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**Datasheet for the decision
of 18 June 2010**

Case Number: T 1280/09 - 3.2.06

Application Number: 95930985.7

Publication Number: 0847263

IPC: A61F 13/15

Language of the proceedings: EN

Title of invention:

Thermoplastic fibrous nonwoven webs for use as core wraps in absorbent articles

Patentee:

KIMBERLY-CLARK WORLDWIDE, INC.

Former Opponent:

The Procter & Gamble Company

Headword:

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Relevant legal provisions:

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Relevant legal provisions (EPC 1973):

EPC Art. 83, 54(2), 56

Keyword:

"Sufficiency of disclosure (yes)"

"Novelty (yes)"

"Inventive step (yes)"

Decisions cited:

T 0629/90

Catchword:

-

Case Number: T 1280/09 - 3.2.06

DECISION
of the Technical Board of Appeal 3.2.06
of 18 June 2010

Appellant: KIMBERLY-CLARK WORLDWIDE, INC.
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 15 April 2009
revoking European patent No. 0847263 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: P. Alting van Geusau
Members: G. Pricolo
W. Sekretaruk

Summary of Facts and Submissions

- I. The appeal is from the decision of the Opposition Division posted on 15 April 2009 revoking European patent No. 0 847 263 on the grounds of lack of sufficiency of disclosure (Article 100(b) EPC 1973).

- II. The patent as granted relates to an absorbent article (Claim 1) and a process for forming an absorbent article (claim 14). The independent claims as granted recite a fibrous nonwoven web core wrap having a plurality of pores with a pore size greater than 50 microns and a mean flow pore size less than 30 microns. The Opposition Division considered that, since it was not apparent from the patent specification what specific "Coulter porometer" was used for measuring pore size and mean flow pore size, and since these measurements were dependent on the specific Coulter porometer used, the skilled person being in possession of a given Coulter porometer would not know whether he was working within the scope of the invention or not. Furthermore, although it was mentioned in the description of the patent in suit that the measurements were made in accordance with the ASTM Standard Test Methods Designation F 316-86, the method of operation programmed into Coulter porometers contradicted the ASTM test. This was relevant to a parameter called the capillary constant B which had a value of B=1 built into the porometer but which was 0.715 in the ASTM test. Accordingly, the skilled person was faced with the uncertainty of whether the intended measurements should be carried out with the value of the capillary constant as set in the Coulter porometer or as indicated in the ASTM test.

- III. This was the second decision by the Opposition Division, following remittal of the case in decision T 1120/04 which set aside the first decision dated 15 September 2006 of the Opposition Division rejecting the opposition. The Board remitted the case in view of the new evidence filed during the appeal proceedings, since it was clear, on the basis of this new evidence, that the impugned decision could not stand insofar as the ground of opposition under Article 100(b) EPC 1973 was concerned (point 3.3 of T 1120/04).
- IV. The appellant (patent proprietor) lodged an appeal against the second decision of the Opposition Division on 15 June 2009. Payment of the appeal fee was recorded on the same day. The statement setting out the grounds of appeal was received at the EPO on 25 August 2009.
- V. With letter dated 16 March 2010, subsequent to its reply to the statement of grounds of appeal, the respondent (opponent) withdrew the opposition.
- VI. In a communication posted on 23 March 2010 accompanying the summons to oral proceedings pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal, the Board expressed the preliminary opinion that the conclusion of the Opposition Division in respect of sufficiency of disclosure was correct. In the communication, the Board referred to document Schaefer IV : declaration of Mr. Schäfer dated 20 December 2009,

filed by the former opponent with the reply to the grounds of appeal, and stated that it appeared to provide convincing evidence that different results were obtained for nonwovens even when the porometers were calibrated according to the manufacturer's instructions.

VII. With letter dated 14 May 2010 the appellant filed an amended set of claims forming the basis for a new main request to maintain the patent with process claims only.

VIII. During the oral proceedings, which took place on 18 June 2010, the appellant filed new claims 1 and 2 together with an amended description and requested that the patent be maintained on the basis of these documents and the figures as granted.

IX. Claim 1 according to the request of the appellant reads as follows:

"1. A process for forming an absorbent article comprising: forming a fibrous nonwoven web core wrap (14) by extruding a molten thermoplastic polymer into a plurality of molten streams, attenuating said plurality of molten streams into a plurality of fibers (52) and depositing said plurality of fibers (52) onto a forming surface (54) to form a fibrous nonwoven web core wrap (14) having a plurality of pores with a mean flow pore size of less than 30 microns with no more than five percent of said plurality of pores having a pore size greater than 50 microns, the mean flow pore size and pore size distribution being determined in accordance with ASTM Test Methods Description F 316-86, and with said fibrous nonwoven web core wrap (14) having a wet to dry tensile strength at peak load ratio in the

machine direction or the cross-machine direction of 0.5 or greater and a Frazier air permeability of at least $6100 \text{ cm}^3 \cdot \text{cm}^{-2} \cdot \text{min}^{-1}$ (200 cubic feet per square foot per minute), the Frazier Air permeability and tensile strength being determined in accordance with the test procedures described herein, depositing using a vacuum source a quantity of particulate superabsorbent (60) onto said core wrap (14), and sealing said core wrap (14) to envelope said particulate superabsorbent (60)."

X. The documents cited in the present decision are the following:

D1 : EP-A-627 210;

D5a: ASTM Designation F316-86 Standard Test Methods for Pore Size Characteristics of Membrane Filters by Bubble Point and Means Flow Pore Test;

D6 : Operator's Handbook of the Coulter Porometer II (Software level 3B);

D7 : EP-A-598 413;

D8 : priority document of WO-A-94/28224;

D17 : ASTM Standard Test Method for Pore Size Characteristics of Membrane Filters Using Automated Liquid Porosimeter, Designation E 1294-89, published May 1989 and reapproved 1999.

XI. The submissions of the appellant can be summarized as follows:

The main point of the former opponent's argument under Article 100(b) EPC 1973 was that different porometers would provide different pore size and pore distribution measurements. In particular, the declaration Schaefer IV allegedly showed that different porometers provided different results even if properly calibrated using a reference sample kit with a nominal 1 micron membrane. However, there was no reason why this should be so. The basis apparatus was illustrated in the ASTM test, and providing that the apparatus was properly calibrated, there was no reason for the skilled person to believe that different instruments would give different results, provided that the ASTM procedure and the appropriate calculation was adhered to. In this respect document D17 provided relevant evidence, since it disclosed that, although decreasing with increased pore size range, the repeatability and reproducibility of a porometer still remained within acceptable ranges for the intended measurements.

All Coulter porometers could provide the basic flow rate versus pressure output in a format which was the same as that shown in the graphs of the ASTM procedure. It would be completely routine for a skilled person to use this information to derive the mean flow pore size and the percent pore size frequency, as was set out in the ASTM procedure. The skilled person did not have to use the algorithm pre-programmed into the porometer for this calculation if there was any doubt about whether the algorithm in the instrument matched the ASTM procedure. The least the skilled person would do would

be to check that the instrument's algorithm provided the same pore size data as the ASTM method. If it did not, then the data could easily be manipulated. This was precisely what the skilled person would do faced with paragraph [0026] of the patent stating that the Coulter instrument should be used, but the determination should be in accordance with the ASTM standard method.

The problem of the invention was to provide an improved process for manufacturing an absorbent article. In the manufacture of such an article, it was highly beneficial to deposit absorbent material, including superabsorbent particles, directly onto a core wrap material using a vacuum. In order for the absorbent material to be successfully deposited, the core wrap material must have a relatively high air permeability. Against this, a key requirement for the wrap sheet in use was to prevent the superabsorbent particles migrating out of the article and contacting the user. The invention was based on the recognition that a meltblown fibrous web formed by extruding and attenuating streams of thermo-plastic polymer could be fabricated with the correct balance of properties which meant that the same wrap material could be used for successful deposition of superabsorbent material on the wrap sheet whilst at the same time adequate containment qualities were obtained. In this way, as was required by claim 1, a single wrap material could be wrapped around both sides of the core following a vacuum deposition process. This was more convenient than using different materials on each side tailored for different properties. There was no hint in the prior art, represented in particular by documents D1 and D7, that

the same meltblown wrap sheet material might be fabricated with sufficiently high air porosity for vacuum deposition on the one hand and sufficiently low pore size for superabsorbent containment on the other hand. Therefore, the claimed subject-matter involved an inventive step.

Reasons for the Decision

1. The appeal is admissible.

2. The fact that the opponent has withdrawn its opposition during these appeal proceedings has no immediate procedural significance because the European patent has been revoked by the Opposition Division. The Board of Appeal must then re-examine the substance of the Opposition Division's decision of its own motion, setting it aside and maintaining the patent only if the latter meets the requirements of the EPC. Furthermore, when the Board examines the decision, evidence may be cited which had been submitted by an opponent before the opposition was withdrawn (see e.g. T 629/90, OJ EPO 1992, 654, point 2.2 of the reasons).

3. *Amendments*
 - 3.1 Claim 1 includes all the features of granted independent claim 14 (which is based on independent claim 15 of the application as filed) and additionally the following features:
 - (i) the particulate superabsorbent is deposited using a vacuum source;

(ii) the mean flow pore size and pore size distribution are determined in accordance with ASTM Test Methods Description F 316-86;

(iii) the Frazier Air permeability and tensile strength are determined in accordance with the test procedures described in the patent.

Feature (i) is disclosed, in a general context, in the application as filed (see page 10, lines 3 to 6).

Feature (ii) is disclosed in the description of the application as filed, in the paragraph bridging pages 11 and 12.

Feature (iii) is a reference to the test procedures described in the patent, which makes it clear that the Frazier Air permeability and tensile strength must be determined in accordance with specific test procedures that are also disclosed in the application as filed (par. [0027] and [0028] of the patent in suit, describing these test procedures, correspond to the passage on page 12, lines 4 to 26, of the application as filed).

Dependent claim 2 corresponds to dependent granted claim 14 (which wording is identical to that of claim 16 of the application as filed).

Accordingly, the amendments made to the claims do not introduce subject-matter extending beyond the content of the application as filed (Article 123(2) EPC). Nor do they extend the protection conferred, since the amendments result in a limitation of the claimed subject-matter (Article 123(3) EPC).

3.2 The description has been brought into conformity with the amended claims and the figures are the same of that of the patent as granted.

3.3 Therefore, the amended documents comply with the requirements of Article 123(2) and (3) EPC.

4. *Sufficiency of disclosure*

4.1 A first reason for the Opposition Division's finding of lack of sufficiency is that it was not apparent from the patent specification what specific "Coulter porometer" was used for measuring pore size and mean flow pore size, these measurements being dependent on the specific Coulter porometer used. During the present appeal proceedings, the former opponent has filed further evidence, namely declaration Schaefer IV, in response to the appellant's criticism in respect of the evidence previously filed. This declaration allegedly shows that, even if calibrated with a nominal 1 micrometer membrane (see points 7 and 8 of the declaration), a Coulter porometer and a Xonics 3G porometer provide different results.

During the oral proceedings, the appellant submitted that the evidence on file was not sufficient to prove that different porometers would effectively lead to different measurement results. Firstly, one of the apparatuses used by the former opponent when making its tests might have not been working correctly. Secondly, on the basis of the description of the ASTM Standard Test Methods Designation F316-86 (document D5a), there was no apparent reason why, provided it was correctly calibrated and properly functioning, any instrument

following the test procedure should provide the user with results different from those obtained with another instrument.

Furthermore, the appellant referred to document D17, which was filed during the opposition proceedings following the remittal of the case in decision T 1120/04 but played no role in the decision under appeal. In the Board's view, this document is however relevant because it discusses the precision and bias of instruments used for pore size analysis (see par. 11). It discloses that the repeatability and reproducibility of each instrument decreases with increasing pore size range. However, up to a pore size of 10 microns, the repeatability and reproducibility still remain within acceptable values, namely 4% and 8%. As regards the amount of acceptable error, it is clear that, due the nature of the measurements and to the fact that they are performed on nonwovens as in the patent in suit, a relatively large margin of error (such as 4%, 8%, or even more for larger pores) is to be taken into account. D17 furthermore discloses that the bias between two different instruments can be determined by comparing the mean flow pore sizes. Accordingly, it is clear that the issue of precision of measurement is taken into consideration by the drafters of the ASTM test procedures, not only with respect to one instrument but also with respect to different instruments. The fact that the detailed ASTM publication D17 does not mention that comparable measurements can only be made with a same instrument indirectly supports the appellant's submissions that mean flow pore size and pore size measurements are, within a certain margin of error which is inevitably relatively large due to the nature

of the measurements, independent of the particular porometer used. The evidence submitted by the former opponent would rather suggest the contrary. However, considering that that the appellant has cast reasonable doubts over the reliability of the evidence filed by the former opponent (e.g. whether the Coulter apparatus effectively functioned properly), and that the latter is no longer available to reply as it is no longer a party to the proceedings, the Board considers that the appellant's submission that the measurement of mean flow pore size and pore size is independent of the specific porometer used is to be regarded as correct.

- 4.2 A second reason for the Opposition Division's finding of lack of sufficiency is that the ASTM Standard Test Methods Designation F 316-86 assumes that the capillary constant B has a value of 0.715 whilst Coulter porometers have a built-in value of 1.

During these appeal proceedings the appellant has pointed out that all Coulter porometers can provide the basic flow rate versus pressure output in a format which is the same as that shown in the graphs of the ASTM test procedure F 316-86 (D5a) used for determining mean flow pore size and pore size frequency. This is to be regarded as correct, in particular having regard to the disclosure of Figs. 8 and 9 of D5a relating to mean flow pore determination and pore size frequency determination, and having regard to the disclosure of appendix 1 of document D6. Accordingly, being expressly told by the patent in suit that determinations of the mean flow pore size, maximum flow pore size and pore size distribution are made in accordance with ASTM Standard Test methods Designation F 316-86 (see par.

[0026]), the skilled person would use the graphs generated by the porometer to calculate the mean flow pore size and pore size frequency rather than using the pre-programmed algorithm of the porometer for this calculation. In fact, he would use the pre-programmed algorithm only if he were confident that it was based on the ASTM test procedure. In the absence of such information, however, it is clear that the ASTM procedure prevails over a specific built-in procedure.

4.3 The Board therefore considers that the conclusion reached by the Opposition Division in the decision under appeal is no longer justified, even having regard to the further evidence filed by the former opponent during these appeal proceedings. Since the Board of its own motion does not see any other issue of lack of sufficiency, it judges that the amended patent now meets the requirements of Article 83 EPC 1973. Accordingly, the decision under appeal must be set aside.

5. The question that remains to be answered is whether the patent meets the requirements of novelty and inventive step (Article 52(1), 54(2) and 56 EPC 1973). In its first decision rejecting the opposition, which was appealed in case T 1120/04, the Opposition Division found that the subject-matter of process claim 14 was novel and inventive over the prior art. Claim 1 being more limited than granted claim 14, the conclusion of the Opposition Division applies *a fortiori* to present claim 1. The Board of its own motion does not see any reason to take a different view, even when taking into account the prior art documents filed by the former

opponent after the first decision of the Opposition Division, namely D7 and D8.

5.1 Claim 1 is limited over granted claim 14 in particular by the feature that the particulate superabsorbent is deposited using a vacuum. The Board agrees with the appellant (see point X above) that there is no indication in the prior art that would suggest that a same nonwoven web core wrap material is suitable for successful deposition of superabsorbent material using a vacuum whilst at the same time providing adequate containment qualities if it has pores with a mean flow pore size and a pore size within the ranges specified in claim 1.

5.2 D1, which is correctly identified by the Opposition Division as representing the closest prior art, is silent about the use of a vacuum deposition process. Such a process is described in D7, which however teaches to have different materials on different sides of the core: as described in column 8, lines 5 to 27, the first layer has a relatively high porosity which facilitates the formation of the air laid core directly onto the forming tissue, whilst the second layer, as described in column 10, lines 1 to 22, has a relatively small pore size, to provide the requisite containment property on the bodyside.

D8 is less relevant than D1 and D7 to the claimed subject-matter. Although D8 relates to a lightweight nonwoven laminate, it does not concern the use of the laminate as a core wrap for an absorbent core but as a web having barrier properties useful e.g. for absorbent flaps (see page 2, first paragraph).

6. Therefore the patent documents in accordance with the request of the appellant form a suitable basis for maintenance of the patent in amended form.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the Opposition Division with the order to maintain the European patent with the following documents:
claims 1 and 2 of 18 June 2010, description columns 1 to 16 of 18 June 2010, drawings figures 1 to 9 as granted.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau