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**Datasheet for the decision
of 26 September 2024**

Case Number: T 2165/21 - 3.2.01

Application Number: 08161871.2

Publication Number: 2052754

IPC: A61M16/22, A61M16/08,
A62B19/00, A62B9/04

Language of the proceedings: EN

Title of invention:

Disposable absorber having an adapter and a lip seal

Patent Proprietor:

Drägerwerk AG & Co. KGaA

Opponent:

Klöckner, Christoph

Headword:

Relevant legal provisions:

EPC Art. 100(a), 54, 56
RPBA 2020 Art. 13(2)

Keyword:

Novelty - (yes)

Inventive step - (yes)

Amendment after notification of Art. 15(1) RPBA communication
- exceptional circumstances (no)

Decisions cited:

Catchword:



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Case Number: T 2165/21 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 26 September 2024

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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 4 October 2021
rejecting the opposition filed against European
patent No. 2052754 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman C. Narcisi
Members: S. Mangin
S. Fernández de Córdoba

Summary of Facts and Submissions

- I. The appeal was filed by the appellant (opponent) against the decision of the opposition division to reject the opposition filed against the patent in suit (hereinafter "the patent").
- II. The opposition division held that:
- documents D4-D6 were admissible,
 - the subject-matter of claim 1 was novel over D4 (EP 1 230 943 A2), D5 (US 2006/0231092 A1) and D6 (WO 97/10020) and involved an inventive step starting from D6 in combination with D3 (WO 01/51841 A1).
 - an apportionment of costs was not justified.
- III. Oral proceedings were held before the Board on 26 September 2024.
- IV. The appellant (opponent) requests that the decision be set aside, and the patent be revoked in its entirety.
- The respondent (patent proprietor) requests that the appeal be dismissed and the patent be maintained as granted (main request), in the alternative that the patent be maintained on the basis of one of the auxiliary requests 1 to 8 filed with the reply to the statement of grounds of appeal, wherein auxiliary requests 1, 3, 5, 7 and 8 correspond to auxiliary requests 1 to 5 filed during the opposition proceedings and auxiliary requests 2, 4, and 6 are newly filed.
- V. The subject-matter of claim 1 as granted reads as follows:

A combination of an adapter (1) and an absorber holder (4), wherein the adapter (1) is for adapting the absorber holder (4) to a breathing system:
the absorber holder (4) having a first gas passage (12) and a second gas passage (14) which extend into the region of the connection between the absorber holder (4) and the adapter (1), wherein the second gas passage (14) comprises an outer valve seat (15) having an outer circumferential surface (34) intended to serve as a sealing surface;
the adapter (1) having seals at the first gas passage (12) and the second gas passage (14) in the region of the connection between the absorber holder (4) and the adapter (1), wherein the seal (16, 401, 402, 403, 404, 405) for the second gas passage (14) comprises sealing surfaces (34, 55, 56, 57) in the form of at least one annular sealing lip which extends around the circumferential surface (34) of the outer valve seat (15), and which extends into the circumferential region and seals against the circumferential surface (34) of the second gas passage (14).

VI. In the present decision, reference is further made to D2: Fifth Edition 2007 of "Seals and sealing handbook".

Reasons for the Decision

1. Novelty - Articles 100(a) and 54 EPC

The subject-matter of claim 1 is novel over D4, D5 and D6.

1.1 Novelty in view of D6

The only disputed feature is the following:

"the seal for the second gas passage comprises sealing surfaces in the form of at least one annular sealing lip which extends around the circumferential surface (34) of the outer valve seat (15), and which extends into the circumferential region and seals against the circumferential surface (34) of the second gas passage (14)".

- 1.1.1 The appellant (opponent) referred to the online Merriam Webster and the Collins dictionary and argued that a lip is to be interpreted as an edge, a rim or a brim.

In their view, there was no suggestion under the normal dictionary definition that a "lip" meant a "projecting edge that extends in an identifiable manner from a body", as alleged by the opposition division.

Furthermore, the wording of the claim did not define the body of a seal and a projecting lip. Instead, the claim defined a seal that "comprises sealing surfaces in the form of at least one annular sealing lip". The claim was therefore defining the sealing surfaces of the seal being in the form of an annular sealing lip, but does not define the form of the remainder, e.g., body, of the seal or indeed if there was a separate body at all.

The description and the claim of the granted patent did not provide further structural information regarding the form of the "lip", instead describing in more detail where the sealing surfaces extend, in particular "which extends into the circumferential region and seals against the circumferential surface of the second gas passage". A person skilled in the art would not understand from the granted patent that the reference

to "lip" in claim 1 required a particular structural form.

The appellant emphasized that claim 1 did not define a "lip seal" - this wording was not present in claim 1 at all. Indeed, claim 1 did not require the use of a known type of seal, only a sealing surface that has a specific form, including where the seal extended to, and the surface against which it sealed against was disclosed in D6.

D6 disclosed O-rings seals 30 that had sealing surfaces in the form of an annular edge, rim or lip that "extends around the circumferential surface of the outer valve seat, and which extends into the circumferential region and seals against the circumferential surface of the second gas passage", as defined in claim 1 of the granted patent.

D6 disclosed a valve manifold having a coupling seal (O-ring 30) positioned on a shoulder, the seal sealing against an outer circumferential surface of outer container 21 (see figure 4 of D6) when the outer container 21 was fitted into the valve manifold 29 (see page 10, line 28 - page 11, line 30). Hence, at least the inner portion of O-ring 30 must extend and project relative to that shoulder, i.e. beyond the wall of the valve manifold, or else it could not seal against the outer circumferential surface of outer container 21. The O-ring 30 therefore did have a projecting edge, and did "extend" relative to the wall of the valve manifold 29, thereby forming an annular sealing lip defining a "lip seal".

The appellant (opponent) referred to figure 2.3(b) on page 10 of D2, to show that in use a lip extending from the initial O-ring is formed.

1.1.2 The respondent refuted the arguments of the appellant (opponent) in particular the broad interpretation of the "annular sealing lip" and the "O-ring" seal 30 in figure 4 of D6 being considered as comprising sealing surfaces in the form of at least one annular sealing lip.

In their view the expression "annular sealing lip" had to be interpreted as a whole rather than interpreting each term individually out of their context. An "annular sealing lip" in their view was to be interpreted as the opposition division mentioned in the last paragraph of page 7 of the appealed decision, as a projecting edge extending in an identifiable manner from the body of the seal.

Regarding the reference to figure 2.3(b) on page 10 of D2 presented by the appellant (opponent) for the first time in oral proceedings, the respondent (patent proprietor) requested the reference not to be admitted into the appeal proceedings as it was late filed. They further noted that an important pressure was required to deform the "O-ring" in the manner depicted in figure 2.3(b) of D2 and that D6 did not indicate such pressures around the "O-ring" such that it could not be concluded that in use the O-ring of D6 would deform in such a way.

1.1.3 The Board is not convinced by the arguments presented by the appellant (opponent) and follows the view of the opposition division and the respondent (patent proprietor).

D6, discloses on page 11, lines 21-24, that:

"Both couplings fit into the corresponding couplings of a valve manifold 29, in which the coupling seal is constituted of an O-ring or similar sealing device, suitable for use in medical equipment".

D6 discloses an O-ring sealing device shown on figure 4 under the reference number 30 that is different from a sealing comprising sealing surfaces in the form of at least one annular sealing lip.

The Board does not follow the interpretation of the "annular sealing lip" made by the appellant (opponent). Indeed, in the technical field of sealing, a sealing lip refers to a specific type of sealing, comprising as mentioned by the opposition division a projection (reference is made to the last paragraph of page 7 of the appealed decision). Taking the general meaning of the word "lip" out of its context (sealing) is not an appropriate approach for interpreting the "annular sealing lip".

Furthermore the fact that the O-ring may be deformed in use to conform to the shape of the structural elements around it (like in the figure 2.3(b) on page 10 of D2), does not mean that an "O-ring" seal has an annular sealing lip. The skilled person understands under an "O-ring" seal a seal in the shape of a torus, i.e. an annular seal with a round cross-section and without any projecting edge.

- 1.2 For the novelty objections based against documents D4 and D5, the parties referred to their written submissions.

The Board has no reason to change its preliminary opinion which is confirmed below.

D4, paragraph [0024] does not specify the type of seal used to provide the pneumatic seal. Seals are shown on the schematic figure 4 of D4. However, their shape is not clearly and unambiguously depicted, and in the absence of any indication in the description, no information about the shape of the seal can be deduced.

D5, paragraph [0032] is silent about the presence of seals, it only discloses that "the inlet and outlet holes 28 are mated". Furthermore, the figures do not show any seals.

2. Inventive step - Article 100(a) and 56 EPC

2.1 Inventive step starting from D6 in combination with D3

The subject-matter of claim 1 involves an inventive step starting from D6 in combination with D3.

2.1.1 The appellant (opponent) argued that when considering D6 the sole technical effect that could be provided by the alleged distinguishing feature (the form of the sealing surfaces being a "lip") was the provision of improved manufacturing tolerances.

Thus, the objective technical problem must be considered only as to improve the manufacturing tolerances associated with the sealing arrangement of D6.

The appellant noted that claim 1 was directed to an adapter for adapting an absorber holder to a breathing system which was not necessarily in the medical field, i.e., it could be a breathing system for scuba diving. There was thus no requirements for the seal to have the

stricter safety requirements required in the medical field.

D3 is specifically concerned with improving prior art O-ring seals for sealing between two tubular components (see page 1, lines 8-26). Page 3, lines 6-14 of D3 presented improved sealing elements comprising:

"a tongue member which is integral with and extends outwardly from the mounting portion... Typically said one engaging surface of the tongue member includes adjacent convex and concave surfaces with the concave surface terminating in and defining a lip portion".

Furthermore, D3 referred to a wide range of applications where the advantage was to reduce *"the need for a never ending increase of precision and accuracy in machining/fabrication of these components and accommodates less stringent tolerances and variations which occur as a result of wear and fatigue between these components"*.

Hence, when faced with the objective technical problem of improving the manufacturing tolerances associated with the sealing arrangement of D6, D3 provided clear motivation for the skilled person to turn to D3, and subsequently modify the arrangement of D6 by replacing the seals of D6 with the seals having an annular sealing tongue member of D3, thus arriving at the claimed invention, as interpreted by the opposition division.

D3 itself did not suggest any particular field of application for the sealing elements presented, and referred only to a "sealing element" for "effecting a seal between adjacent components" (see page 1, lines 3-5, page 2, lines 19-20, the title, and the abstract). D3 also mentions that the "sealing element can be

designed in configuration or material selection to suit a vast range of applications" (see page 9, lines 30-32 of D3). If D3 were intended to be limited to a specific technical field, then the description of D3 would clearly mention that technical field or limit the features of the sealing element for use in said technical field.

D6 merely taught that the seal disclosed therein was suitable for use in medical equipment. Moreover, there was nothing in D3 that suggested it was not suitable for use in medical equipment, thus it did not go against any teaching of D6. There was no suggestion in D6 of what made the seal of D6 "suitable for" use in medical equipment, nor was there any indication as to what would not be "suitable for" use in medical equipment. Thus, with no explicit teaching to the contrary, the person skilled in the art would assume that the seal of D3 was suitable for use in medical equipment.

Furthermore, if the medical application would impose stricter requirements, then it would be on the material itself but not on the shape of the seal.

2.1.2 The respondent argued that the problem identified by the opposition division was appropriate:

"how to provide an improved sealing connection between the gas passages of an absorber holder and an adapter for adapting the absorber holder to a breathing system".

Starting from the device for anaesthetic systems of D6, the skilled person would not combine it with D3 mainly because D6 required a seal suitable for medical equipment (as stated in page 11, lines 20-25).

It was irrelevant that claim 1 was not limited to a breathing system in the medical field as the starting point for the problem solution approach was D6, directed to a device in anaesthetic systems, which was in the medical field. A modification of the seal in this device required that the seal be still suitable for use in medical equipment.

D3 was directed to a sealing element comprising an annular sealing lip, however D3 was not directed to seals in the medical field. The only example given in the description was "a crank shaft seal".

Finally, they argued that seals suitable for the medical field, not only required to be made from suitable materials that were safe for the health of the patient but required higher safety standards in general. The seal needed to have a shape and a quality that would ascertain that it would not be distorted or damaged. The breathing system had to be safe to be used without putting the life of the patient in danger.

- 2.1.3 The Board is not convinced by the arguments of the appellant (opponent) and follows the opinion of the opposition division and the respondent (patent proprietor).

The subject-matter of claim 1 differs from D6 in that:
"the seal for the second gas passage comprises sealing surfaces in the form of at least one annular sealing lip which extends around the circumferential surface of the outer valve seat, and which extends into the circumferential region and seals against the circumferential surface of the second gas passage".

The Board judges that irrespective of whether the opposition division's or the appellant's (opponent's) objective technical problem is considered as appropriate, the skilled person would not combine the teaching of D6 with the teaching of D3.

Document D6 is directed to a device for handling dioxide-absorbing compound in an anaesthetic system, which is used in the medical field. The passage on page 11, lines 20-25 relating to the seal emphasizes that the sealing device should be suitable for use in medical equipment:

"Both couplings fit into the corresponding couplings of a valve manifold 29, in which the coupling seal is constituted of an O-ring or similar sealing device, suitable for use in medical equipment".

Starting from D6, the skilled person would only look for seals that are suitable for use in medical equipment, which have higher safety standards. Indeed, these seals need to be safe and reliable as a person's life is at stake. And as pointed out by the respondent (patent proprietor) not only the material is determinant but also the quality of the seal is critical for its application in the medical field.

Document D3 cited by the appellant (opponent) is not in the medical field. While the passage on page 10, lines 1-15 of D3 does not restrict the application to any specific field:

"Those skilled in the art will appreciate that the invention described herein is susceptible to variations and modifications other than those specifically described. For example, the sealing element itself may be manufactured from a range of appropriate materials provided the sealing portion is constructed of a

resiliently flexible material which functions as broadly defined. For example the sealing element may be fabricated from a flexible or semi-flexible metal such as a thermal metal. The sealing element depending on the material selection and geometry required may be injection moulded, rotationally moulded, or extruded and bonded where necessary. The sealing element may be used in a range of applications where one or both of the tubular components are generally stationary or move relative to one another. This movement may be by way of axial sliding or rotation",

the above passage is followed by the example of a crank shaft seal, which is far from the medical field (reference is made to page 10, lines 17-18 of D3).

Furthermore, as mentioned by the Opposition Division, annular lip seals are usually used between components moving relatively one to another. Therefore, there is no motivation for the skilled person to consider an annular lip seal when starting from document D6, where the components are static.

2.2 The inventive step starting from D6 in combination with D2.

The inventive step objection starting from D6 in combination with D2 raised in the letter of 3 March 2023 and substantiated only with letter of 26 August 2024 is not admitted in the appeal proceedings.

2.3 The respondent (patent proprietor) requested that the inventive step objection starting from D6 in combination with D2 not be admitted in the appeal proceedings. They argued that this objection was first formulated with letter of 3 March 2023 and represented

an amendment to the appellant's (opponent's) appeal case which has not been justified. They further noted that with the letter of 3 March 2023, no passage in D2 were cited, such that the objection could not be regarded as substantiated, especially as D2 was a 600-pages document. The substantiation came only after the board of appeal communication under Article 15(1) RPBA, with letter of 26 August 2024, only a month before the oral proceedings. The respondent explained that they were not prepared to reply to such an inventive step objection at short notice of the oral proceedings.

- 2.4 The appellant (opponent) requested the objection of inventive step starting from D6 in combination with D2 to be admitted into the appeal proceedings as an amendment of the appellant's case. They submitted that D2 would only be relevant if the patent proprietor's alleged technical effects associated with the invention of claim 1 relative to D6 would affect the Board's decision . Since they could not reasonably foresee that these technical effects could be presented they did not submit the inventive step objection starting from D6 in combination with D2 with their statement of grounds of appeal.

The appellant further argued that the content of D2 was to be considered as common general knowledge as D2 was a handbook on seals.

- 2.5 The Board does not admit the inventive step objection starting from D6 in combination with D2 under Article 13(2) RPBA.

The inventive step objection starting from D6 in combination with D2 first filed in appeal proceedings

with letter of 3 March 2023 was only substantiated with letter of 26 August 2024, after the communication of the Board under Article 15(1) RPBA.

Indeed with letter of 3 March 2023, the appellant (opponent) submitted that the disclosure of dynamic seals in D2 (presented during first instance proceedings in opposition of the patent) would be considered by a person skilled in the art when looking to solve any technical problem solved by the invention of claim 1 relative to D6.

However, they did not cite any specific passage of D2, such that the respondent (patent proprietor) and the Board could only conjecture about possibly relevant passages.

The Board notes that a mere general reference to submissions made at first instance, cannot be considered sufficient for substantiating the objection. Therefore, with letter of 3 March 2023, the inventive step objection did not set out clearly the reasons why the subject-matter of claim 1 did not involve an inventive step starting from D6 in combination with D2.

The appellant (opponent) with letter of 26 August 2024 substantiated the inventive step objection by citing three sections of D2 which teach that an annular sealing lip provides wider manufacturing tolerances compared to O-ring:

- "2.3.2 X section rings" under chapter 2, related to static seals, and referring to figures 2.17 and 2.18,
- "4.2.1 background" under chapter 4, related to reciprocating seals, referring to figures 4.1 and 4.2, and
- "2.3.5 U-rings" under chapter 2.

Article 13(2) RPBA 2020 provides that any amendment to a party's appeal case made after the communication of the Board under Article 15(1) RPBA will, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

The argument of the appellant (opponent) that D2 represents common general knowledge cannot be considered as a cogent reason for admitting the inventive step objection starting from D6 in combination with D2 in the appeal proceedings. Even if D2 represents common general knowledge, the sections cited and the 600 pages document need to be studied to be able to assess whether the skilled person would combine D6 with the cited sections, or whether he would combine it with other sections (i.e. section related to "hygienic seal arrangement"). Therefore, the inventive step objection starting from D6 in combination with D2 should have been substantiated with the statement of grounds of appeal or at the latest with letter of 3 March 2023.

In any case, the inventive step attack starting from D6 in combination with D2 is not relevant in the substance. Indeed, the sections cited do not relate to seals suitable for medical equipment. For the same reasons as with document D3, the skilled person would not combine the teaching of D6 with the sections cited of D2.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



M. Schalow

C. Narcisi

Decision electronically authenticated