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D E C I S I O N
of 1 June 2005

Case Number: T 0925/03 - 3.2.7

Application Number: 95105513.6

Publication Number: 0677612

IPC: D21F 11/14

Language of the proceedings: EN

Title of invention:
Method of making soft tissue products

Patentee:
KIMBERLY-CLARK WORLDWIDE, INC.

Opponent:
The Procter & Gamble Company

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56, 87, 88, 89, 114(2), 123(2)(3)

Keyword:
"Late filed document - admitted"
"Amendments - extension beyond the scope of the claims as granted (no)"
"Validity of right to first priority date (claims 1 and 3 - yes)"
"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:
G 0002/98, T 0998/99

Catchword:
-

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Case Number: T 0925/03 - 3.2.7

D E C I S I O N
of the Technical Board of Appeal 3.2.7
of 1 June 2005

Appellant: (Opponent)	The Procter & Gamble Company One Procter & Gamble Plaza Cincinnati, OH 45202 (US)
Representative:	Boulinguiez, Didier Cabinet Plasseraud 65/67 rue de la Victoire F-75440 Paris Cedex 09 (FR)
Respondent: (Proprietor of the patent)	KIMBERLY-CLARK WORLDWIDE, INC. 401 North Lake Street Neenah, WI 54956 (US)
Representative:	Davies, Christopher Robert Frank B. Dehn & Co., European Patent Attorneys 179 Queen Victoria Street London EC4V 4EL (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted 16 May 2003 concerning maintenance of the European patent No. 0677612 in amended form.**

Composition of the Board:

Chairman: H. Meinders
Members: H. E. Hahn
E. Lachacinski

Summary of Facts and Submissions

I. The opponent lodged an appeal against the interlocutory decision of the Opposition Division to maintain the European patent No. 0 677 612 in amended form.

II. The opposition had been filed against the patent as a whole and was based on Article 100(a) EPC (lack of novelty and lack of inventive step).

The Opposition Division held that the amendments made to the main request complied with Article 123(2) EPC and that the claims 1 to 8 and 10 to 26 were considered to be entitled to the priority date of the first priority document whereas the claims 9 and 27 to 39 were not considered to be entitled to said priority date. The subject-matter of the claims 1 to 40, based on their respective priority dates, was considered to be novel with respect to the prior art documents D1 to D7, prior art according to Article 54(3) EPC, and also inventive with respect to the documents D2 to D5 belonging to the state of the art under Article 54(2) EPC.

III. Oral Proceedings before the Board were held on 1 June 2005.

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

The respondent (patentee) requested that the decision under appeal be set aside and the patent be maintained on the basis of the claims 1 to 24 of the request filed at the oral proceedings in combination with the

description pages 1, 4 to 9, 11 to 17 of the patent as granted, the description pages 2, 3 and 10 as filed at the oral proceedings, and with figures 1 to 19 of the drawings of the patent as granted.

IV. The most relevant documents of the prior art submitted in the opposition proceedings are:

D1 = EP-A-0 631 014

D2 = US-A-4 529 480

D3 = US-A-5 048 589

D5 = US-A-4 514 345

D7 = WO-A-95 27821

In the appeal proceedings, the following was filed:

D12 = Series of e-mails between Mr Uwe Hirsch and the technical advisers at the Procter & Gamble Company concerning the fabrics Asten 920A, 937A, Velostar P800 (also mentioned as Vellowstar P800) and 103A

V. The independent claims 1, 3 and 9 under consideration read as follows:

"1. A method of making a tissue sheet comprising the steps of:

a. depositing an aqueous suspension of papermaking fibers having a consistency of about 1 percent or less to provide a web comprising papermaking fibers and

water on a forming fabric (12), and dewatering the wet web to a consistency of from about 20 to 30%;

b. transferring the web from the forming fabric (12) to a transfer fabric (17) travelling at a speed of from about 10 to about 80% slower than the forming fabric;

c. transferring the web to a throughdrying fabric (19) having from about 10 to about 150 machine-direction elongated impression knuckles per 6.45 cm^2 (1 square inch) which are raised at least about 0.12 mm (0.005 inch) above the plane of the fabric (19) wherein the web is macroscopically rearranged to conform to the surface of the throughdrying fabric (19); and

d. throughdrying the web.

"3. A method of making a tissue sheet comprising the steps of:

a. depositing an aqueous suspension of papermaking fibers having a consistency of about 1 percent or less to provide a web comprising papermaking fibers and water on a forming fabric (12), and dewatering the wet web to a consistency of from about 20 to 30%;

b. transferring the web to a transfer fabric (17) travelling at a speed of from about 10 to about 80% slower than the forming fabric (12), said transfer fabric (17) having from about 10 to about 150 machine-direction elongated impression knuckles per 6.45 cm^2 (1 square inch) which are raised at least about 0.12 mm (0.005 inch) above the plane of the transfer fabric (17) wherein the web is macroscopically rearranged to conform to the surface of the transfer fabric (17); and

c. transferring the web to a throughdrying fabric (19) and throughdrying the web.

"9. A throughdried tissue sheet, especially an uncreped throughdried tissue sheet, having a basis weight of from about 10 to 70 g/m^2 and from about 10 to about 150 protrusions per 6.45 cm^2 (1 square inch) having a height of about 0.12 mm (about 0.005 inch) or greater which correspond to machine-direction elongated impression knuckles on the throughdrying fabric (19) and/or a transfer fabric (17) used during manufacture of the tissue sheet, said tissue sheet having a cross-machine direction stretch of about 9% or greater."

VI. The appellant argued essentially as follows:

Document D12 should be admitted since it is evident from the data given therein that the fabrics referred to in D1 or D3 - based on the diameters of the MD yarn of 0,50 mm and of the CD yarn of 0,45 mm - had "knuckles" which were raised above the plane of the fabric. Furthermore, it was much more difficult for the appellant than for the respondent to obtain such information because these fabrics are no longer available. Therefore it should be admitted, even as late filed. Paragraph [0027] of the patent in suit cited by the respondent does not constitute proof that the fabrics referred to in document D1 or D3 did not meet at the time the requirement of claims 1 and 3 concerning the feature of the impression knuckles.

The filing date of 12 April 1994 of the first priority application P1: US 08/226630 is not the effective date for claim 9 as it does not concern the same invention. Furthermore, it appears that P1 and document D7 concern the same invention under Article 87(1) EPC because the

fabrics described therein are identical and two of the inventors, Mr Chiu and Mr Wendt, are the same for P1 and for D7. D7 does not claim P1 as its priority, but another application, P3: US 08/226735. The patent in suit, claiming P1, should have claimed P3 for this same invention. In the spirit of decision T 998/99 (see OJ EPO 2005, 229) this should be considered a circumvention of the law by abuse of process and thus this priority cannot be validly claimed for claim 9.

Document D1 is thus prior art according to Article 54(2) EPC for it, while D7 represents prior art according to Article 54(3) and (4) EPC.

Document D1 is novelty destroying for claims 1 and 9 at least in combination with the additional information of D12 revealing the data of the commercial throughdrying fabrics Asten 920A and 937A, Velostar P800 and 103A as used in D1, which corresponds with the claimed number of knuckles per square inch and height of the knuckles above the plane of the fabric. Further, the product resulting from the process described in document D7 inevitably has a CD-stretch of 9% or more, as this process is identical to the process resulting in the product of claim 9, therefore this product also lacks novelty with respect to document D7.

According to document D1 an improved CD stretch of 9% or more was achieved without raised knuckles and with different fabrics (see examples 15 and 18). According to the patent in suit the fabrics Lindsay Wire T216-3 and T-216-3A have been used as throughdrying fabric in the examples 2, 3, 4 and 13 resulting in CD-stretch values of 8.5%, 20.1%, 13.2% and 6.8%, respectively. It

is not clear why certain examples result in values above 9% and others do not. Thus the problem of achieving a CD-stretch of at least 9% must have been solved by other parameters, not presently claimed. There is no evidence in the patent in suit that the result is not also obtained with a value of lower than 10 or higher than 150 knuckles per square inch. Thus the product of claim 9 either relates to a simple alternative or it does not solve the problem of obtaining these CD-values and therefore does not involve inventive step. The process claims 1 and 3 are silent with respect to the CD-stretch and do not necessarily result in a product having said CD-stretch of 9% or more.

Also with respect to document D2 the patent in suit does not solve the problem as discussed in its description. As already stated, only the examples 3, 4 and 5 of the patent in suit reveal a CD-stretch of 9% or greater, whereas the other examples - no features relevant to the claim having changed - do not achieve this CD-stretch. The problem is therefore not solved with the features as claimed. As a result, the subject-matter of claim 9, which does not exclude the domes known from document D2, lacks an inventive step. The same applies to process claim 1.

VII. The respondent argued essentially as follows:

Document D12 should not be admitted since it is a late filed document and represents an insufficiently substantiated prior use. Document D12 only discloses the warp count but not whether the knuckles extend beyond the plane or not. It does not call into doubt

the statement in paragraph [0027] of the patent in suit which reflects the patentee's belief concerning the commercial fabrics known at the time. Furthermore, if the said commercial fabrics were heat-set then no raised impression knuckles would result. Additionally, D12 is only hearsay evidence of a person who has never seen the fabrics as referred to in document D1. It confirmed that the information concerning said fabrics was no longer available from the supplier Asten, these fabrics no longer being in stock.

The amendments made to claims 1, 3 and 9 have a basis in the application as originally filed (see page 3, lines 14 to 31; page 16, lines 1 to 10; and claims 1, 3 to 5 and 10 to 11) so that the requirements of Article 123(2) and (3) EPC are met.

The filing date of the first priority application P1 is validly claimed for the process claims 1 and 3 so that D1 represents prior art according to Article 54(3) and (4) EPC while document D7 does not belong to the state of the art at all.

The priority issue is without any importance for product claim 9 since the documents D1 (including the additional information of D12), even if considered as prior art under Article 54(2) EPC and D7, when considered as prior art under Article 54(3) and (4) EPC neither disclose the product as claimed nor do they allow to derive same since D1 does not disclose a knuckle height of 0.12 mm or more and D7 does not disclose a CD-stretch of 9% or more.

The arguments with respect to the validity of the priority, based on decision T 998/99 (supra) cannot be accepted since this decision is applicable to a fundamentally different situation. In the present case two different companies filed applications claiming priorities from two different priority applications, filed on the same date. According to T 998/99 the same applicant filed two applications claiming priority from the same application.

With respect to D12: as products referred to by their trademarks frequently change their composition during their commercial lifespan, it is not assured that at the time of reference in D1 said MD knuckles were raised over the CD knuckles and in particular that no CD knuckles were present in the top plane, as required by the patent in suit (see patent, page 4, lines 53 to 54). These fabrics were available in different weave patterns and the person in question transmitted only the data he had received, without ever having seen the fabrics themselves. Document D12 represents an alleged implicit prior use issue but there exists no supporting evidence that the statement made in D12 is correct. Furthermore, there is additionally no proof that the fabrics referred to in document D12 were used in the examples of document D1. D12 only specifies the warp count but not whether the knuckles extend beyond the plane or not. The statement "if they were sanded" on page 2 of D12 implies that the said fabrics should be flat and should not have raised knuckles. If said fabrics were heat-set then there would also no longer exist impression knuckles. Document D12 thus cannot call into doubt the statement in the patent in suit wherein it is stated what the inventors believed the

available commercial fabrics to be about (see patent, paragraph [0027]).

The processes of claims 1 and 3 as well as the product of claim 9 differ from those according to document D1 in that the used fabrics comprise raised MD knuckles having a height of 0.12 mm or more above the plane of the fabric. The problem to be solved with respect to the process of document D1 is as defined in the patent (see page 2, paragraph [0004]). There is no teaching in document D1 which unambiguously gives the indication to increase the height of protrusions or whatsoever knuckles. This is valid with respect to the statement that the CD-stretch is dominated by the design of the throughdrying fabric and the suggestion to use separate fabrics to achieve it (see D1, page 5, lines 1 to 2; page 7, line 55 to page 8, line 7). The cited commercial transfer fabrics are smooth. Also the number of strands in the context of these transfer fabrics, which would result in a range of from 100 to 4000 for the number of knuckles per square inch, does not imply that the skilled person would actually choose such a number for the throughdrying fabric. The skilled person would not choose such a number, but use an already available type of fabric. The concept of the patent in suit is linked to a relatively small number of knuckles (about 10 to 150 knuckles per square inch), compared to the range of from 100 to 4000 of document D1.

Examples 1 and 3 of the patent in suit were made with about the same basis weight but they differ substantially with respect to their bulk values so that the corresponding CD-stretch value is expected to be different.

The examples of document D1 were made with uncalendered tissue sheets having high bulks (see page 4, lines 16 to 21). From Table 1 of D1 it is apparent that high CD-stretch values are combined with low tensile strength values ("GMT") and vice versa (see Table 1, page 12).

Contrary to this, the uncalendered tissue sheets according to examples 3 and 4 of the patent in suit possess both, a high CD stretch with high MD tensile strength in combination with a high CD tensile strength. The CD stretch values have to be considered in combination with said CD tensile strength values: an improvement for the tissue sheets according to the patent in suit compared to those of document D1 can be seen.

The product of claim 9 thus does not represent a simple alternative to the one proposed by document D1. The examples of the patent in suit not meeting the 9% CD-stretch value were heavily calendered so that the CD-stretch cannot be as good as for the uncalendered ones.

The problem to be solved when starting from the product of document D2 could be considered to be the provision of an alternative solution. The deflection member according to document D2, with its honeycomb hat structure, forms holes wherein the wet web is macroscopically rearranged to form dome protrusions. Thus the process of document D2 provides the opposite from the patent in suit (which uses impression knuckles for forming protrusions) and teaches the skilled person to use MD elongated holes in said deflection member in combination with a nip roll and a Yankee dryer drum.

The skilled person has no reason to change this concept underlying D2, let alone by replacing it with a fabric having raised impression knuckles, as it would not work with the nip roll and the Yankee drum. The protrusions or domes according to document D2 will not be understood as "knuckles" by the skilled person as this term has a clear meaning in the art (see e.g. D2, column 11, line 68 to column 12, line 11; D4, column 3, lines 6 to 10; column 6, lines 34 to 42).

Furthermore, product claim 9 excludes the product of document D2 by the process features referred to; the domes according to document D2 are fundamentally different from those as claimed in this claim.

All other documents are less relevant than D2.

Thus, the subject-matter of claims 1, 3 and 9 involves inventive step.

Reasons for the Decision

1. *Admissibility of late filed document D12 (Article 114(2) EPC)*

1.1 Document D12 was submitted by the appellant with its letter of 17 May 2005 as a reaction to the Board's communication dated 26 January 2005, annexed to the summons for oral proceedings on 1 June 2002. Therefore it was clearly submitted after the latest date before the oral proceedings indicated in the Board's communication, although the appellant could have

submitted D12 about two weeks earlier, as derivable from the receiving dates of the e-mails in question.

1.2 However, the Board considers that obtaining the information concerning the technical parameters of the fabrics referred to in document D1 - an application filed by the respondent - is more difficult for the opponent. Particularly, since in the present case - as was confirmed by the respondent - this information was no longer available from the supplier Asten, which no longer has these fabrics in stock. Therefore, in the present case the Board exercises its discretion under Article 114(2) EPC and allows the introduction of document D12 into the procedure, as it may shed light on the nature of the fabrics used in the examples of D1.

2. *Admissibility of amendments (Articles 123(2) and (3) EPC)*

2.1 Both independent process claims 1 and 3 were amended by introducing the additional feature "**and dewatering the wet web to a consistency of from about 20 to 30%**" and by restricting the number of knuckles per square inch of the throughdrying fabric (claim 1) or the transfer fabric (claim 3) to the range of "**from about 10 to about 150 machine-direction elongated impression knuckles per 6.45 cm^2 (1 square inch)**". Both have a basis in the application as originally filed (see page 3, lines 14 to 31; page 16, lines 1 to 10; and claims 1, 3 to 5).

Furthermore, the term "**optionally**" of feature b) of claim 1 **was deleted** whereby a preferred embodiment has been made compulsory which is also supported by the

application as originally filed (see claim 1; page 3, lines 19 to 31; page 15, lines 29 to 32; and examples 1 to 13).

2.2 Product claim 9 similarly has been restricted by limiting the number of protrusions to "**from about 10 to about 150 protrusions per 6.45 cm^2 (1 square inch)**" and the alternative to the impression knuckles on the throughdrying fabric, i.e. the feature "**and/or the transfer fabric**" **was deleted**. Basis for these amendments can be found in claims 10 and 11 of the application as originally filed.

2.3 The requirements of Articles 123(2) and (3) EPC are therefore fulfilled.

3. *Priority (Articles 87 to 89 EPC)*

3.1 The amendments made to claims 1 and 3 are the result of discussions with respect to the validity of the filing date of P1 (= US 08/226 630) as effective date for these claims. These claims are fully supported by the disclosure of the first priority application P1 (see P1, page 2, lines 16 to 31; claims 1, 2, 10 and 11) and are thus directed to "the same invention" as required by the G 2/98 (OJ EPO 2001, 413, points 8 and 9 of the reasons).

3.2 Therefore the priority date of 12 April 1994 of the first priority application P1 is validly claimed for the subject-matter of the claims 1 and 3 of the patent in suit.

3.3 Consequently, document **D1** - having been filed on 23 June 1994, claiming a priority date of 24 June 1993, and having been published on 28 December 1994 - represents prior art pursuant Article 54(3) and (4) EPC for claims 1 and 3. It is thus only relevant for novelty.

3.4 It follows also that document **D7** - having been filed on 30 March 1995, claiming a priority date of 12 April 1994 - does **not** belong to the state of the art under Article 54(3) and (4) EPC for claims 1 and 3.

3.5 The question whether or not the priority date of the first priority application P1 is validly claimed for the subject-matter of product claim 9 needs not to be answered in view of the conclusions regarding D1 and D7 arrived at in points 4 and 5 below.

3.6 The appellant finally argued, with respect to the validity of the first priority date of the patent in suit, that T 998/99 (supra) appeared to be relevant. The priority application of D7 should have been claimed as well by the patent in suit, as the subject-matter was identical, as were two of the inventors.

The Board cannot accept these arguments for the following reasons. The situation in the present case is not the same as in case T 998/99 (supra). The latter applied to one and the same applicant claiming the same priority for two subsequent applications, for the same invention, whereas in the present case there are two applications filed by two different applicants, namely Kimberly Clark Corporation (patent in suit) and Lindsay Wire Corporation (D7) which each claim their priority

from different priority applications, which were filed on the same date. The Board therefore sees no need to discuss this decision any further.

4. *Novelty (Article 54 EPC) - Documents D1 and D3*

The appellant argued that the subject-matter of claims 1, 3 and 9 lacked novelty with respect to documents D1 and D3 (both optionally in combination with D12).

4.1 Document D1 discloses an almost identical process as the patent in suit for making a, preferably uncreped, tissue sheet. Said process includes depositing a suspension of fibers having a consistency of about 0.5% or less on a forming fabric, dewatering it to a consistency of about 20-30%, transferring the web to a transfer fabric going 10-80% slower, transferring the web to a throughdrying fabric whereby the web is macroscopically rearranged to conform to the surface of the throughdrying fabric and throughdrying the web. Document D1, however, does not give any details of the fabrics used (see page 3, lines 36 to 37; page 4, lines 4 to 15 and lines 24 to 25; examples; claims 19 and 21).

4.1.1 The preferred transfer fabrics are stated to have at least one of the following characteristics:
(a) on the side contacting the wet web (top side) the number of machine-direction (MD) strands is 10-200 strands per inch and the number of cross-machine-direction strands is in the same range of from 10-200 strands per inch; the strand diameter is typically smaller than 1.3 mm, and

(b) on the top side, the distance between the highest point in the MD knuckle and the highest point of the CD knuckle is in the range of from about 0.025 to about 0.5 or 0.75 mm (corresponding to 0.001-0.03 inch). "In between these two levels, there can be knuckles formed either by MD or CD strands that give the topography a 3-dimensional characteristic" (see page 7, lines 29 to 37).

This statement in document D1, however, does **not** allow to conclusively derive that these transfer fabrics - which based on the number of strands per square inch may have from about 100 to 4000 knuckles per square inch - meet the requirements of the patent in suit as defined in claims 1, 3 and 9. This is particularly so for the height of the MD knuckles of at least 0.12 mm relative to the plane of the CD knuckles. It also cannot be derived that these knuckles are elongated in the machine-direction, since the type of weave of these fabrics is not known (see page 7, lines 29 to 40).

To the contrary, the commercial transfer fabrics mentioned in document D1, i.e. Asten 934, 937, 939, 959 or Albany 94M (see Table 1) are stated to have a smooth surface to improve the smoothness of the sheet (see page 7, lines 21 to 28 and line 57 to page 8, line 7; and page 9, lines 15 to 16). This view is also supported by the patent in suit wherein the transfer fabric - with reference to the same trademarks - is a "smoother fabric", i.e. a fabric not having raised impression knuckles (see patent, page 6, lines 49 to 51). This is also supported by document D7 stating that these fabrics have a co-planar top surface (see page 8, lines 6 to 8). In this context the Board notes

that these facts have never been questioned by the appellant.

4.1.2 According to document D1 the throughdrying fabrics may be quite coarse and three-dimensional in the optimized configuration; the fabrics Asten 920A and 937A, Velostar P800 and 103A are stated to be suitable for this purpose (page 7, line 53 to page 8, line 19; Table 1). However, these fabrics are not further described in document D1; in the patent in suit they are not mentioned at all. The term "coarse" does not imply that raised MD knuckles are present. No range of the number of knuckles of said throughdrying fabrics is known, let alone that they are MD elongated and/or have a specific minimum height of the said knuckles of about 0.12 mm above the plane of the fabric.

4.1.3 The resulting products according to document D1 can have a CD stretch of about 9% or greater (see page 4, lines 16 to 21; Table 1 at page 12, lines 34, 36 and 37, examples 15, 17 and 18); they were made using two types of throughdrying fabrics having
(a) a side dominated by warp knuckles (designated "W") which contacted the web side or
(b) a side dominated by shute knuckles (designated "S").
The said examples were made using Asten 934 and Velostar 800 as the throughdrying fabric but without disclosing any details thereof (see page 10, line 48; page 11, Table 1).

4.1.4 For the above reasons the Board concludes that document D1, when taken alone, cannot take away the novelty of either of claims 1, 3 and 9.

4.2 Document D12 was submitted by the appellant in order to show that the throughdrying fabrics Asten 937A, Asten 920A, Velostar P800 and 103A, as mentioned in document D1 had MD elongated knuckles which were raised more than 0.12 mm above the plane of the fabric. The designation "Vel**l**o**w**star P800" in the relevant passage of D12 is interpreted as actually meaning "Velostar P800" (see D12, page 2, last paragraph and page 5, second paragraph).

4.2.1 The appellant argued that, based on the given diameters of the MD yarn of 0.50 mm and the CD yarn of 0.45 mm the knuckles of the Asten 920A fabric must have been raised more than 0.18 mm above the plane of the fabric since the minimum height would be no less than 50% of the filament thickness and said fabric has 155 MD elongations (which value can be calculated from the given Mesh number 25x31 [=number of MD filaments x number of CD filaments in 1 inch] resulting in the number of X-overs [i.e. 25x31=775] which divided by the given number of the sheds of 5 [= number of filaments in one direction of the pattern] results in 775/5=155; see D12, page 2, lower part to page 3, upper part).

These arguments cannot be accepted for the following reasons.

4.2.2 D12 is the only evidence available, in support of the appellant's contention that the fabrics referred to in D1 resulted in the claimed number of elongated MD knuckles and had the claimed height above the plane of the fabric. It is the transmittal of information which one person received from the suppliers at the time, referring to a technical design of the fabric existing

15 years ago. No further supporting evidence is available, in the form of the fabrics themselves, technical data sheets, etc. The person in question has never seen these fabrics, let alone those which were used for carrying out the examples referred to in document D1. Further, the fabrics are referred to by their trademarks, which is neither a guarantee that their technical design remains unchanged over time.

Actually, document D12 only specifies the warp count but not whether the knuckles extend above the plane of the fabric. Furthermore, the statement "if they were sanded" on page 2 of D12 implies that the said fabrics should be flat and should not have raised knuckles. Similarly, if the said fabrics were heat-set then impression knuckles would no longer exist. Thus document D12 does not call into doubt the general statement in the patent in suit that it was believed that the commercial fabrics heretofore were either co-planar or that they had a surface where the shute (and not the warp) knuckles lay higher (see patent, paragraph [0027]).

4.2.3 On the basis of D12 alone the Board cannot therefore conclude that the fabrics referred to in D1 have resulted in the features of the fabric as claimed in claims 1, 3 and 9. Having also been reminded of it in the communication of the Board in preparation of the oral proceedings the burden of proof lies entirely with the appellant who has not been able to dispense with it.

Document D1 when combined with the information of D12 therefore cannot take away the novelty of either of claims 1, 3 and 9.

The above conclusion is equally valid for document D3 which in the same way as D1 discloses the use of an Asten 920 fabric as transfer- and throughdrying fabric (see example 2).

5. *Novelty (Article 54 EPC) - Document D7*

5.1 Taking account of paragraphs 3.4 and 3.5 above, document D7 can only represent prior art under Article 54(3) and (4) EPC for product claim 9.

Document D7 does not disclose a CD stretch value of about 9% or greater as defined in claim 9, let alone any other properties of the resulting tissue sheet, apart from the about 10 to 150 protrusions per square inch having a height of about 0.12 mm or greater above the plane of the fabric. Document D7 is also completely silent with respect to the parameters of the process used for making the tissue sheet.

The appellant argued that the process disclosed in D7 inevitably would result in a tissue sheet having the claimed CD stretch value.

5.2 The Board cannot accept this since - as evident from the examples of the patent in suit - only the examples 3 to 5 result in a tissue sheet having this minimum CD stretch value while all other examples have a lower CD stretch value (see patent in suit, examples 1 to 13). Thus it is evident that this desired CD stretch value is not automatically obtained but depends on the process conditions.

Consequently, the subject-matter of claim 9 is also novel with respect to document D7.

5.3 None of the other available prior art discloses all features of claims 1, 3 or 9.

The Board therefore concludes that the subject-matter of claims 1, 3 and 9 is novel.

6. *Inventive step (Article 56 EPC)*

6.1 *Document D1 with respect to claim 9*

Taking account of paragraphs 3.4 and 3.5 above document D1 is considered to represent the closest prior art for product claim 9. It does not disclose knuckles having a height of 0.12 mm or greater. According to the examples 15, 17 and 18 of document D1 tissue sheets having a CD stretch of 9% or more were made.

6.2 *Problem to be solved with respect to the tissue sheet of document D1*

The problem to be solved with respect to the tissue sheet discussed in document D1 is considered to be the provision of such a sheet having increased flexibility and CD-stretch and maintained or improved other desirable tissue properties (see patent, page 2, paragraph [0004]).

6.3 *Solution to the problem*

This problem is solved by a tissue sheet as defined in product claim 9.

It is credible that the claimed measures provide an effective solution to the technical problem (cf. page 2, lines 23 to 25; see also paragraph 6.4.5 below).

6.4 The Board considers that the subject-matter of product claim 9 is not obvious to the person skilled in the art for the following reasons:

6.4.1 There is no teaching in document D1 which unambiguously indicates increasing the height of protrusions or whatsoever knuckles. This holds true with respect to the statement that the CD-stretch is dominated by the design of the throughdrying fabric and the suggestion to use separate fabrics to achieve it (see D1, page 5, lines 1 to 2; page 7, line 55 to page 8, line 7). Also the number of strands in the context of the transfer fabrics, which would result in a range of from 100 to 4000 knuckles per square inch, does not imply that the skilled person actually would select the lowest number (100 knuckles per square inch) and additionally would increase the height of the knuckles. It is the classical "could-would-approach"-situation since the skilled person would not choose such a figure for an already defined type of fabric. The concept of the patent in suit is linked to a relatively small number of about 10 to 150 knuckles per square inch compared to the range of from 100 to 4000 knuckles per square inch mentioned in document D1.

6.4.2 The appellant argued that the improved CD stretch of 9% or more according to document D1 has been achieved without raised knuckles. Furthermore, according to the patent in suit the fabric T-216-3 has been used as

throughdrying fabric in the examples 2, 3, 4 and 13 resulting in CD-stretch values of 8.5%, 20.1%, 13.2% and 6.8%, respectively. Thus the problem has not been solved over the entire range claimed. Furthermore, there is no evidence in the patent in suit that the benefit is not obtained with a knuckle value of lower than 10 or higher than 150. Thus claim 9 either relates to a simple alternative solution or does not solve the problem.

These arguments cannot be accepted for the following reasons.

6.4.3 If the skilled person has the desired CD-stretch effect achieved without conclusively knowing that said fabrics (see D1, page 7, lines 36 to 40 and page 8, line 2) have the impression knuckle property (which causes said effect) he has no need at all to modify the fabrics used.

6.4.4 Examples 1 and 3 of the patent in suit, although being made with about the same basis weight of 7.7 kg per 267.55 m^2 and of 6.15 kg per 267.55 m^2, differ substantially with respect to their bulk value of 13.18 cm^3/g and 24.89 cm^3/g, respectively, so that the corresponding CD-stretch value is expected to be different.

6.4.5 It is further remarked that the examples of document D1 were made with uncalendered tissue sheets having high bulks (see page 4, lines 16 to 21). From Table 1 of D1 it can be taken that high CD-stretch values go together with low tensile strength values ("GMT") and vice versa (see Table 1, page 12).

Contrary to that, the uncalendered tissue sheets according to the examples 3 (and 4) of the patent in suit possess both, a high CD stretch of 20.1% (13.2%) and a high MD tensile strength of 777 g per 7.62 cm (951 g per 7.62 cm) in combination with a CD tensile strength of 275 g per 7.62 cm (751 g per 7.62 cm). Thus, the CD stretch values have to be considered in combination with said tensile strength values whereby an improvement for the tissue sheets according to the patent in suit compared to those of document D1 can be seen. Consequently, the solution according to claim 9 does not represent a simple alternative solution with respect to document D1.

6.4.6 With respect to those examples of the patent in suit not meeting the 9% CD-stretch value it has to be considered that these sheets were heavily calendered so that it is to be expected that the CD-stretch cannot be as good as for the uncalendered sheets.

6.4.7 Finally, the appellant has not submitted any evidence in order to prove his allegations that said range of MD elongated knuckles is not critical and does not solve the technical problem as defined in paragraph 6.2 above.

6.4.8 Taking account of the reasons given in paragraphs 6.2 to 6.4.7 above the teaching of document D1 cannot render obvious the subject-matter of claim 9.

6.5 *Remaining state of the art, documents D2 to D6, with respect to the claims 1, 3 and 9*

6.5.1 Among the other documents belonging to the state of the art under Article 54(2) EPC document D2 is considered to represent the closest prior art for discussing inventive step.

6.5.2 Document D2 discloses a process for making absorbent paper webs using an aqueous dispersion of the paper making fibers having a consistency of from about 0.1 to 0.3% (see column 3, lines 37 to 39; column 4, lines 3 to 6 and lines 24 to 59). Said process includes the use of a first foraminous member for forming an embryonic web from said dispersion and then associating said embryonic web with a second foraminous ("deflection") member having a macroscopically monoplanar network surface which is continuous and patterned (see column 2, lines 7 to 45; column 3, lines 37 to 39; column 4, lines 3 to 6; figures 2 to 8). Said deflection member preferably has an overall thickness of about 0.35 to 3.0 mm and is spaced from about 0.10 to about 2.54 mm from the mean upper surface of the knuckles of said foraminous woven element (see column 11, line 68 to column 12, line 12). The embryonic web has consistencies in the range of from about 5 to about 25% (see column 5, lines 1 to 20), preferably from about 10-30% (see column 14, lines 32 to 37), before it reaches the transfer zone where it is transferred to the second foraminous member (see column 14, lines 32 to 40).

There is a differential velocity between the two members, the first member travelling at a velocity of from about 7-30% faster than the second member (see column 14, line 61 to column 15, line 5). The continued water removal to about 25-35% causes a rearrangement of

the fibers (column 15, lines 6 to 39) which are deflected into the deflection conduits of said deflection member (see column 15, line 40 to column 16, line 20).

Thereafter the intermediate paper web is dried, preferably with a flow-through dryer, to a consistency of from about 30-98% (see column 16, lines 30 to 45, and column 17, lines 3 to 11). The resulting tissue paper may be calendered and/or creped or not (see column 18, lines 3 to 12 and lines 34 to 60) and has a pattern of protrusions or domes and preferably a basis weight of from about 9-95 g/m^2 (see column 1, lines 60 to 65; column 20, lines 7 to 9).

D2 does neither specify the number of protrusions per surface area of the web nor the height of said resulting protrusions, but the product reveals a CD stretch of 10-21% (see Table II). The deflection member of the embodiment according to figure 10 has about 387 protrusions per square inch as calculated by the Opposition Division (see interlocutory decision, point 2.3.2.3 of the reasons).

6.6 *Problem to be solved with respect to the method and the paper web disclosed in document D2*

The appellant considered that the problem to be solved with respect to the method and the paper web disclosed in document D2 is the provision of an alternative solution.

6.7 *Obviousness*

6.7.1 Starting from D2, the Board considers that the subject-matter of claims 1, 3 and 9 is not obvious to the person skilled in the art for the following reasons:

6.7.2 The monoplanar network surface of the deflection member according to document D2, through its "honeycomb hat" structure, forms holes wherein the wet web is macroscopically rearranged to form dome protrusions. Thus document D2 provides the opposite from the patent in suit - which uses knuckles in the throughdrying and/or transfer fabric for forming "knuckle" protrusions - and teaches the skilled person to use MD elongated holes in said deflection member for throughdrying the wet tissue web. The skilled person has no reason to change this concept underlying D2, let alone by replacing it with a fabric having raised knuckles, as he would have to completely redesign the throughdrying section to accommodate the fabric with the knuckle protrusions.

6.7.3 The protrusions or domes according to the tissue sheet of document D2 will not be understood (by the skilled person) as resulting from "impression knuckles", as the term "impression knuckles" has a clear meaning in the art (see e.g. D2, column 11, line 68 to column 12, line 11; D4, column 3, lines 6 to 10; column 6, lines 34 to 42). The protrusions according to document D2 are fundamentally different from those of the patent in suit; the domes are not formed on any knuckles, they have a different, i.e. a higher basis weight and a lower density than their surrounding network and they are not necessarily MD elongated (see D2, column 1,

line 60 to column 2, line 6). Furthermore, product claim 9 excludes the product of document D2 by its reference to process features requiring the MD elongated impression knuckles on the throughdrying fabric.

6.7.4 The other documents D3 to D6 are less relevant than D2, with document D5 disclosing the same deflection member as in D2.

6.8 The appellant's further argument that the patent in suit does not solve the problem discussed in its description cannot be accepted since the objective problem to be solved is, as always, defined by taking account of the closest prior art and not in an abstract manner (see Case Law of the Boards of Appeal of the European Patent Office, 4th edition, 2001, sections I.D.2 to I.D.4.6).

6.9 The appellant's argument that only the examples 3, 4 and 5 of the patent in suit reveal a CD-stretch of 9% or greater so that the problem is not solved over the entire range claimed cannot be accepted either. This is due to the fact that the alternative solution with respect to document D2 (the object according to D2 is stated to be the provision of an improved paper web and/or soft, strong, absorbent paper products; see column 2, lines 7 to 13 and lines 47 to 56) does not require obtaining a specific CD-stretch value of more than 9%.

6.10 The Board therefore concludes that the subject-matter of the independent claims 1, 3 and 9 involves an inventive step (Article 56 EPC).

6.11 The same applies to the subject-matter of the dependent claims 2, 4 to 8 and 10 to 24 which define further preferred embodiments of the processes according to claims 1 or 3 and/or the tissue sheet according to claim 9.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance with the order to maintain the patent in amended form in the following version:

- claims:
1 to 24 as filed at the oral proceedings,

- description:
pages 1, 4 to 9, 11 to 17 of the patent as granted,
pages 2, 3 and 10 as filed at the oral proceedings,

- drawings:
figures 1 to 19 of the patent as granted.

The Registrar: The Chairman:

G. Nachtigall H. Meinders