32), and wherein wires (31) of said mesh sheet (3,3a,3b) has been covered and openings (32) of said mesh sheet (3,3a,3b) are filled by a support (33) having the median pore size of pores (35) over 10 nm and having the median particles size from 2 to 10  $\mu\text{m}$  and having the area mass of support (33) from 20 to 200  $\text{g}/\text{m}^2$ ."

Claim 1 of auxiliary request 4 reads:

"A mesh sheet for treating exhaust gases of combustion engines in open channels, characterized in that the mesh sheet (3,3a,3b) has wires (31) and square openings (32), and wherein wires (31) of said mesh sheet (3,3a,3b) has been covered and openings (32) of said mesh sheet (3,3a,3b) are filled by a support (33) having pores (35) and coarse particles, and wherein the median pore size of the pores (35) is over 10 nm and the median particles size is from 2 to 10  $\mu\text{m}$ , and having the area mass of support (33) from 20 to 200  $\text{g}/\text{m}^2$ ."

IX. The arguments of the appellant may be summarised as follows:

The skilled person could not recognize a link between the features of "coarse particles over 1.4  $\mu\text{m}$ " present in originally filed claim 1 and "having the median particles size from 2 to 10  $\mu\text{m}$ " present in current

claim 1. Page 4, lines 19/20 disclosed that according to an embodiment of the invention the median particle size of support was over 1  $\mu\text{m}$ , and a preferred range started from 1.4  $\mu\text{m}$  to 15  $\mu\text{m}$ , such as from 2 to 10  $\mu\text{m}$ . Accordingly, the skilled person had no indication that the range of from 2 to 10  $\mu\text{m}$  would apply generally for coarse particles. Moreover, page 4, lines 19/20 disclosed the ranges in relation to a porous sheet but not in relation to a mesh sheet; a mesh sheet was a selection from among several examples of sheet types. Accordingly, the requirement of Article 123(2) EPC was not met.

The auxiliary requests should not be admitted. They should all have been filed earlier. Further, none of these requests was *prima facie* suitable to overcome the above objection (Article 123(2) EPC). No arguments had been provided by the respondent as to why the subject-matter of claim 1 of these requests should overcome the above objection to the main request. Additionally, the respondent had not even supplied amended descriptions for these requests.

X. The arguments of the respondent may be summarised as follows:

The main request was allowable. According to the general Case Law of the Boards of Appeal regarding Article 123(2) EPC, an amendment made to a claim was permitted within the limits of what the skilled person would derive directly and unambiguously from the disclosure of the application as originally filed (G 2/10). The total information content of the disclosure as a whole had to be considered (see e.g. T 514/88). Also, no objection under Article 123(2) EPC necessarily arose when combining different parts of the

description, and different parts may properly be read together (T 54/82).

Claims 1, 3, 8 and 13 as originally filed disclosed all features of current claim 1 apart from the features "median particle size from 2 to 10  $\mu\text{m}$ " and "wires (31) of said mesh sheet (3,3a,3b) has been covered and openings (32) of said mesh sheet (3,3a,3b) are filled by a support". These features were disclosed in combination in the description as filed.

The application as filed (page 4, lines 19/20) disclosed that the median particle size of the particles of the support was from 2 to 10  $\mu\text{m}$ . Accordingly, the replacement of the feature "coarse particles over 1.4  $\mu\text{m}$ " by the feature "having the median particle size from 2 to 10  $\mu\text{m}$ " was supported by the application as filed. Consistently, Figures 10 and 11 illustrated the pores and particles of the support. The skilled person understood that in order to ensure that the pores had a median pore size of over 10 nm, the particles had to have a specific median particle size.

From page 3, lines 27/28, it was evident to a skilled person that all subject-matter disclosed in relation to porous sheets also applied to mesh sheets. Claims 1 and 3 as filed, when taken together, indicated that the porous sheet was a mesh sheet. Additionally, page 2, lines 25-27 of the application as filed referred generally to the essential characteristic of the support including pores and particles.

Accordingly, the application as filed disclosed "a mesh sheet which was at least partially covered by a support that has pores having a median pore size of over 10 nm



and particles having a median particle size from 2 to 10  $\mu\text{m}$ ".

The auxiliary requests should be admitted into the proceedings as they were filed in reaction to the Board's communication. Claims 1 and 19 of the first auxiliary request had been amended to include the limitation that the openings of the mesh sheet were square openings, which feature was based on page 10, lines 19/30 and Figures 6 to 8 of the application as filed. Claims 1 and 19 of the second auxiliary request had been amended further in order to include the feature that the particles of the mesh sheet were coarse particles based on page 10, lines 3/4 of the application as filed. Claims 1 and 17 of the third auxiliary request had been amended to include the feature that the openings were filled with the support based on claim 2 as filed and Figure 8 of the application as filed. Claims 1 and 17 of the fourth auxiliary request had been amended to include both features added to the claims of the second and the third auxiliary requests.

## **Reasons for the Decision**

1. *Main request - amendments*
- 1.1 No unambiguous disclosure is present in the application as originally filed, for the combination of features as defined by the subject-matter of claim 1.

- 1.2 In its communication the Board had stated in its provisional opinion (point 2.3) that "According to page 3, lines 27/28, the "Porous sheet can be preferably mesh sheet or metal foam sheet, sintered metal sheet, knitted wire mesh, ceramic fiber sheet etc." Accordingly, a "mesh sheet" represents a specific selection within the group of porous sheets. However, no mesh sheet is disclosed which is at least partially filled by a support having the median particle size from 2 to 10  $\mu\text{m}$ ."
- 1.3 In response, the respondent cited originally filed claims 1, 3, 8 and 13. Originally filed claim 1 discloses a porous sheet having a covering support having pores over 10 nm and coarse particles over 1,4  $\mu\text{m}$ . Originally filed claim 3 refers to the feature of the porous sheet being a mesh sheet. Originally filed claim 8 refers to the median pore size of the support being over 10 nm. Originally filed claim 13 refers to the area mass of support being in the range of from 20 to 200  $\text{g}/\text{m}^2$ .
- 1.4 The combination of these claims does not include the following features:  
"a median particle size from 2 to 10  $\mu\text{m}$ " and  
"wires of said mesh has [sic] been covered and openings of said mesh sheet has [sic] been at least partially filled by a support". Accordingly, the combination of originally filed claims by itself does not provide a basis in the application as filed for the combination of features in current claim 1.
- 1.5 For these features, the respondent referred to the disclosure in the description as originally filed. It was argued that the feature concerning the range for the median particle size clarified the feature "coarse

particles over 1.4  $\mu\text{m}$ ". It was argued that the skilled person would know that coarse particles were simply particles having a median size bigger than fine particles. The respondent's reference to page 4, lines 19/20 of the application as filed as disclosing that the median particle size of the particles of support was from 2 to 10  $\mu\text{m}$  is as such correct. However, it is unrelated to mesh sheets.

- 1.6 Page 4, lines 19/20, states that according to an embodiment of the invention "the median particle size of support is over 1  $\mu\text{m}$ , preferably from 1,4 to 15  $\mu\text{m}$ , such as from 2 to 10  $\mu\text{m}$ ." It is further explained that the value for the particle size "depends on pore size of the porous sheet(s)" (page 4, line 22). Thus, this paragraph refers to porous sheet(s) only generally, and the preferred range from 2 to 10  $\mu\text{m}$  for the median particle size of the support is not linked in any way to the embodiment(s) concerning mesh sheets as now claimed.
- 1.7 The respondent additionally referred in this context to Figures 10 and 11. These Figures show cross-sections of a mesh sheet covered with a support having fine and coarse particles. No median pore size of the pores nor a specific median particle size of the particles is disclosed.
- 1.8 The respondent also argued that it would be evident for a skilled person that all subject-matter which was disclosed in connection with a porous sheet also applied to a mesh sheet and cited in this regard page 3, lines 27-29 as well as page 2, lines 25/26 of the description as filed. The general reference in the latter citation is however only to the essential characteristic of the support including pores (over

10 nm) and particles (over 1.4  $\mu\text{m}$ ). However, it neither concerns the claimed "median" particles size nor is it related to the selected "mesh" sheet now in the claim.

1.9 According to page 3, lines 27/28, a "mesh sheet" is one of a group of porous sheets; it is stated that the "Porous sheet can be preferably mesh sheet or metal foam sheet, sintered metal sheet, knitted wire mesh, ceramic fiber sheet etc." Accordingly, this group has five specific and further undefined members. The mesh sheet is thus a selection of one specific sheet type from this group. There is no suggestion in this part of the description (or anywhere else) linking the selection of a "mesh sheet" with the feature of the range now claimed for the median particle size of the support. There is also no link to the pores being at least partially filled.

1.10 The reference of the respondent to G 2/10 and T 514/88 highlights that an amendment made to a claim should be held permissible only within the limits of what the skilled person would derive directly and unambiguously from the disclosure of the application as originally filed (G 2/10). The argument that the total information content of the disclosure as a whole has to be considered (see e.g. T 514/88) already underlies the forementioned findings, such that citation of this decision merely supports the Board's conclusions. As regards T 54/82, it can also be agreed by the Board that merely because parts of an application have been combined, does not mean that an objection under Article 123(2) EPC arises. However, the skilled person must consider whether there is a direct and unambiguous disclosure of the combination of elements when considering whether different parts of the description may be properly read together. This is not so in the

present case. In as far as T 54/82 refers to taking the state of the art into account, the Board finds that this would not alter the foregoing, nor has the respondent stated which particular account should be taken of the state of the art in the present case.

1.11 Hence, there is no clear and unambiguous disclosure of the combination of the features included in claim 1 in the originally filed application. The subject-matter of claim 1 thus extends beyond the content of the application as originally filed contrary to Article 123(2) EPC, such that the main request is not allowable.

## 2. *Admittance - Auxiliary requests*

2.1 According to Article 13(1) of the Rules of Procedure of the Boards of Appeal (RPBA), it lies within the discretion of the Board to admit any amendment to a party's case after it has filed its grounds of appeal or reply. In order to be admitted at such a late stage of proceedings, such a request should normally be clearly allowable at least in the sense that it overcomes the objections raised and does not give rise to new objections.

2.2 When submitting the auxiliary requests, the respondent did not address the issue of why these requests would overcome any of the objection(s) set out with regard to the main request. Instead, the respondent simply pointed out the basis for the amendments as such.

2.3 Claim 1 of all auxiliary requests continues to include the features of a "mesh sheet" comprising a support "having the median particle size from 2 to 10  $\mu\text{m}$ ".

- 2.4 None of the cited parts of the text (which were given as the basis for the amendments) discloses the combination of features of a "mesh sheet" comprising a support "having the median particle size from 2 to 10  $\mu\text{m}$ " in a manner which is directly and unambiguously derivable, as set out for the main request above. The respondent also did not argue why this would be the case. Hence, for the reasons given above with respect to the main request, also the amendments in claim 1 of each of the first to fourth auxiliary requests do not lead to the objection with regard to the requirement of Article 123(2) EPC being overcome.
- 2.5 Accordingly, the Board exercised its discretion under Article 13(1) RPBA not to admit the first to fourth auxiliary requests into the proceedings.

**Order**

**For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



M. H. A. Patin

M. Harrison

Decision electronically authenticated