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Bezeichnung der Erfindung: A device for the diffusion of substances between
Title of invention: two fluids via semipermeable membranes
Titre de l'invention :

Klassifikation / Classification / Classement : B01D 13/00, A61M 1/03

ENTSCHEIDUNG / DECISION

vom / of / du 7 November 1989

Anmelder / Applicant / Demandeur : Gambro Lundia AB, et al

Patentinhaber / Proprietor of the patent /
Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence :

EPU / EPC / CBE Article 123(2)

Schlagwort / Keyword / Mot clé : Unallowed incorporation of not-disclosed
equivalents into the content of the
application as filed by substituting the only
disclosed technical means (sealing beads) by a
more general term (pressure seals).

Leitsatz / Headnote / Sommaire

Europäisches
Patentamt

Beschwerdekammern

European Patent
Office

Boards of Appeal

Office européen
des brevets

Chambres de recours



Case Number : T 265/88 - 3.4.1

D E C I S I O N
of the Technical Board of Appeal 3.4.1
of 7 November 1989

Appellant : Gambio Lundia AB, et al
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Decision under appeal : Decision of Examining Division 031
of the European Patent Office
dated 10 February 1988 refusing
European patent application
No. 83 102 691.9 pursuant to
Article 97(1) EPC

Composition of the Board :

Chairman : H. Reich
Members : E. Turrini
L. Mancini

Summary of Facts and Submissions

- I. European patent application No. 83 102 691.9 (publication No. 0 086 503) - a divisional application from parent application 81 100 686.5 (publication No. 0 036 926) - was refused by decision of the Examining Division.
- II. The reason for the refusal was that the subject-matter of Claim 1 as filed with letter dated 3 November 1987 would not satisfy the requirements of Article 123(2) EPC, because of an intended scope-broadening amendment of the term "sealings beads" as disclosed in parent application No. 0 036 926 into the more general expression "pressure seals" without any basis for this generalisation in the original application documents of the parent application.
- III. The Appellant lodged an appeal against this decision.
- IV. Oral proceedings were held, for the preparation of which in a communication pursuant to Article 11(2) RPBA, the Appellant's attention inter alia was drawn to the Board's earlier decision T 416/86; OJ EPO 1989, 308 in view of doubts in the allowability of the above amendment.
- V. At the end of the oral proceedings the Appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the following sets of claims:

Claims: 1-12 according to the main request

 or according to auxiliary request No. 2,
 handed over during oral proceedings;

or according to auxiliary request No. 3,
arrived 10 June 1988;

or one of the claim sets of auxiliary
requests No. 4-8, handed over during oral
proceedings;

Description: pages 1-9 according to EP-A-0 086 503 to be
adapted; and

Drawings: sheets 1/4 - 3/4 of EP-A-0 086 503, and
sheet 4/4, handed over during oral
proceedings.

Claim 1 of the main request reads as follows:

"1. A device for the diffusion of substances between two fluids via one or more semipermeable membranes (2) which are arranged in a stack separated by elongated spacer plates (1) which on their surfaces are provided with ducts (18, 35) connected to inlets and outlets (4-7) for said fluids, these spacer plates (1) being arranged in the folds of one or more membranes (2) folded in zigzag, including two transverse ducts (18) arranged near two opposite end edges (17) of the plates and substantially parallel with these end edges (17) which open onto at least one of the two lateral edges (24) which connect the end edges (17) of the plates (1), each of said transverse ducts (18) extending on one and the same side of the spacer plate (1) across essentially the entire said side and across at least one side edge (24) in such a way that the space outside the mouth of the duct (18) is directly connected with the working channels (35) connected to the transverse duct (18), pressure seals (34) being arranged in longitudinal direction of the plates parallel with their lateral edges (24) and near these edges, which are adapted so as to press

the membrane material (2) between them against the adjoining spacer plate (1), characterized in that a sealing material is cast between the stack and an outer casing (10) in the form of two strands (14) extending around the stack in its transverse direction, as reckoned from the end edges (17) just inside the openings of respective transverse ducts (18)."

Auxiliary request No. 1 was directed to oral proceedings, Claim 1 of auxiliary request No. 2 reads as follows:

"1. A device for the diffusion of substances between two fluids via one or more semipermeable membranes (2) which are arranged in a stack separated by elongated spacer plates (1) which on their surfaces are provided with ducts (18, 35) connected to inlets and outlets (4-7) for said fluids, these spacer plates (1) being arranged in the folds of one or more membranes (2) folded in zigzag, including two transverse ducts (18) arranged near two opposite end edges (17) of the plates and substantially parallel with these end edges (17) which open onto at least one of the lateral edges (24) which connect the end edges (17) of the plates (1), each of said transverse ducts (18) extending on one and the same side of the spacer plate (1) across essentially the entire said side and across at least one side edge (24) in such a way that the space outside the mouth of the duct (18) is directly connected with the working channels (35) connected to the transverse duct (18), the membrane material between the spacer plates being tightly pressed against said spacer plates in longitudinal direction of the plates parallel with their lateral edges (24) and near these edges, which are adapted so as to press the membrane material (2) between them against the adjoining spacer plate (1), characterized in that a sealing material is cast between the stack and an outer casing (10) in the form

of two strands (14) extending around the stack in its transverse direction, as reckoned from the end edges (17) just inside the openings of respective transverse ducts (18)."

Claim 1 of auxiliary request No. 3 reads as follows:

"1. A device for the diffusion of substances between two fluids via semipermeable membranes (2), which are arranged in a stack separated by spacer plates (1), which on their surfaces are provided with ducts (18, 35) connected to the inlets and outlets (4-7) for at least one of the said fluids, these spacer plates (1) being arranged in the folds of one or more membranes (2) folded in zigzag, two transverse ducts (18) being arranged near two opposite front edges (17) of the plates and substantially parallel with these front edges (17), which open onto at least one of the lateral edges (24), which connect the front edges (17) of the plates (1), the stack of spacer plates (1) and membrane material (2) between them being arranged in an outer casing (10) with inlets and outlets (4-7) for the respective fluids, characterized in that the sealing material is cast in between the outer casing (10) and the stack in the form of strands (14), sealing the spaces for the respective fluid from one another and in that two strands extend around the stack in its transverse direction, as reckoned from the front edges (17) just inside the openings of the respective transverse ducts (18)."

Claims 2-12 of each of the above requests are referred back to the corresponding Claim 1.

Due to the fact that the Board in its given decision followed the Appellant's auxiliary request No. 3, it is

superfluous to cite here the wording of the independent claims of auxiliary requests 4-8.

VI. In support of his requests, the Appellant argued essentially as set out below:

A generalisation of the term "sealing bead" into the term "pressure seals" should be allowed for the following reasons:

- (a) According to decisions T 52/82, OJ EPO 1983, 416, point 4d, and T 260/85, OJ EPO 1989, 105, point 11, paragraph 3, a generalisation of subject-matter, which is of no importance to the solution of the stated problem, should be allowed, the longitudinal sealing of the stack being such an unimportant feature.
- (b) In view of decision T 151/84, point 3, not published, and also T 66/85, OJ EPO 1989, 167, point 2, a generalisation of a claim should be allowed if there is a basis for the broadened claim in the original description, which basis comprises also elements which are implicit to the skilled man. Such basis has to be seen in the fact that a skilled person knows of only three possibilities to seal the stack: an O-ring, a flat surface and a sealing bead, which all can be used alternatively. Two of these alternatives, the flat surface and the beads, are disclosed in Figure 14 of the present application. Furthermore, though the indication "grooves 19" on page 6, line 28 of the original description of the parent application was made by mistake and should read "beads 19" as everywhere else in the description, a skilled person derives therefrom, that two forms of sealings can be used, i.e. beads and O-rings in said grooves.

- (c) Having regard to said decision T 66/85, point 5, references to prior art given in an application should be included into its disclosure. Such references are to be found in the original description of the parent application, page 8, lines 6 and 7, and page 9, paragraph 2, in combination with page 1, paragraph 3. Prior art document SE-A-218 441 referred to in the application would disclose a lateral sealing of the stack with O-rings.
- (d) It would be obvious to a skilled person that the salient advantage of the invention to avoid large quantities of glue as stated in the original description of the parent application, page 8, last paragraph, can be realised by strands 14 in combination with each said type of pressure seal.
- (e) A basis for the disclosure of the functional statement in auxiliary request No. 2 is to be seen in original Claim 5.

Moreover, in order to remove corresponding doubts of the Board, the Appellant stated that the "endless ring" formed by said strands 14, 14a - as claimed inter alia in Claim 12 of auxiliary request No. 3 - is disclosed on page 6, line 34 to page 7, line 6, in combination with Figures 10, 12 and 13; and that the amendment of Figure 18, introducing beads 19 on the lower right border-surface, can be derived from page 8, lines 34 and 35, in combination with the position of beads 19 in Figure 15.

Reasons for the Decision

1. The appeal is admissible.

2. Main Request

- 2.1 Claim 1 of the main request comprises subject-matter as disclosed in the original documents of the parent application as follows:

Claim 1 from line 1 to line 17 "plates (1)" corresponds to original Claim 1;

Claim 1, from line 17 "each of said" to line 22 "the transverse duct (18)" is regarded to be disclosed by the original description, page 8, lines 10-13 in combination with Figure 16;

Claim 1, from line 22 "pressure seals (34)" to line 26 "spacer plate (1)" corresponds to the wording of original Claim 5 except that the original term "pressure beads (34)" is replaced by the term "pressure seals (34)";

the features in the characterising part of Claim 1 of the main request are based on original Claims 8 and 9.

- 2.2 Hence, the item to be discussed is whether the broadening of the term "pressure beads" into "pressure seals" is allowable under Article 123(2) EPC.

3. Having regard to the Appellant's arguments in point VI-a to VI-d above the Board takes the following view:

- 3.1 The Appellant himself admits in point VI-d that disclosed sealing beads 19 and 34 are a technical means that indispensably contributes to realise glue savings, which in his view are the salient advantage of the present application. For this reason, said sealing beads are, in the Board's view, of importance for the solution of the problem derivable from the description of the application.

Hence, contrary to the Appellant's view in point VI-a above "sealing beads (34)" represent an essential feature of the application, that is clearly to be excluded from generalisation by the adduced decisions T 52/82 and T 260/85. Moreover, the view expressed in decision T 52/82 is not generally shared, decision T 66/85 (mentioned in point VI-b above) explicitly states in point 2 that a generalisation of a disclosed feature is not permissible, independent from the fact, "whether this feature appears relevant or not to the features which represent the inventive concept of the subject-matter claimed, unless there is a basis for the broadened claim in the original description".

- 3.2 The technical facts to which the Appellant refers in point VI-b above as a "basis" for the generalisation of the term "sealing beads" are held to be not relevant. A skilled person may well know that an O-ring and a flat surface are equivalents to a sealing bead. In the examination of novelty, equivalents of a specific technical means of an invention, which are not explicitly mentioned in the most relevant prior art document are regarded as novel. Following the principle of the "novelty test" in the examination of fresh subject-matter, an amendment is not allowable, if the subject-matter generated by the amendment is "novel" when compared with the content of the original application; see the Board's earlier decision T 194/84 (to be published) point 2.4. Consequently, when approving the validity of the novelty test equivalents of a specific technical means - also in the implicit form of a generalisation - cannot, in the Board's view, be admitted to the implicit disclosure of this specific means, which a skilled person would derive therefrom. The amendment "pressure seals" includes all the equivalents of the disclosed specific means "sealing beads" into the content of the application, i.e. subject-matter which is novel with

regard to the application as filed. Hence, said amendment contradicts Article 123(2) EPC already as a result of the novelty test.

The flat surface in Figure 14 of the application has a bead of another space plate as sealing counterpart and is not contacted by a further flat surface. For this reason, the disclosed flat surface belongs to the "bead"-sealing mechanism and does not represent the disclosure of an alternative sealing means. Having regard to the contradicting designation in the original description of the parent application of means 19 and 34 as "grooves" (page 6, line 28 and page 8, line 38) and as "beads" (page 8, line 34, and Claim 5) a skilled person, in the Board's opinion, is able to recognise that the designation "groove" is erroneous in view of the disclosed function of these means in Claim 5 and their structure derivable from the figures. Hence, the Board regards it as unlikely to derive from such an evident clerical error, that the use of O-rings was originally contemplated.

- 3.3 The Appellant is followed in his view in point VI-c above that according to decision T 66/85 a reference to prior art may be taken into account, when considering the item whether there is a basis for a broadened claim in the original application. However according to the same decision, point 2, this basis must be "sufficiently clear to a person skilled in the art to be unambiguously recognisable as such". Page 8, lines 6 and 7 and page 9, paragraph 2 of the original description of the parent application, indicate that "the plate can be patterned in a largely conventional manner, for example in accordance with any one of the above-mentioned Swedish patents" and that "the spacer plates may be modified to resemble any of the spacer plates described in the aforementioned Swedish patents". Nine different Swedish patents are mentioned on

page 1, paragraph 3. These integral vague statements, in the Board's opinion, do not allow a skilled person to recognise unambiguously the crucial facts as such, i.e. that the lateral edges of the stack inbetween the spacer plates shall be sealed by means other than the disclosed beads.

4. For the above reasons, the Board is convinced that the amendment of the originally disclosed term "sealing beads" into "pressure seals" used in connection with the original disclosed spacer plate stack results in that Claim 1 of the main request is now extended to sealing means other than beads. Already in an earlier decision T 416/86, OJ EPO 1989, 308, point 2.12, the Board has considered that the replacement of a disclosed special feature by a more general expression must be regarded as an amendment inadmissible under Article 123(2) EPC, if the use of such general expression for the first time implicitly associates with the subject-matter of the application specific features going beyond the initial disclosure.

Hence, Claim 1 of the main request cannot be allowed under Article 123(2) EPC. Claims 2-12 of the main request are not allowable, being referred back to Claim 1.

5. **Auxiliary Request No. 2**

- 5.1 Claim 1 of auxiliary request No. 2 (auxiliary request No. 1 being oral proceedings) is based on the originally disclosed subject-matter already mentioned in point 2.1 above except that the original term "pressure beads" of original Claim 5 is amended into the functional statement "the membrane material between the spacer plates being tightly pressed against said spacer plates".

- 5.2 The above substitution of the specific technical sealing means "beads" by its produced effect "pressure" in the Board's opinion corresponds in substance to the broadening by the term "pressure seals" of the main request. Thus, Claim 1 of auxiliary request No. 2 is also regarded to associate for the first time implicitly with the subject-matter of the application specific features going beyond the initial disclosure as pointed out in detail above in points 2 to 4.

Contrary to the Appellant's view in point VI-e above, original Claim 5 cannot be regarded as a basis for the disclosure of the sealing effect as such being claimed independent from any particular means applied. Claim 5 in the Board's opinion is expressly limited to a statement of the effects, which are produced by the sealing beads.

For the above reasons, Claim 1 of auxiliary request No. 2 does not satisfy Article 123(2) EPC. Claims 2-12 of auxiliary request No. 2 are not allowable, being referred back to Claim 1.

6. Auxiliary Request No. 3

- 6.1 The subject-matter of Claim 1 of auxiliary request No. 3 is regarded to be disclosed in original Claims 1, 7, 8 and 9 of the parent application. Hence, there are no objections under Article 123(2) EPC against Claim 1 in the wording of auxiliary request No. 3.

The dependent claims of auxiliary request No. 3 correspond to the original claims of the parent application as

follows: Claims 2-6 correspond to original Claims 2-6 respectively; Claims 7-11 correspond to original Claims 10-14 respectively; Claim 12 is disclosed by the original description of the parent application, page 6, line 34 to page 7, line 6 in combination with Figures 10, 12 and 13. For these reasons there is no objection under Article 123(2) EPC against Claims 2-12 of auxiliary request No. 3 either.

- 6.2 It remains to be determined whether the application in the wording of auxiliary request No. 3 filed during the appeal proceedings satisfies the other requirements of the EPC. As regards the requirements of Article 52(1) EPC, in particular novelty and inventive step, the Examining Division appears not to have reached a final conclusion. Furthermore, in its communication the Examining Division made objections under Rule 29(1) and Article 84 EPC (features essential to the solution of the problem would be missing in the independent claim), which objections are to be reviewed with regard to their relevance in respect of Claim 1 in the wording of auxiliary request No. 3.

In these circumstances and since the appealed decision is founded exclusively on an objection under Article 123(2) EPC the Board considers it appropriate to make use of the powers conferred on it by Article 111 EPC to remit the case to the first instance for further prosecution on the basis of the application documents according to auxiliary request No. 3.

7. It is therefore unnecessary for the Board to consider the claims of auxiliary requests Nos. 4-8.

Order

For these reasons, it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the Examining Division for further prosecution on the basis of the documents according to auxiliary request No. 3, i.e.:

Claims: 1-12, filed on 10 June 1988 with letter dated 7 June 1988;

Description: pages 1-9 according to EP-A-0 086 503;

Drawings: sheets 1/4 to 3/4 according to EP-A-0 086 503; and sheet 4/4 handed over during oral proceedings.

The Registrar:

The Chairman:

M. Beer

H. Reich