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D E C I S I O N
of 21 October 2003

Case Number: T 1105/00 - 3.3.6

Application Number: 94109734.7

Publication Number: 0631014

IPC: D21H 27/30

Language of the proceedings: EN

Title of invention:
Soft tissue product and process of making same

Patentee:
KIMBERLY-CLARK WORLDWIDE, INC.

Opponent:
The Procter & Gamble Company

Headword:
Soft tissue/KIMBERLY

Relevant legal provisions:
EPC Art. 123(2), 84, 56, 54
EPC R. 57(a)

Keyword:
"Eighth to tenth auxiliary request: added subject-matter (yes)"
"Late filed evidence in relation to the appellant-opponent's prior use: (not admitted) - not prima facie relevant"
"Main and first to seventh and eleventh to thirteenth auxiliary request: novelty (yes)"
"Main and first to seventh auxiliary request: inventive step (no) - obvious desiderata"
"Eleventh auxiliary request: inventive step (yes) - the product of an inventive process is itself based on an inventive step"

Decisions cited:
T 0595/90, T 0472/92, T 0233/93, T 793/93, T 0363/96, T 0823/96, T 0329/99, T 0131/01

Catchword:
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Case Number: T 1105/00 - 3.3.6

D E C I S I O N
of the Technical Board of Appeal 3.3.6
of 21 October 2003

Appellant: (Opponent)	The Procter & Gamble Company One Procter & Gamble Plaza Cincinnati, Ohio 45202 (US)
Representative:	Boon, Graham Anthony Elkington and Fife, Prospect House, 8 Pembroke Road Sevenoaks, Kent TN13 1XR (GB)
Respondent: (Proprietor of the patent)	KIMBERLY-CLARK WORLDWIDE, INC. 401 North Lake Street Neenah, Wisconsin 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 29 September 2000 concerning maintenance of European patent No. 0631014 in amended form.**

Composition of the Board:

Chairman: P. Krasa
Members: G. Dischinger-Höppler
C. Rennie-Smith

Summary of Facts and Submissions

I. This appeal is from the interlocutory decision of the Opposition Division concerning maintenance in amended form of European patent No. 0 631 014 relating to a soft tissue product and a process of making the same.

II. In its notice of opposition filed against the patent, the Appellant (Opponent) sought revocation of the patent on the grounds of Article 100(a) EPC for lack of novelty and inventive step. The notice of opposition contained reasoned statements concerning novelty of the subject-matter of independent product Claims 1 and 2 and concerning inventive step of independent product Claims 2 and 18. The opposition was further based on the grounds of insufficiency of disclosure (Article 100(b) EPC) and extension of the subject-matter of independent process Claim 19 beyond the content of the application as filed (Article 100(c) EPC).

The evidence in support of the opposition included:

(1) statements contained in the notice of opposition relating to the Appellant's own public prior use by commercial sale of its products under the brand names "Charmin" and "Charmin Ultra" (hereinafter document (1));

and, *inter alia*, document

(3) US-A-4 440 597.

In a communication annexed to the summons to oral proceedings before the Opposition Division, attention was drawn to missing evidence in relation to the alleged public prior use.

The Appellant, under cover of its letters dated 10 January 2000 and 31 October 2000, filed *inter alia*, the following further documents:

(7) a report concerning the Appellant's own prior use in relation to products under the brand name "White Cloud Ultra" which was accompanied by seven Exhibits and a "Supplement"; and

(10) a report by R. S. Ampulski concerning a reworking of examples of document (3).

Further, in its letter dated 10 January 2000, the Appellant, for the first time, mentioned lack of inventive step of the subject-matter of Claim 1.

III. In its decision, the Opposition Division found that the claims as amended complied with the requirements of Article 100(c) EPC and that the patent in suit met the requirements of Article 100(b) EPC.

Concerning novelty of the subject-matter of Claim 1 in respect of the alleged public prior use, the Opposition Division held that the objections contained in the notice of Opposition (namely document (1) in paragraph II above) were not sufficiently substantiated and that the late filed document (7) related to another prior use which was not prima facie relevant. Further, the Opposition Division dismissed the objection to the

subject-matter of Claims 1 and 2 of lack of novelty over documents (3) and (10) as being based on unproven assumptions and speculation.

Concerning lack of inventive step of the subject-matter of Claim 1, the Opposition Division observed that this ground of opposition had been filed late since the notice of opposition did not contain a reasoned statement in this respect. If, however, this ground were exceptionally to be considered, it would not *prima facie* prejudice the maintenance of the patent in suit and, therefore, in accordance with decision G 10/91 of the Enlarged Board of Appeal this ground was rejected. As regards inventive step of the subject-matter of Claim 2, the Opposition Division held that it was not obvious from the prior art, in particular document (3), to manufacture an uncreped tissue product having a minimized MD Max Slope in order to provide a soft product having advantageous tactile and cleaning properties and being convenient to manufacture.

IV. This decision was appealed by the Appellant who, in appeal proceedings, filed nine further documents, one being a patent document (document (19)), and the rest consisting of experts' statements, accompanied by 18 Exhibits, concerning the alleged prior use and further experiments reproducing examples of document (3). The Respondent (Proprietor) objected to the admissibility of the documents filed late during the appeal proceedings.

V. During the oral proceedings held before the Board on 20 and 21 October 2003, the Respondent filed amended sets of claims in a new main and 13 auxiliary requests.

The independent Claims 1, 2, 16 and 17 of the main request read:

"1. A soft tissue product comprising one or more tissue plies and having a Bulk (as defined herein) of 9 cubic centimeters per gram or greater; a MD Max Slope (as defined herein) of 6 or less, and/or a MD Stiffness Factor (as defined herein) of 100 or less; and a machine direction stretch of from 10 to 30 percent.

2. A soft tissue product comprising one or more uncreped throughdried tissue plies and having a MD Max Slope (as defined herein) of 10 or less, and/or a MD Stiffness Factor (as defined herein) of 150 or less, and having a Bulk of 9 to 20 cubic centimeters per gram.

16. A soft single-ply bath tissue comprising a layered, uncreped throughdried tissue sheet having an air side layer comprising 80 weight percent or greater curled eucalyptus fibers and a fabric side layer comprising 80 weight percent or greater curled eucalyptus fibers, said tissue having a Bulk (as defined herein) of 9 to 20 cubic centimeters per gram, a MD Stiffness Factor (as defined herein) of from 50 to 100 and a machine direction stretch of from 10 to 25 percent.

17. A method of making a soft uncreped throughdried tissue sheet, comprising:

(a) forming an aqueous suspension of papermaking fibers having a consistency of 20 percent or greater;

(b) mechanically working the aqueous suspension in a shaft disperger preferably at 60°C (140°F) or greater to curl the fibers;

(c) diluting the aqueous suspension of curled fibers to a consistency of 0.5 percent or less and feeding the diluted suspension to a tissue-making headbox;

(d) depositing the diluted aqueous suspension of papermaking fibers onto a forming fabric to form a wet web;

(e) dewatering the wet web preferably to a consistency of from 20 to 30 percent;

(f) transferring the wet web from the forming fabric to a transfer fabric travelling at a speed from 10 to 80 percent slower than the forming fabric, this transfer being optionally performed by two or more different speed transfers using more than one transfer fabrics;

(g) transferring the web to a throughdrying fabric whereby the web is macroscopically rearranged to conform to the surface of the throughdrying fabric; and

(h) non compressive drying the web to final dryness."

Differences with respect to the claims found patentable in the decision under appeal appear in Claim 1 as regards the values for the parameters MD Max Slope and MD stiffness Factor and the introduction of the feature concerning the machine direction stretch, and in Claim 2 as regards the value of the parameter MD Max

Slope and the introduction of the feature concerning the Bulk.

Dependent Claims 3 to 15 and 27 relate to specific embodiments of the products of Claims 1, 2 and 16 respectively, and dependent Claims 18 to 26 relate to specific embodiments of the method of Claim 17.

The first to third auxiliary requests differ from the main request only in further limitations of one or more values for the parameters Bulk, MD Max Slope and machine direction (MD) stretch in Claim 1.

The fourth auxiliary request differs from the main request in a further limitation of the value of the MD Max Slope and by the addition of the MD stretch value in Claim 2.

The fifth to seventh auxiliary requests differ from the fourth in limitations of one or more values for the parameters Bulk, MD Max Slope and MD stretch in Claims 1 and 2.

The eighth auxiliary request differs from the main request essentially by a different MD Max Slope value, the omission of the MD stretch and the addition of the feature "and comprising a layer treated by refining or chemical action to give high strength, the remaining layer(s) being weaker" in Claim 1.

The ninth auxiliary request differs from the eighth only in that this latter feature has been added to Claim 2.

The tenth auxiliary request differs from the main request in that product Claims 1 to 15 have been replaced by a new method Claim 1 and in that Claims 16 to 27 have been renumbered as Claims 2 to 13; new Claim 1 reads:

"1. A method of making a soft tissue product comprising one or more uncreped throughdried tissue plies and having an MD Max Slope of 10 or less, and/or a MD Stiffness Factor (as defined herein) of 150 or less, and a Bulk of from 9 to 20 cubic centimeters per gram, wherein the tissue web is not adhered to and creped from a Yankee drier".

The eleventh auxiliary request consists of Claims 16 to 27 of the main request, renumbered as Claims 1 to 12

The twelfth auxiliary request consists of Claims 17 to 26 of the main request, renumbered as Claims 1 to 10, and the thirteenth auxiliary request consists of Claims 19 to 28 of the claims as granted, renumbered as Claims 1 to 10.

VI. The Appellant's arguments, in writing and at the oral proceedings, can be summarised as follows:

– The subject-matter of Claim 1 of the main request lacked novelty over sales of White Cloud Ultra as was evident from document (7) and Charmin Ultra as was evident from the expert statements and exhibits filed during the appeal. In the present case, it was not necessary to prove this public prior use "up to the hilt" as set out in decision T 472/92 but merely "on the balance of

probabilities" in accordance with decision T 363/96 since the Respondent had had access to the Appellant's Charmin Ultra products as was admitted during the opposition proceedings.

- The subject-matter of Claims 1 and 2 of the main request lacked novelty over document (3) in view of the reproduction experiments reported in exhibits to statements of Dr Ampulski filed during the appeal proceedings.

- The subject-matter of Claims 1 and 2 of the main request lacked an inventive step in view of the prior art admitted in the patent in suit and in view of document (3). The same applied to the respective claims of the first to seventh auxiliary requests.

- The eighth to tenth auxiliary requests were inadmissible since each contained features newly introduced into Claim 1 which rendered that claim unclear and which extended beyond the content of the application as originally filed.

- Even though Claim 1 of the eleventh auxiliary request represented the product of the process of Claim 2, it consisted merely of a collection of unrelated and randomly selected parameters which were usual in the art.

VII. The arguments of the Respondent can be summarized as follows:

- The evidence of alleged prior use was insufficient to prove that any of the particular products referred to by the Appellant in its late-filed documents was publicly available at the priority date of the patent in suit.

- Considering that a number of process parameters which had an influence on the product properties were not specified in document (3), the evidence provided was insufficient to prove that the reproduction of the process disclosed therein would inevitably result in a product falling within Claim 1 of the main request.

- This applied all the more to the subject-matter of Claim 2 as document (3) did not contain examples with no creping step.

- The problem solved by the claimed tissue having a bulk and MD Max Slope as defined in the patent in suit, in view of document (3) as the closest prior art, consisted in providing a soft tissue product having improved tactile and cleaning properties and which is less expensive to manufacture.

- It was nowhere recognised in the prior art, either as mentioned in the patent in suit or as disclosed in document (3), that this problem could be solved by the means claimed in any of the requests. The teaching in document (3), that creping provided

softness to the tissue, if anything taught away from any uncreped soft tissue product.

– Claim 1 of the eighth and ninth auxiliary requests was clear, if properly read in view of the description. As to Claim 1 of the tenth auxiliary request, it was argued that it contained merely an allowable change in category and a clarification of the term "uncreped".

- Finally, it was submitted that there was no hint in the art that a combination of features as set out in Claim 1 of the eleventh auxiliary request would provide a soft tissue product.

VIII. The Appellant requested that the decision under appeal be set aside and that the patent be revoked, alternatively that the case be remitted for further prosecution.

The Respondent requested that the appeal be dismissed and that the patent be maintained according to the main request or alternatively one of the auxiliary requests 1 to 13 filed during the oral proceedings.

Reasons for the Decision

1. *Amendments (Articles 84 and 123 EPC), all requests*

1.1 The Board is satisfied that the amendments made to the claims of any of the main request, first to seventh and eleventh to thirteenth auxiliary requests comply with the requirements of Articles 84 and 123 EPC. This has

not been contested by the Appellant and no further comments on this matter are necessary.

1.2 However, the Appellant raised objections under Articles 123(2) and 84 EPC with respect to Claim 1 of the eighth to tenth auxiliary requests.

1.2.1 The Appellant argued that the new feature introduced into Claim 1 of the eighth and ninth auxiliary request **"and comprising a layer treated by refining or chemical action to give high strength, the remaining layer(s) being weaker"** rendered the respective claim unclear with respect to the meaning of the terms "high" and "weaker". Moreover, it represented an unallowable generalisation since the feature was originally disclosed only in relation to the manufacture of uncreped tissues.

1.2.2 The Respondent argued that the terms "high" and "weaker" were relative to each other in the sense that if one layer was of high strength, the other layers were significantly reduced in strength. This was apparent from the description of the patent in suit (page 4, lines 20 to 39). In addition, a skilled reader would understand from the application as filed that the reference to a process with no creping was merely a preferred embodiment of the invention.

1.2.3 Whilst it might be acceptable that the terms "high" and "weaker" in Claim 1 of the eighth and ninth auxiliary requests are only relative terms with no particular meaning, it is the Board's view that Claim 1, not being limited to uncreped tissue products, is broader than

the content of the application as filed for the following reasons:

The amended Claim 1, which is identical in the eighth and ninth auxiliary requests, covers a creped tissue product comprising a layer treated by refining or chemical action to give high strength and remaining layer(s) which are weaker. It is uncontested that this tissue product is not explicitly disclosed in the application as filed. Therefore, it must be determined whether this particular embodiment is implicitly disclosed. Layered products are disclosed in the examples which all describe uncreped throughdried three-layered tissues wherein the center layer was refined to achieve the target strength values, while the outer layers comprised disperged, debonded eucalyptus fibers which provide softness and bulk (page 23, lines 7 to 32). Layered products are further addressed in paragraph 2 of page 8 of the application in suit. In this paragraph it is described that stiffness of a tissue can be decreased via creping, layering or attachment to a Yankee dryer. However, the first and the last processes are said to be not possible for uncreped tissue, for which layering is expected to be the key for reducing its stiffness. The Board, therefore, concludes that layering is disclosed in the application as filed as an alternative method to creping or treatment with a Yankee drier in order to obtain a soft tissue of reduced stiffness and that layering is obviously not necessary for achieving softness and low stiffness in the case of creped tissues.

The Board accepts the Respondent's argument that a skilled person may realise from the content of the application as filed that a combined layering and creping of tissue plies could also provide useful products. However, it is necessary to distinguish two questions: whether a particular embodiment is disclosed in an application or whether it is merely rendered obvious by the application's disclosure (see T 823/96 of January 1997, reasons No. 4, and T 329/99 of 5 April 2001, reasons No. 4, both not published in the OJ EPO). In the present case, the Board holds that the claimed layered and creped product would be based on a concept in which the process for its production implies a creping step after forming layers in one tissue ply for which the application as filed does not provide a basis. Therefore, the Board concludes that a layered creped tissue product as described in Claim 1 of the eighth and ninth auxiliary requests does not belong to the explicit or implicit disclosure of the application as filed which cannot, therefore, serve as a valid basis for the amendments in the sense of Article 123(2) EPC.

1.3 Concerning the tenth auxiliary request, the Appellant argued that the method of Claim 1 was not originally disclosed and was unclear with respect to the definition of "uncreped".

1.3.1 In the Respondent's view, the amendments made to Claim 1 merely consisted in an allowable change of category from a product claim to a process claim and in a clarification as to the meaning of the term "uncreped".

1.3.2 Claim 1 of the tenth auxiliary request is concerned with a method of making a soft tissue product comprising one or more "uncreped tissue throughdried plies" wherein **"the tissue web is not adhered to and creped from a Yankee drier"**. It excludes only a tissue creped by a Yankee drier, but encompasses a tissue product creped by any other creping method. This is in contrast to the term "uncreped" and renders it unclear as to its precise meaning (Article 84 EPC). If, however, creping from a Yankee drier should be the only creping method in the art, as submitted by the Respondent, the added feature "wherein the tissue web is not adhered to and creped from a Yankee drier" would be redundant and not suitable to overcome any ground of opposition (Rule 57a EPC).

Moreover, the application as originally filed discloses only one process for making an uncreped tissue product, namely that of Claim 19 which requires particular steps - none of which is included in the new method Claim 1 - of suspension forming, mechanical working, diluting before web forming, dewatering, web transfer and drying. Whilst this process is thoroughly explained in the description (in particular page 18, line 21 to page 22, line 34) and illustrated in the examples (page 23, line 7 to page 24, line 35), the application as filed contains no information at all suggesting that all these steps could be omitted and replaced by any other process steps convenient in the art for making soft tissue products. The Board, therefore, concludes that the subject-matter of Claim 1 of the tenth auxiliary request extends beyond the content of the application as filed (Article 123(2) EPC.

1.4 It follows from the above reasoning that, apart from the fact that Claim 1 of the tenth auxiliary request suffers from deficiencies under Article 84 EPC and Rule 57a EPC, the subject-matter of Claim 1 of the eighth to tenth auxiliary requests extends beyond the content of the application as filed and does not meet the requirements of Article 123(2) EPC.

2. *Novelty and admissibility of late-filed evidence*

Main Request

The Appellant attacked the novelty of the subject-matter of Claim 1 of the main request in view of its own alleged public prior use and of Claims 1 and 2 in view of document (3).

2.1 Prior use

2.1.1 The Appellant based its arguments exclusively upon document (7), filed late during the opposition proceedings, and statements and exhibits filed late during the appeal proceedings. It submitted that the evidence was prima facie highly relevant and, therefore, to be admitted into the proceedings.

The Appellant further submitted that the Respondent had admitted during the opposition proceedings to have had access to the Appellant's Charmin Ultra products manufactured between 1985 and 1993. Therefore, as in decision T 363/96, the present case needed to be decided on "the balance of probabilities" only.

In the Appellant's view, it was shown on the evidence provided that, at the priority date of the patent in suit, soft tissue products with the brand names "Charmin Ultra" and "White Cloud Ultra" having the properties set out in Claim 1 had most probably been publicly available and, hence, anticipated the novelty of Claim 1.

2.1.2 According to the Case Law of the Boards of Appeal, the standard of proof for contradictory allegations made by the parties is normally "the balance of probabilities", which means that the Boards base their conclusions on those facts which are most likely to be true. This standard also applies in cases of a public prior use where both parties have the same opportunity to obtain evidence to support or refute the alleged public prior use. For example in the decision T 363/96 cited by the Appellant (not published in the OJ EPO; reasons No. 5), the alleged prior use concerned a product of a competitor which was not party to the proceedings and where the product was undoubtedly at the disposal of anybody interested in it. The question to be decided there was merely whether or not this product had identical technical features and was, therefore, an anticipation of the claimed subject-matter.

In the present case, however, the situation is quite different since the alleged prior use is based on a product of the Appellant-Opponent and, apart from identity of the products, one controversial issue disputed by the parties is whether this product was publicly available or not. In such a situation, the Appellant-Opponent is, normally, in a better situation to obtain all the necessary evidence than the

Respondent-Proprietor and has, therefore, to prove its case "up to the hilt" (T 472/92, OJ EPO 1988, 161, reasons No. 3).

The Appellant's conclusion that the Respondent had access to the alleged prior use is based on the following statement of the Respondent in paragraph 11 of its letter dated 13 April 1999:

"The Patentee as part of its normal business practice monitors properties of competitive tissue products, including bulk. Consequently, the Patentee carries out bulk measurements using the procedures as set out on page 3 of the contested patent in relation to a number of the Opponent's Charmin and Charmin Ultra products manufactured between 1985 and 1993. The Patentee has consistently recorded Bulk values for these products which were significantly less than the value of 9 cubic centimeters per gram required by claim 1 of the contested patent."

Unlike the Appellant, the Board concludes from this statement that in the Respondent's view there existed a variety of different products under the brand names Charmin and Charmin Ultra on the market between 1985 and 1993, a number of which had been tested by the Respondent according to the procedure set out in the patent in suit, but none of the tested products actually had the required high Bulk. The Respondent's statement simply cannot be read as an admission that the Respondent had the actual product, the subject of the alleged prior use.

2.1.3 The Appellant's criticism that the Respondent had not substantiated the circumstances of its case "by identifying the products tested, when and where they were obtained and so forth" is in the Board's opinion unjustified. There is no reason to assume that the Charmin products available to the public during that period of time had the required properties of the alleged prior use product.

Even on the standard of the balance of probabilities, it is the Appellant-Opponent which must first establish the alleged prior use took place and not for the Respondent-Proprietor to demonstrate that there was no prior use. If, as in this case, the Respondent casts doubt on the existence of the prior use, the burden of proof on the Appellant increases.

However, as will be seen below, the Appellant failed to identify any one particular product made under its Charmin Ultra or White Cloud Ultra brands as a prior use.

The Appellant argued that it was unusual to keep and store bath tissue or toilet paper over a long period of time and that, therefore, the normal standard of proof (on the balance of probabilities) should be sufficient.

It is certainly correct that consumers are unlikely to retain such products; and also possibly true of competitors who, after they have identified the products available from others, may not keep them. It is, however, as far as the Appellant is concerned, contradicted by the Appellant's own employee Mr Ampulski in his statement dated 26 January 2001

(items 14 and 15) in which he says the Appellant has a warehouse for storing samples of all its tissue products together with corresponding sample records. This statement is convincing since it is, in the Board's opinion, a manufacturer who has the best reasons for storing its products, including keeping former product samples for comparison with subsequent production and to control product development.

This confirms the consistent case law that if the alleged prior use is based on the Appellant-Opponent's product, practically all the evidence in support of it lies within the power and knowledge of the Appellant, whereas the Respondent-Proprietor has comparably little, if any, evidence to establish the contradictory proposition that no public use took place.

The Board, therefore, concludes that under these circumstances and in accordance with the above case law, the alleged prior use has to be proved "up to the hilt".

2.1.4 To that end, an Appellant-Opponent has to provide convincing evidence of **what** was made available to the public under what **circumstances** and **when**.

During the opposition and appeal proceedings, the Appellant made several proposals as to the object (what) of the alleged prior use, but finally concentrated on product samples which had been stored by the Appellant's employee Mr Weisman and samples from the Appellant's sample storage warehouse. These samples had been tested in accordance with the procedures of the patent in suit in January 2001 by Mr Ampulski who

concluded from the core codes of the samples that they dated back to particular production runs, i.e. lots 1, 2 and 7, in March and September 1992.

By referring to statements of its employee Mr Hensler dated 30 January 2001, the Appellant suggested that the products of these lots were released for shipment from the factory and passed into the control of customers from 6 April 1992 onwards. The Appellant relied on several interdepartmental memos and an internal electronic record of invoices as evidence for the shipments, but did not produce any corresponding external confirmation.

The only external evidence on which the Appellant relied to show that the products actually reached the consumer during 1992 consisted in a number (58) of questionnaires returned by consumers who purchased a product under the brand name "White Cloud". The Appellant argued that this product was actually identified as the White Cloud Ultra product by the code "NH" at the bottom of the questionnaires and that the questionnaires could be traced back to products of lots 1 and 2 referred to above. In support several exhibits by Mr Hensler were submitted, in particular a "Unit Test Sampling Plan" dated 9 September 1992.

2.1.5 The Respondent objected to the Appellant's arguments and gave reasons as to why the Appellant's internal tracing back of the tested product samples was not conclusive.

2.1.6 It is, however, in the present case not necessary to discuss the pros and cons of the evidence concerning the object (what) of the prior use, since the Appellant failed to produce any convincing evidence in regard to the date (when) and circumstances of the alleged prior use.

In this respect, the Appellant's internal documents are all insufficient insofar as they do not show whether the shipments and invoices mentioned therein ever actually reached the customer or addressee.

As to the only external evidence, the questionnaires, it is sufficient to state that none of them is dated, so that they could equally relate to White Cloud Ultra products from any other production lot distributed before or after 1992. The "Unit Test Sampling Plan" of September 1992 referred to by the Appellant in this respect mentions that "questionnaires will be inserted into 2000 rolls of the first month's production, and again in a unit test run this summer". However, this neither shows that the plan was ever executed nor excludes the possibility that the same questionnaires had been inserted into rolls of earlier or later White Cloud Ultra products.

2.1.7 Thus, the Board concludes that, even if it was accepted that the samples tested by Mr Ampulski originated from production lots 1, 2 and 7 in 1992 of the Appellant's Charmin Ultra or White Cloud Ultra brands, the Appellant has not convincingly demonstrated that these products ever reached the public.

2.1.8 Consequently, the late-filed evidence in respect of the alleged prior use is not *prima facie* relevant and, therefore, not admitted into the proceedings.

2.2 Document (3)

2.2.1 The Appellant argued that the parameters characterizing the claimed product were so unusual that it was almost impossible to provide evidence explicitly disclosing them. It therefore based its case on experiments, conducted by Mr Ampulski and filed late during the appeal proceedings, in which the samples 135 to 144 presented in Tables II and III of document (3) were reproduced and advanced as evidence for an implicit disclosure of the claimed subject-matter. A first set of new experiments was filed in response to the Respondent's criticism of former experiments provided in document (10); and then a second set of new experiments was filed in response to the Respondent's further criticism of that first set.

2.2.2 According to document (3) the principle process parameters which determine the ultimate product properties like density and stress/stain modulus include the percentage velocity difference between the carrier fabric and the transfer fabric, the fiber consistency of the web when undergoing the differential velocity transfer; the void volume and topography of the transfer fabric, the geometry of the transfer zone, the strength additives and the creping angle (column 5, lines 16 to 25).

Document (3) identifies in the description specific values and conditions for the above parameters and these values and conditions have essentially been used in the Appellant's reproduction experiments. However, the Board agrees with the Respondent that other process parameters, e.g. during heat setting and web transfer, which are not specified in document (3) or in the first new experiments, might also influence the product properties.

2.2.3 The Appellant argued that varying such further parameters was unlikely to have a major influence on the bulk, MD Max Slope or MD Stiffness Factor of the tissue product. In its opinion, this had been shown in the second new experiments.

These experiments were, however, disputed by the Respondent with respect to the particular variations of conditions. It argued that those skilled in the art had no necessary reason to select those particular conditions when trying to rework the examples of document (3).

2.2.4 It is undisputed that the standard of proof which must be met when relying on an implicit disclosure of a document is "beyond all **reasonable** doubt" (e.g. T 793/93, not published in the OJ EPO)(emphasis added by the Appellant).

2.2.5 The only reproduction example suitable as a candidate for providing a tissue having the properties required in Claim 1 of the main request is example F/142 in Table 3 of the first new experiments, for which the data recorded are just inside the claimed ranges (Bulk

of 13.2 cc/g, MD Max Slope of 5.0, MD Stretch of 28.9 and MD Stiffness Factor of 98.4). These data are average values obtained from four samples tested in either 16 or 20 individual tests (Tables 4 to 9). However, as can be seen from these tables, the MD Max Slope, MD stretch and MD Stiffness Factor measured in the individual tests for Example F/142 may well be outside the claimed ranges (see condition F-3 in Table 7, conditions F-3 and F-4 in Table 8 and conditions F-1 and F-3 in Table 9). The Board, therefore, concludes that there remains a reasonable doubt as to the conditions necessary for obtaining the tissue properties required in Claim 1.

Further, the Board cannot accept the Appellant's argument that varying process conditions not mentioned in document (3) were unlikely to have a major influence on the product properties (see point 2.2.3 above). On the contrary, the second new experiments show that a minor variation of the temperature at the pre-dryer of from 450°C to 500°C (Table 3) leads to an increase of up to 28 % of the MD stretch value (cf. Table 4, examples B1.A,B and B4.A,B). For the sake of completeness it is noted that all of the second new experiments result in products having a MD stretch value above that in Claim 1.

Therefore, document (3) does not disclose a technical teaching which would necessarily lead the skilled person to products according to Claim 1.

2.2.6 The Board, therefore, concludes that the evidence provided by the Appellant is insufficient to prove that

the subject-matter of Claim 1 is the inevitable outcome of the process disclosed in document (3).

2.3 No other novelty objections have been raised in regard to Claim 1 of the main request during the appeal proceedings and the Board also has no further objection. Consequently, the subject-matter of claim 1 of the main request is novel.

2.4 The subject-matter of independent Claim 2 of the main request is not limited with regard to a particular MD Stretch value. The above considerations concerning novelty of Claim 1 with respect to the stretch value do not, therefore, apply to Claim 2. However, unlike Claim 1, Claim 2 specifies that at least one of the tissue plies of the product is uncreped.

2.4.1 The Appellant argued that tissues having uncreped plies were identified in document (3), Tables II and III, where zero dry-crepe was indicated for Examples 138 and 141 to 144. In these examples the crepe produced by the application of the Yankee drier had been pulled out afterwards due to the same velocity at the reel and the Yankee (column 8, lines 40 to 48 and 60 to 68).

2.4.2 According to the patent in suit, creping by a Yankee dryer is defined as the action of a doctor blade for scraping off the web from the drying drum. By this action, many of the bonds previously formed in the web during the wet-pressing are broken so that the web is partially debonded which improves the softness of the web at the expense of loss of strength (page 2, lines 12 to 14 and page 6, lines 52 to 53).

This is corroborated in document (3) where it is stated in column 7, lines 45 to 47: "In general, creping of a paper web tends to disrupt bonds in the web. This causes the web to be softer but of lower tensile strength than were it not creped".

2.4.3 In the examples of document (3) one and the same Yankee dryer and doctor blade is used. Document (3) does not propose, nor is there any reason to expect, any re-bonding of the bonds disrupted on the Yankee dryer, e.g. by pulling out the dry crepe from the webs. Further, there is no reason to expect that bond disruption did not necessarily occur in the examples of document (3) or that the same debonding occurred according to the patent in suit even in the absence of a creping step.

2.4.4 The Board, therefore, concludes that the subject-matter of Claim 2 differs from prior art tissue products disclosed in document (3) in at least one ply wherein the bonds are not broken or partially debonded. Consequently, the subject-matter of Claim 2 of the main request is also novel.

2.5 Novelty of the subject-matter of independent Claims 16 and 17 was not in dispute. Therefore, the subject-matter of the main request is considered novel in accordance with Article 54 EPC.

2.6 Auxiliary Requests

The reasoning set out in paragraphs 2.4 and 2.5 above also applies to the claims of the first to seventh auxiliary requests wherein the claimed subject-matter is further limited and to the claims of the eleventh to

thirteenth auxiliary requests which have never been attacked under Article 54 EPC.

3. *Inventive Step*

3.1 Main Request

3.1.1 The patent had been opposed under Article 100(a) EPC on the grounds of both, novelty and inventive step (see standard form EPA 2300.2 04.93), and lack of novelty of the subject-matter of Claim 1 had been substantiated in accordance with Rule 55(c) EPC. Since novelty is a prerequisite for assessing inventive step, it is in the Board's view not generally necessary in such circumstances, or even possible, to give specific reasons for lack of inventive step in the notice of opposition (see T 131/01, OJ EPO, 2003, 115, reasons No. 3.1).

Therefore, the ground of lack of inventive step of Claim 1 has not been introduced late, and the Board agrees with the Appellant that the inventive step of Claim 1 be assessed.

3.1.2 The patent in suit is concerned with the general technical problem in the field of manufacturing products such as bath tissues to provide a final product of low stiffness and high bulk to improve its perceived softness (page 2, lines 3 to 7). In particular, it is intended to provide an uncreped tissue, i.e. where no mechanical debonding has occurred during its production, but still has adequate softness when compared with creped counterparts (page 2, lines 29 to 32).

However, this latter technical problem cannot be considered as relevant, since Claim 1 is not restricted to uncreped tissue products.

3.1.3 The Board agrees with both parties that document (3) is a suitable starting point for assessing inventive step of the claimed subject-matter since it also relates to high bulk tissue paper (e.g. column 1, lines 8 to 10).

3.1.4 According to the Respondent, the technical problem in view of document (3) consisted in providing a soft tissue product having improved tactile and cleaning properties and which is less expensive to manufacture. In addition, the product should exhibit flexibility as was expressed by the MD stretch value. This problem was solved by the claimed subject-matter since the high bulk measured under a compressive load of 220 gsi (grams per square inch) as defined in the patent in suit indicated that less raw material was required for the production of the tissue and that the tissue retained its bulk even under rigorous wiping conditions. Further, the particular combination of high bulk and low MD Max Slope provided improved cleaning and tactile properties. The latter was apparent from Figures 6 to 8 in the patent in suit, which showed that for the claimed tissue product, the stiffness (panel stiffness and MD Max Slope) decreases as the bulk increases, whereas normally a tissue having a high bulk at a high load behaved like a stiff beam with low flexibility. However, there was no hint in the art that the desired product having high bulk and low slope was in fact obtainable.

3.1.5 The only evidence relied on by the Appellant in this respect are Figures 6 to 8 of the patent in suit which simply illustrate bulk and stiffness properties of particular tissues representing the invention and the prior art (page 7, lines 10 to 17). This evidence does not, however, show that the problem cited by the Appellant, i.e. achieving the desired tactile and cleaning properties or reduced production costs, is actually solved in view of document (3).

The Appellant's arguments can, therefore, only be accepted if the relation between this particular technical problem and the claimed features was self-evident to those skilled in the art.

3.1.6 The Board accepts that this is presently the case since it is obvious that tissues having high bulk at high load not only require less material per unit of volume but also retain their bulk under that high load and that tissues having both high bulk and low stiffness feel softer and perform better when used for cleaning than stiff tissues with low bulk. It is further evident that stretch is an indication of some flexibility and, therefore, a further requirement for a cleaning tissue. However, concerning the claimed stretch value of 10 to 30%, no particular technical benefit is apparent from the patent in suit, the prior art, or has been given by the Respondent.

The technical problem as stated by the Respondent consists, therefore, of the advantages or effects of the claimed solution in terms of parameters and the Board concludes that this particular technical problem is actually solved by the claimed subject-matter.

3.1.7 However, since both the parameters (bulk, stiffness and stretch) and their advantages are *per se* known in the art, the Board agrees with the Appellant that it was obvious for the skilled person to desire a flexible tissue, whether creped or not, having both a bulk as high as possible (at least 9 cm^3/g) and at the same time a stiffness as low as possible as expressed by either a MD Max Slope of 6 or less, or a MD Stiffness Factor of 100 or less.

3.1.8 Despite the fact that such a product is defined by known desiderata only, it may nevertheless be based on an inventive step if the technical problem solved consisted in providing a process for obtaining this product, in other words, if at the priority date of the patent in suit there was no applicable method in the art to produce that product and if the patent disclosed for the first time a method for its preparation (see e.g. T 595/90 OJ EPO, 1994, 695, reasons No. 5; T 233/93, not published in the OJ EPO, Reasons No. 4).

This is not the case here since Claim 1 covers creped tissues, whereas the patent in suit discloses only a process with no creping step for manufacturing uncreped tissues. Processes for making creped tissues are, however, known in the art, e.g. from document (3) and the Appellant has not shown that such a process is unsuitable for producing the claimed subject-matter.

3.1.9 The Board concludes therefore that, being not linked to a novel and inventive process and defined by *desiderata* only, the product of Claim 1 is obvious in the art and,

as a consequence, does not meet the requirements of Article 56 EPC.

3.2 First to seventh auxiliary requests

Claim 1 of these requests differs from Claim 1 of the main request only in that the same desiderata are differently quantified. Not being a matter of a particular value of the desired feature, the above reasoning applies also to Claim 1 of the first to seventh auxiliary requests.

3.3 Eleventh auxiliary request

3.3.1 Unlike the main request, Claim 1 refers to a soft tissue product comprising an uncreped tissue sheet but which is also characterized by a high bulk (9 to 20 cm^3/g), a low stiffness (50 to 100) and some flexibility as expressed by a MD Stretch value of 20 to 25%. In addition, the tissue of Claim 1 is layered and comprises curled fibers.

3.3.2 According to the patent in suit, production of uncreped tissues was desirable if only for the reason that a creping means, such as a Yankee dryer, can be omitted. However, uncreped tissues are said to lack adequate softness since without creping no mechanical debonding occurs and the uncreped tissue retains its initial high stiffness and strength (page 2, lines 29 to 32).

It is stated that softness can be applied without creping if a very thin and stiff layer is combined with weak and bulky layers which can be obtained by mechanical modification of the fibers to form permanent

curls and kinks in the fibers through mechanical action (page 4, lines 20 to 34).

It is, therefore, credible that the problem mentioned in the patent in suit to provide an uncreped tissue which, nevertheless, is comparably soft as a creped tissue is actually solved (3.1.2 above).

3.3.3 No evidence has been provided in relation to any existing prior art processes suitable for manufacturing this tissue (see point 3.1.8 above). On the contrary, the Appellant has admitted that the tissue of Claim 1 is the outcome of the process of Claims 2 to 11 (corresponding to granted Claim 19 to 28) which have never been challenged in the opposition and appeal proceedings either for lack of novelty or for lack of inventive step.

3.3.4 Consequently, the Board concludes that not only the process of Claim 2 but also the product of Claim 1 itself involves an inventive step. Dependent Claims 3 to 11, relating to specific embodiments of the process of Claim 2, and the product of Claim 12, which is obtainable by the process of Claims 2 to 11, are based on the same inventive concept and derive their patentability from that of Claim 1.

4. Since the claims of the eleventh auxiliary request comply with the requirements of the EPC, there is no need to consider the twelfth and thirteenth auxiliary requests.

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 on the basis of Claims 1 to 12 of the eleventh auxiliary request filed during the oral proceedings, a description to be adapted thereto and the drawings 1 to 10 as granted.

The Registrar: The Chairman:

G. Rauh P. Krasa