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Datasheet for the decision of 24 May 2018

Case Number: T 0626/14 - 3.2.06

Application Number: 01999338.5

Publication Number: 1350497

IPC: A61F13/49, A61F13/15

Language of the proceedings: EN

Title of invention:
ABSORBENT, PROCESS FOR PRODUCING THE SAME, AND ABSORBENT ARTICLE COMPRISING THE ABSORBENT

Patent Proprietor:
DAIO PAPER CORPORATION

Opponents:
Paul Hartmann AG
Essity Hygiene and Health Aktiebolag

Headword:

Relevant legal provisions:
EPC 1973 Art. 100(b), 83

Keyword:
Sufficiency of disclosure - main request (no) , auxiliary requests 1 to 12 (no)

Decisions cited:
T 2096/12, T 0464/05

Catchword:

Europäisches Patentamt
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Beschwerdekammern

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Case Number: T 0626/14 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 24 May 2018

Appellant: (Patent Proprietor)	DAIO PAPER CORPORATION 2-60, Kamiyacho Iyomishima-shi, Ehime 799-0492 (JP)
Representative:	Potter Clarkson LLP The Belgrave Centre Talbot Street Nottingham NG1 5GG (GB)
Respondent: (Opponent 1)	Paul Hartmann AG Paul-Hartmann-Strasse 12 89522 Heidenheim (DE)
Representative:	DREISS Patentanwälte PartG mbB Friedrichstrasse 6 70174 Stuttgart (DE)
Respondent: (Opponent 2)	Essity Hygiene and Health Aktiebolag 405 03 Göteborg (SE)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 26 February 2014 revoking European patent No. 1350497 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	M. Harrison
Members:	M. Hannam
	W. Ungler

Summary of Facts and Submissions

I. An appeal was filed by the appellant (patent proprietor) against the decision of the opposition division revoking European Patent No. 1 350 497 in which it found *inter alia* that the invention according to claim 1 of each of a main request, and a first to fifth auxiliary request was insufficiently disclosed (Article 100(b) EPC / Article 83 EPC).

II. With its grounds of appeal, the appellant requested that the impugned decision be set aside and the patent be maintained as granted, or that the patent be maintained in an amended form according to one of auxiliary requests 1 to 12. It further requested oral proceedings should none of its requests be allowable.

III. The respondents (opponents O1 and O2) each requested that the appeal be dismissed.

IV. The following document cited by each respondent is of relevance to the present decision:

D8 ASTM D5729-97 'Standard Test Method for Thickness of Nonwoven Fabrics'

V. The Board issued a summons to oral proceedings and a subsequent communication containing its provisional opinion, in which it indicated *inter alia* that the ground for opposition under Article 100(b) EPC appeared to prejudice maintenance of the patent according to the main request, the same objection seemingly applying to each of the auxiliary requests 1 to 12, albeit under Article 83 EPC.

VI. With letter of 10 May 2018 the appellant withdrew its request for oral proceedings, indicating that it did not intend to make any further written submissions.

VII. With letter of 22 May 2018 the Board cancelled the scheduled oral proceedings.

VIII. Claim 1 of the main request reads as follows:

"An absorbent body (52, AB) of a body fluid absorbing article, wherein the body comprises an air laid absorbent fiber having a dispersed and thin layer of mixed absorbent fiber and super absorbent polymer, the air laid absorbent fiber being obtained by multiple stages comprising multiple dispersing chutes (62) and pressing rolls (64) spaced out in a transfer direction which:
accumulate and form the absorbent fiber and the super absorbent polymer while disentangling and mixing the absorbent fiber and the super absorbent polymer in accordance with an air laying method in which the absorbent fiber and the super absorbent polymer are conveyed in an air flow and injected by said dispersing chutes (62) to provide the dispersed layer of the mixed absorbent fiber and super absorbent polymer, and
thin the air laid absorbent fiber, by pressurization, by using said pressing rolls (64) to provide for thinning of the dispersed layer,
wherein:
the super absorbent polymer is one of the following: carboxymethylcellulose, polyacrylic acid and its salts, crosslinked acrylate polymer, starch-acrylate graft copolymer, hydrolysate of starch-acrylonitrile graft copolymer, crosslinked polyoxyethylene, crosslinked carboxymethylcellulose, partially crosslinked compounds of water swelling polymers such as polyethylene oxide,

polyacrylamide and the like, or copolymers of isobutylene with maleic acid and the like, the super absorbent polymer is contained in an amount of 40 to 80 wt% of a total weight of the super absorbent polymer and the absorbent fiber, and the absorbent body has a density of not less than 150 kg/m^3 and a thickness of 1.0 to 2.0 mm by performing the thinning by the pressurization after the accumulating and the forming, and wherein the absorbent body comprises a plurality of holes (53) having a depth of not less than 30% with respect to a thickness from a front surface side of the absorbent body."

Claim 1 of each of the auxiliary requests 1 to 12 includes the following feature of claim 1 of the main request:

"the absorbent body has a density of not less than 150 kg/m^3 and a thickness of 1.0 to 2.0 mm by performing the thinning by the pressurization after the accumulating and the forming".

IX. The appellant's arguments relevant to the decision may be summarised as follows:

The invention according to the main request was sufficiently disclosed. The claimed thickness was 'the thickness of the outcome product' under normal atmospheric pressure and with no pressure applied thereto as the absorbent body exited the pressing rolls. There was no need to apply a pressure to deform the absorbent body when measuring its thickness; a deforming pressure would, by comparison, equally not usually be applied when measuring the thickness of a wooden board, a piece of paper or rubber. Applying a pressure would thin the product which, in the absence

of such being specified, was obviously not intended. In particular, an excessively large pressure which would thin the product would have no meaning in context.

The same arguments applied to each of the auxiliary requests 1 to 12 such that these met the requirements of Article 83 EPC.

X. The arguments of respondent O1 relevant to the decision may be summarised as follows:

The invention according to claim 1 of the main request and the auxiliary requests 1 to 12 was insufficiently disclosed. When measuring the thickness of compressible, absorbent bodies, the pressure applied needed to be defined. The fibrous nature of such a body with cavities and a fluffy surface made such an applied pressure necessary for accurate thickness measurement. D8, for example, demonstrated the need for a specified pressure to be applied before measurement of a sample's thickness. Such a pressure to be applied was not disclosed in the patent.

XI. The arguments of respondent O2 relevant to the decision may be summarised as follows:

The invention according to the main request and auxiliary requests 1 to 12 could not be carried out by the skilled person. Lacking a pressure to apply in the thickness gauge foot, the skilled person would be unable to reliably determine the thickness of the fibrous composite. Such a pressure was defined for example in the norm in D8.

Reasons for the Decision

1. *Main request*

1.1 *Article 100(b) EPC 1973*

The ground for opposition under Article 100(b) EPC 1973 prejudices the maintenance of the patent as granted.

1.2 The absorbent body of claim 1 is indicated to have a thickness of 1.0 to 2.0 mm. The absorbent body, according to claim 1, comprises a layer of mixed absorbent fiber and super absorbent polymer which is laid down with an air laying method. It is common general knowledge for the skilled person in the field of absorbent articles that fibrous composites have a fluffy nature with fibres protruding from their surfaces. A consequence of this is that the 'surface' of the fibrous composite is not clearly recognisable such that an accurate measurement of its thickness is impossible, unless further measures are applied.

1.3 When wishing to establish the thickness of such fibrous composites, it is generally accepted in the art that a pressure is applied to the composite in order to be able to eliminate variability in measurement caused by the ill-defined 'surface' of the composite. Being easily compressible, the pressure used in any test method for measuring thickness of such fibrous composites is also of utmost importance, because the thickness varies inversely with the pressure applied. A requirement for repeatable thickness measurement is thus to have a predefined pressure applied to the specimen, such a predefined pressure for example being given in D8 (see Section 6.1.5), the ASTM norm for

thickness measurement of nonwoven fabrics.

1.4 In the patent in suit, an indication of what this pressure should be, in order to enable a reliable and repeatable thickness measurement to be made, is lacking such that the skilled person would not know when a product according to the invention has been arrived at, the defined parameter lacking a sufficiently defined technical meaning within the technical field concerned. This finding is also in line with established case law on this matter (see for example T464/05, Reasons 3.3.2 to 3.3.4; T2096/12, Reasons 1.1 to 1.3).

1.4.1 Since the Board cites T464/05 above, it is perhaps important at this juncture to mention briefly that two recent decisions (T1811/13 and T647/15, albeit with essentially identical reasoning as regards objections made under Article 83 EPC) have sought to question the way in which Article 83 EPC objections were reasoned in decisions such as T464/05 mentioned *supra*. Yet, T1811/13 and T647/15 themselves concentrate only on an individual aspect in e.g. T464/05, namely 'the area covered by the claim' without addressing the actual findings in that decision regarding the issue of Article 83 EPC. In fact, T464/05 draws a distinction between the two objections under Articles 83 and 84 EPC respectively and explains the significance thereof. For example, T464/05 considers in Reasons 3.3.2 not the boundaries of the claimed subject-matter which was the subject of T1811/13 and T647/15, but the lack of indications in the patent concerning the measurement of a particular parameter. This is stated in T464/05 as resulting in 'an undue burden for the skilled person trying to reproduce the invention'. Likewise, in Reasons 3.2, the crucial issue in respect of sufficiency of disclosure concerns the issue of whether

a skilled person 'is capable of reliably measuring (the) parameter'. Thus, T1811/13 and T647/15 do not cause the present Board to see anything which would undermine the reasoning in T464/05 concerning Article 83 EPC.

In the sense that a parameter to be measured was at issue in T464/05 with regard to Article 83 EPC, the Board in the present case is faced with the same issue, i.e. the undue burden created by the lack of any information allowing the skilled person to reliably measure the defined thickness. This, as explained *supra*, results in the skilled person being unable to know whether he has arrived at the invention or not, such that the invention is not sufficiently clearly and completely disclosed.

1.5 The appellant's argument that the absorbent body thickness should be measured as the absorbent body exits the pressing rolls at normal atmospheric pressure has no support in the patent itself. Nowhere in the patent is such a limitation given as to when the absorbent body thickness should be measured. Even if this suggestion of the appellant were to be followed, it would not be expected, nor indeed was it argued to be so by the appellant, that the pressing rolls would eliminate all protruding fibres from the fibrous composite which could make a thickness measurement repeatable or reliable without a restraining pressure being applied.

1.6 The further argument of the appellant, that deforming pressures would not be applied to wooden board, sheets of paper or rubber when wishing to measure their thickness, such that it would not be logical to do so for fibrous composites, fails to address the underlying

objection. As indicated in point 1.2 above, a fibrous composite, as opposed to a wooden board, sheet of paper or rubber, exhibits fibres extending from its surface which are at least one cause of the unreliability in measuring its thickness. It is to counter the lacking reliability in thickness measurement caused by such fibres that a pre-defined restraining pressure is required. The lack of such a restraining pressure being defined in the patent has, as its consequence, that the skilled person would be unable to reliably measure the absorbent body thickness and could thus not carry out the invention according to claim 1.

1.7 The ground for opposition under Article 100(b) EPC 1973 thus prejudices the maintenance of the patent as granted. The main request is therefore not allowable.

2. *Auxiliary requests 1 to 12*

2.1 *Article 83 EPC 1973*

The invention according to each of auxiliary requests 1 to 12 does not meet the requirement of Article 83 EPC 1973.

2.2 Claim 1 of each of the auxiliary requests 1 to 12 includes the feature that the absorbent body has a thickness of 1.0 to 2.0 mm. In the absence of any arguments from the appellant in support of these requests beyond those already presented with respect to the main request on the matter of sufficiency of disclosure, the Board finds similarly to the main request, albeit for the auxiliary requests now under Article 83 EPC, that the invention according to each of auxiliary requests 1 to 12 is not disclosed in a manner sufficiently clear and complete for the invention to be

carried out by a person skilled in the art.

2.3 The auxiliary requests 1 to 12 are therefore not allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Kiehl M. Harrison

Decision electronically authenticated