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DECISION of 11 June 2002

Т 0812/99 - 3.2.6 Case Number:

Application Number:	92308923.9
Publication Number:	0536941
IPC:	A61F 13/15

Language of the proceedings: EN

Title of invention: Core for hygienic absorbent products

Patentee: FiberVisions, L.P.

Opponents:

SCA Hygiene Products AB The Procter & Gamble Company

Headword:

Relevant legal provisions: EPC Art. 52(1), 54(2), 56

Keyword:

"Novelty - yes, after amendment" "Inventive step - yes, after amendment"

Decisions cited: Т 0739/93, Т 0246/92

Catchword:

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Beschwerdekammern

Boards of Appeal

Chambres de recours

Case Number: T 0812/99 - 3.2.6

D E C I S I O N of the Technical Board of Appeal 3.2.6 of 11 June 2002

- Appellant I:SCA Hygiene Products AB(Opponent I)SE-405 03 Göteborg (SE)
- Representative: Romare, Laila Anette Albihns Göteborg AB Box 142 SE-401 22 Göteborg (SE)
- Appellant II:The Procter & Gamble Company(Opponent II)One Procter & Gamble PlazaCincinnati, OHIO 45202(US)
- Representative: Lawrence, Peter Robin Broughton GILL JENNINGS & EVERY Broadgate House 7 Eldon Street London EC2M 7LH (GB)
- Respondent: FiberVisions, L.P. (Proprietor of the patent) 1313 North Market Street Wilmington, DE 19894 (US)

Representative:	Howard, Paul Nicholas
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Decision under appeal: Decision of the Opposition Division of the European Patent Office posted 30 June 1999 rejecting the oppositions filed against European patent No. 0 536 941 pursuant to Article 102(2) EPC.

Composition of the Board:

Chairman:	Ρ.	Alting Van Geusau
Members:	G.	Pricolo
	Μ.	J. Vogel

Summary of Facts and Submissions

- I. The appellants (opponents I and II) each lodged an appeal, received at the EPO on 3 September 1999 and 16 August 1999 respectively, against the decision of the Opposition Division dispatched on 30 June 1999 to reject the oppositions filed against European patent No. 0 536 941. The appeal fees were paid on 3 September 1999. The statements setting out the grounds of appeal were received at the EPO on 8 November 1999 and 5 November 1999, respectively.
- II. In its decision the Opposition Division considered that the European patent did not contain subject-matter extending beyond the content of the application as filed, that it disclosed the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art, and that the claimed subject-matter was novel and inventive over the available prior art.
- III. The following prior art documents which featured in the opposition procedure played a role in the appeal proceedings:

D1: EP-A-0 397 110;

D2: EP-A-0 343 941;

D7: US-A-4 685 914;

D8: EP-A-0 312 118.

IV. Oral proceedings before the Board of Appeal took place on 11 June 2001. As previously announced by letter dated 6 May 2002, Appellant I did not attend the oral proceedings. The proceedings were continued without him (Rule 71(2) EPC).

Appellant II requested that the decision under appeal be set aside and that the patent be revoked. The same request was made during the written proceedings by Appellant I.

The respondent requested that the patent be maintained on the basis of the following documents filed during oral proceedings:

Claims: 1 to 29;

Description: columns 1 to 12;

Drawings: Figures 1 to 7.

V. Independent claims 1 and 26 read as follows:

"1. A core component for use in a fluid-absorbing article having a plurality of zones, said core component comprising:

(a) a zone of vulnerability positioned in said core component for maximum potential exposure to initial wetting, said zone of vulnerability having a wadding component comprising synthetic fiber or filament; and

(b) a plurality of additional core zones in the core component each having a wadding component and arranged in the core component in areas of reduced potential exposure to initial wetting and in direct or indirect

fluid-receivable relation from said zone of vulnerability; wherein the wadding component in the zone of vulnerability is characterized by (c) a greater average pore size than the average pore size of the wadding components in the additional core zones and (d) a higher average fractional value of fiber volume-to-fiber surface area than the average fractional value of fiber volume-to fiber surface area within the wadding component of the additional core zones; and wherein the average fractional value of fiber volume-to-fiber surface area and the average pore size within the wadding components of said additional core zones decrease in value from zone to zone relative to increased geometric distance from said zone of vulnerability and corresponding decreased potential exposure to initial wetting."

"26. A method for the preparation of a core component for use in a fluid-absorbing article comprises laying down a plurality of additional core zones and a zone of vulnerability characterized in that the zones are comprised of fiber or filament possessing different average pore surfaces and average fractional values of fiber or filament volume to fiber or filament surface area; the zone of vulnerability is positioned in the core component for maximum exposure to initial wetting and the additional core zones are arranged in direct or indirect fluid-receivable relation to the zone of vulnerability and in areas of reduced exposure to initial wetting, and further characterized in that the at least one additional core zones have a smaller average pore size and average fractional value of fiber or filament volume to fiber or filament surface area than the respective average pore size and average fractional value of fiber or filament volume to fiber

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or filament surface area in the zone of vulnerability; and in that the degree of difference in the average pore size and average fractional value of fiber or filament volume to fiber or filament surface area between the additional core zones increase in relation to increased distance from the zone of vulnerability and to reduced risk of initial wetting."

- VI. The written submissions of appellant I were exclusively concerned with the claims of the granted patent. Appellant I essentially argued that the subject-matter of claims 1 and 30 lacked novelty.
- VII. The arguments of appellant II can be summarized as follows:

The pore size and the fractional value of fiber volume-to-fiber surface area were a function of the cross sectional area of the fibers and consequently of their diameter: finer fibers, for instance, provided components with finer pores and smaller average fractional value of fiber volume-to-fiber surface area than coarser fibers. Furthermore, it was generally known that cellulosic fibers had a cross sectional area much smaller, typically with a diameter of about 1 to 3 microns, than that of synthetic fibers, typically having a diameter of about 20 to 40 microns. Since in the core component of D7 the wadding component in the zone of vulnerability was made of synthetic fibers and the wadding component of the additional core zone was made of cellulosic fibers, it necessarily followed from the substantial difference in diameter between the fibers, that the wadding component in the zone of vulnerability had both a greater average pore size and a higher average fractional value of fiber

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volume-to-fiber surface area than the wadding component in the additional core zone. Document D7 moreover disclosed a plurality of additional core zones, with the capillary pressure provided by each additional core zone increasing as the additional core zones were placed away from the facing. In order to increase the capillary pressure, D7 taught to provide fibers with lower liquid-contact angle, narrower capillary radii or both. It was clear for the skilled person that, when the zone of vulnerability was made of synthetic fibers and one of the additional core zones of cellulosic fibers, increased capillary pressure from one additional core zone to the other was obtained by the provision of an intermediate core zone comprising a mixture of synthetic and cellulosic fibers. Hence, the disclosure of D7 was to be regarded as encompassing a core component comprising a first layer of synthetic fibers, a second layer consisting of a blend of synthetic and cellulosic fibers, and a third layer of cellulosic fibers. In such core component the average fractional value of fiber volume-to-fiber surface area and the average pore size of the layers decreased in value relative to increased geometric distance from the first layer. Therefore, such core component fulfilled all the requirements of claim 1 of the patent in suit. Its subject-matter was, as a consequence, not novel.

In any case, the subject-matter of claim 1 did not involve an inventive step, when starting from the prior art reflected by either D8 or D7.

Document D8 disclosed, in Example 4, a core component comprising a transport layer composed of round polyester fibers having denier of about 6 and pore size of 52 microns, and an absorbent pad composed of wood

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pulp fluff. These polyester fibers had a crosssectional diameter of about 27 microns, hence much greater than the cross-sectional diameter of the cellulosic fibers of the wood pulp fluff, being about 1 to 3 microns as generally known. Therefore, there was no doubt that the wadding component in the zone of vulnerability, ie the transport layer, had a greater average pore size and a higher average fractional value of fiber volume-to-fiber surface area than the wadding component in the additional core zone, ie the absorbent pad. Furthermore, D8 disclosed that the transport layer might be configured with a pore size gradient through the thickness dimension thereof, with the pore sizes increasing through the thickness of the layer. Since D8, and also D1, disclosed that the pore size changed if the blend of fibers was changed, it was obvious for a skilled person to provide a pore size gradient in the core component of example 4 of D8 by varying the blend of fibers through the thickness dimension of the transport layer. In doing so, the skilled person would directly arrive at core component having a transport layer consisting of a plurality of zones, in which the average fractional value of fiber volume-to-fiber surface area and the average pore size within the zones decreased in value from zone to zone relative to increased geometric distance from the outermost zone, ie a core component in accordance with the definition of claim 1 of the patent in suit.

Since the provision of a mixture of different fiber types was known from D7 and also represented the most efficient manner of modifying the capillary pressure of a fibrous layer, it was obvious for a skilled person to provide an intermediate layer consisting of a mixture of synthetic and cellulosic fibers in the core

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component of D7 having a layer of synthetic fibers and a layer of cellulosic fibers, thereby directly arriving at a core component in accordance with claim 1 of the patent in suit.

VIII. In support of its request the respondent relied essentially on the following submissions:

Although appellant II's argument that the average fractional value of fiber volume-to-fiber surface area was merely a function of the fiber diameter might be correct for homogeneous fibers having round crosssection, it did not apply for those fibers, such as cellulosic fibers, which were neither homogeneous nor round. Since moreover no calculations or any tests had been carried out by the appellants in respect of any of the prior art's core components, there was no proof that the feature according to which the zone of vulnerability had a higher average fractional value of fiber volume-to-fiber surface area than the additional core zone was known from any of the cited prior art documents. Since it was the appellant who bore the burden of proof for the fact that this feature was known from the prior art, the subject-matter of claim 1 should be considered novel.

Moreover the skilled person, being in terms of patent law a person incapable of abstract reasoning and having a rather unimaginative spirit, would not consider the provision of a plurality of additional core zones having pore size and average fractional value of fiber volume-to-fiber surface area decreasing from zone to zone because there was no clear disclosure of this feature in the prior art. As a consequence, the subject-matter of claim 1 also involved an inventive

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step.

Reasons for the Decision

1. The appeal is admissible.

2. Sufficiency of disclosure (Article 83 EPC).

- 2.1 The patent in suit discloses specific examples of core components and methods for their preparation (see Example I, column 9 and 10; see column 8, lines 6 ff. and Figure 5A-C) that fall within the scope of the claims. Therefore, at least one way enabling the skilled person to carry out the invention is clearly indicated in the patent. For this reason, the Board comes to the conclusion that the invention is sufficiently disclosed.
- 2.2 The question of sufficiency of disclosure was raised by appellant II in connection with the definition "fractional value of fiber volume-to-fiber surface area" on the ground that there was no disclosure in the patent of how to measure and calculate such fractional value.

The Board already treated this question in its annex to the summons to oral proceedings, and appellant II did not supply further arguments concerning this point.

The Board is satisfied that the skilled person has no difficulties in calculating the above mentioned fractional value. Indeed, methods for the calculation of the fiber surface area are known in the art (see for instance D1, page 20, lines 36 to 39, and pages 16

to 20), and the fiber volume is of easy determination since it can be calculated on the basis of the denier and the density of the material of the fibers which are known parameters.

- 3. Amendments (Article 123 EPC).
- 3.1 Basis for the definition of independent claims 1 and 26 is found in the original application in independent claims 3 and 30.

Dependent claims 2 to 25 and 27 to 29 are based on original claims 4, 7 to 29 and 31 to 33.

The description of the patent in suit is adapted to be consistent with the claims as amended.

Hence, the amendments do not introduce subject-matter which extends beyond the content of the application as filed.

3.2 With respect to granted claims 1 and 30, encompassing embodiments with one additional core zone only, independent claims 1 and 26 are restricted to the presence of a plurality of additional core zones.

Therefore, the amendments do not result in an extension of the protection conferred.

- 3.3 It follows that none of the amendments give rise to objections under Article 123 (2) and (3) EPC.
- 4. State of the art Novelty
- 4.1 Using the wording of claim 1 of the patent in suit,

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document D8 discloses (see Figure 2; see Example 4 on page 11) a core component for use in a fluid-absorbing article having a plurality of zones, said core component comprising a zone of vulnerability (18) positioned in said core component for maximum potential exposure to initial wetting, said zone of vulnerability having a wadding component comprising polyester (synthetic) fibers having a denier of about 6 (see page 11, lines 38, 39 and 25,26); and an additional core zone (16) in the core component having a wadding component comprising wood pulp fluff (see page 11, lines 36 to 38 and 15 to 19) and arranged in the core component in an area of reduced potential exposure to initial wetting and in direct fluid-receivable relation from said zone of vulnerability; wherein the wadding component in the zone of vulnerability has a greater average pore size than the average pore size of the wadding component in the additional core zone, this latter feature being clearly and unambiguously disclosed in particular on page 3, lines 24 to 26 of D8.

The respondent did not contest appellant II's statement that there is a great difference in cross-section between the fibers in the zone of vulnerability and those in the additional core zone, the cellulosic fibers of the wood pulp fluff typically having a cross section with a diameter of about 1 to 3 microns whilst 6 denier polyester fibers have a cross section with a diameter of about 27 microns. Although these figures are approximative, the Board is satisfied that they are sufficiently accurate in the present context.

Furthermore, the fractional value of fiber volume-to - fiber surface area is a function of the diameter if the

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fiber has a round cross-section: in accordance with the calculations made by appellant II (see the letter dated 31 May 2002), which were not contested by the respondent and which are considered correct by the Board, if d is the diameter, then the fractional value is d/4. If the fiber is not round, then the fractional value can be considered as a function of the diameter of the circle inscribing the cross section of the fiber only in a first approximation.

Therefore, the fractional value of 6 denier polyester fibers is about 27/4 = 6.75 and that of cellulosic fibers is about 3/4 = 0.75 in a first approximation.

Because there is such a great difference between the fractional values of 6 denier polyester fibers and cellulosic fibers, the Board is convinced that, even taking into account any realistic deviations from the value calculated as a first approximation for the cellulosic fibers, the fractional value of 6 denier polyester fibers is greater than the fractional value of cellulosic fibers. From this it follows that D8 also discloses the feature that the wadding component in the zone of vulnerability (18) has a higher average fractional value of fiber volume-to-fiber surface area than the average fractional value of fiber volume-to fiber surface area within the wadding component of the additional core zone (16).

The respondent submitted that since no calculations or tests had been carried out by the appellants in respect of any of the prior art's core components, there was no proof that the above mentioned feature was known from the prior art. Since in the present case the Board, after taking into consideration the above mentioned uncontested facts in respect of the cross-section of the fibers, comes to the conclusion that no reasonable doubt exist (see in this respect T 739/93, unpublished) in respect of the presence of the above mentioned feature in the prior art, it follows that such calculations or tests are not necessary.

However, since document D8 fails to disclose a **plurality of additional core zones** wherein the average fractional value of fiber volume-to-fiber surface area and the average pore size within the wadding components of said additional core zones decrease in value from zone to zone relative to increased geometric distance from said zone of vulnerability and corresponding decreased potential exposure to initial wetting, the Board comes to the conclusion that D8 does not anticipate the subject-matter of claim 1.

4.2 Document D7 discloses (see Figure 8) a core component (80) for use in a fluid-absorbing article having a plurality of zones, said core component comprising:

> a zone of vulnerability (first layer 82) positioned in said core component for maximum potential exposure to initial wetting, said zone of vulnerability having a wadding component comprising synthetic fiber (see column 6, lines 21 to 30); and a plurality of additional core zones (second and third layers 84, 86) in the core component each having a wadding component and arranged in the core component in areas of reduced potential exposure to initial wetting and in direct fluid-receivable relation from said zone of vulnerability; wherein the wadding component in the zone of vulnerability (first layer 82) has a greater average pore size than the average pore size of the

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wadding components in the additional core zones (second and third layers 84, 86) and wherein the average pore size within the wadding components of said additional core zones decrease in value from zone to zone relative to increased geometric distance from said zone of vulnerability and corresponding decreased potential exposure to initial wetting. Indeed, the first layer 82 is of lower density than is the second layer 84, and the second layer 84 is of a lower density than is the third layer 86. In the context of the disclosure in column 7, lines 22 to 52, that the capillary pressure provided by each layer increases as the layers are placed away from the facing, whereby the capillary pressure is a function of the liquid-fiber contact angle and of the capillary radius, the increase in density from layer 82 to layer 82 can only be interpreted as a decrease of the capillary radii, ie of the pore size.

However, document D7 does not disclose the features of claim 1 that the wadding component in the zone of vulnerability has a higher average fractional value of fiber volume-to-fiber surface area than the average fractional value within the wadding components of the additional core zones; and that the average fractional value within the wadding components of said additional core zones decreases in value from zone to zone relative to increased geometric distance from said zone of vulnerability and corresponding decreased potential exposure to initial wetting.

Indeed, D7 specifically discloses to use synthetic fibers, in particular polyester fibers (see column 6, lines 28), in the layer providing the superstructure (ie the zone of vulnerability, see claim 1), and

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cellulosic fibers, in particular wood pulp, in the layer providing a suitable absorbent medium (ie the additional core zone; see column 7, lines 60, 61; see claim 8). However, there is no indication of the denier or the diameter of the synthetic fibers used in combination with the cellulosic fibers in D7. Neither

or the diameter of the synthetic fibers used in combination with the cellulosic fibers in D7. Neither is there any evidence that synthetic fibers **always** have a diameter much greater than that of cellulosic fibers. Therefore, nothing can be inferred about the average fractional value of the synthetic fibers. It is noted that the present situation is different from the situation in respect of D8 (see above), as D8 specifically discloses the denier of the polyester fibers used.

Furthermore, the Board cannot follow appellant II's view that the disclosure of document D7 encompasses a core component comprising a layer of synthetic fibers, a second layer comprising a blend of synthetic and cellulosic fibers, and a third layer of cellulosic fibers. It is true that D7 discloses that blends of fibers may be used in any of the layers(see column 7, lines 10 to 12 and 59 to 62); however, there is no direct and unambiguous disclosure of the **specific combination** of layers as mentioned above.

It follows that the subject-matter of claim 1 is novel over the disclosure of document D7.

4.3 Referring to Figure 9 of D2, the core according to this prior art comprises a zone of vulnerability (956) comprising polyester fibers having a denier of about 5.5 (see column 18, lines 22 to 26 and column 24, line 63 to column 25, line 7) and a plurality of additional core zones (48, 52) made of wood pulp fibers

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(see column 20, lines 8 to 12 and column 24, lines 61 to 63). D2 explicitly discloses (see column 16, lines 47 to 54) that the wadding component in the zone of vulnerability (956) has a greater average pore size than the average pore size of the wadding components in the additional core zones (48, 52). From the above discussion of document D8 (see point 4.1), considering that the polyester fibers of D2 (denier of 5.5) are very similar to those of D8 (denier of about 6) and that in both cases wood fluff fibers are used in the additional core zones, it follows that D2 also discloses that the wadding component in the zone of vulnerability has a higher average fractional value of fiber volume-to-fiber surface area than the average fractional value of fiber volume-to fiber surface area within the wadding component of the additional core zones.

However, since D2 merely discloses that the fibers in the storage layer 52 can be of the same type as those used in the first layer 48 (ie that the additional core zones are made of the same fibers) and does not specifically disclose any other fiber combination for these two layers, it must be concluded that D2 does not disclose the feature of claim 1 that the average fractional value of fiber volume-to-fiber surface area and the average pore size within the wadding components of the additional core zones decrease in value from zone to zone relative to increased geometric distance from the zone of vulnerability and corresponding decreased potential exposure to initial wetting.

4.4 Document D1 discloses (see e.g. Figure 6 and 9) a core component comprising a zone of vulnerability (surge management portion 46) and an additional core zone

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(retention portion 48). There is no disclosure of a plurality of additional core zones in which the average fractional value of fiber volume-to-fiber surface area within the wadding components of the additional core zones decrease in value from zone to zone relative to increased geometric distance from the zone of vulnerability.

Nor is the latter feature disclosed by any of the other available prior art documents.

- 4.5 Therefore, the Board comes to the conclusion that the subject-matter of claim 1 is novel.
- 5. Inventive step
- 5.1 In the Board's view, document D7 represents the closest prior art because it discloses the core component which is the most suitable for the purpose claimed by the invention, to achieve a capillary gradient through the various layers of the absorbent structure (see column 2, lines 45 to 50, of the patent in suit).
- 5.2 Since the technical problem mentioned in the patent was formulated in relation to a prior art which was less relevant than D7, an inquiry must be made as to which other technical problem objectively existed when starting from D7 as the closest prior art (see e.g. T 246/92, not published in the OJ EPO).

The features distinguishing the subject-matter of claim 1 from the closest prior art, namely that the wadding component in the zone of vulnerability has a higher average fractional value of fiber volume-to-fiber surface area than the average fractional value within the wadding component of the additional core zones and that the average fractional value within the wadding components of said additional core zones decrease in value from zone to zone relative to increased geometric distance from said zone of vulnerability and corresponding decreased potential exposure to initial wetting, define a manner of providing a capillary gradient through the zones. As explained above (see point 4.2 of this decision), D7 already discloses a manner of providing a capillary gradient through the zones.

The objective problem solved by the patent in suit may therefore be seen in finding an alternative manner of providing a capillary gradient through the zones.

5.3 Document D7 discloses to provide a capillary pressure gradient from zone to zone (column 7, lines 22 to 63) by varying either the liquid-fiber contact angle, the capillary radii or both. However, these possibilities do not necessarily result in a decrease of the average fractional value of fiber volume-to-fiber surface area. For instance, the average fractional value remains the same if only the degree of compression of the fibers, and thus the capillary radii, is varied from zone to zone. In order to provide the claimed decrease of the average fractional value, a particular and purposive selection of the fibers composing the different zones should be made, for which no indication is found in D7.

> In the specific embodiments of D2 and D8 referred to above (see points 4.1 and 4.3) it is only accidentally that the zone of vulnerability has a higher average fractional value of fiber volume-to-fiber surface area than **one** additional core zone, since the selection of

the particular combinations of fibers in these embodiments is not based on the provision of different fractional values of fiber volume-to-fiber surface area from zone to zone. Therefore D2 and D8 could not suggest a selection of fiber types providing a decrease of the average fractional value within **the plurality of additional core zones** of document D7.

Furthermore, also document D1 would not suggest the distinguishing features, since it does not even disclose a plurality of additional core zones. Neither would the other available documents, since they do not include any explicit indications about the average fractional value of fiber volume-to-fiber surface area within wadding components.

5.4 Appellant II argued that it was obvious for a skilled person to provide an intermediate layer consisting of a mixture of synthetic and cellulosic fibers in the core component of D7 comprising a layer of synthetic fibers and a layer of cellulosic fibers, since the provision of a mixture of different fiber types was known from D7 and also represented the most efficient manner of modifying both the liquid contact-angle and the capillary radii of a fibrous layer, and thus the capillary pressure thereof.

> Although D7 indeed discloses that mixtures of fibers may be used (column 7, line 61 and lines 10 to 10), it only discloses such mixtures as examples of fibers which can be used, separately, in the different layers of the absorbent core. There is no suggestion in D7 to fabricate the mentioned intermediate layer by mixing the fibers composing the other two layers. Neither is the Board aware of any reasons, based on general

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knowledge, why the skilled person would come to the conclusion that the provision of a mixture would be the most efficient manner of fabricating the intermediate layer.

Moreover, even if the skilled person would provide a mixture of synthetic and cellulosic fibers in the intermediate layer of the core component of D7, there is no indication in D7 that the particular selection of fibers in the three layers would or should have as a result that the average fractional value within the three layers decreases relative to increased geometric distance from the facing layer.

5.5 Appellant II further argued that, starting from document D8, it was obvious for a skilled person to provide a pore size gradient in the transfer layer of the core component of example 4 of D8 by varying the blend of polyester and wood fluff fibers through the thickness dimension of the transport layer.

> D8 indeed discloses (see page 5, last paragraph) that the transport layer might be configured with a pore size gradient through the thickness dimension thereof, with the pore sizes increasing through the thickness of the layer. However, there is no indication, either in D8 or in D1 (also referred to by appellant II), that one manner of providing the pore size gradient would consist in varying the relative percentage of fibers within the transport layer to have an increasing amount of wood fluff fibers in a direction facing away from the top of the transport layer. In the Board's view, the disclosure of D8 to provide hydrophobic synthetic fibers in the transport layer (see page 5, lines 41 to 43) would rather suggest to the skilled person to

avoid hydrophilic fibers, such as wood pulp fibers, in the transport layer.

- 5.6 It follows that the subject-matter of claim 1 is found to involve an inventive step.
- 6. The method defined by independent claim 26 results directly and necessarily in the preparation of a core component having all the features in accordance with claim 1. Therefore, the subject-matter of claim 26 is found to be novel and inventive for the same reasons given for claim 1.

The dependent claims 2 to 25 and 27 to 29 relate to preferred embodiments of the product of Claim 1 and the method of claim 26, respectively. Their subject-matter is likewise found to be novel and inventive.

These claims, together with the description and drawings as filed during the oral proceedings of 11 June 2002, therefore form a suitable basis for maintenance of the patent in amended form.

7. Finally, the Board finds that considering and deciding on the maintenance of the patent on the basis of the documents filed during oral proceedings in the absence of appellant I does not conflict with decision G 4/92 (OJ 1994, 149). Indeed, the claims correspond to the claims of the previous auxiliary request 1 filed by the respondent with letter dated 21 July 2000, and consequent amendments of the descriptions and drawings during oral proceedings could have been expected.

Order

For these reasons it is decided that:

- 1. The decision under appeal is set aside.
- 2. The case is remitted to the first instance with the order to maintain the patent with the amended text as filed during the oral proceedings.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau