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**Datasheet for the decision
of 26 June 2023**

Case Number: T 1856/19 - 3.2.06

Application Number: 14180701.6

Publication Number: 2985375

IPC: D04H1/4382, D04H1/425,
A47L13/16, D04H1/4258,
D04H1/492, D21H27/00

Language of the proceedings: EN

Title of invention:

Dispersible non-woven fabric and method for producing the same

Patent Proprietor:

Glatfelter Gernsbach GmbH

Opponents:

Kimberly-Clark Worldwide, Inc.
Suominen Corporation
Andritz Küsters GmbH

Headword:

Relevant legal provisions:

EPC Art. 100(a), 56
RPBA Art. 12(4)

Keyword:

Grounds for opposition - inventive step (no)

Decisions cited:

Catchword:



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Case Number: T 1856/19 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 26 June 2023

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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 28 May 2019
rejecting the opposition filed against European
patent No. 2985375 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman M. Harrison
Members: T. Rosenblatt
 D. Prietzel-Funk

Summary of Facts and Submissions

- I. The appellants (opponents 1, 2 and 3) filed respective appeals against the decision of the opposition division rejecting their oppositions against European Patent 2 985 375 (hereinafter "the patent"), each requesting that the decision under appeal be set aside and the patent be revoked.
- II. With the reply to the statements of grounds of appeal, the respondent (patent proprietor) requested that the appeals be dismissed, in the alternative that the patent be maintained in amended form on the basis of one of the auxiliary requests 1 to 5 submitted with the reply to the statements of grounds of appeal.
- III. In the subsequent submissions of the appellants following the reply of the respondent, it was *inter alia* also requested not to admit auxiliary requests 1 to 5 into the proceedings.
- IV. The respondent submitted additional observations and arguments with the letters dated 15 June 2021 and 8 July 2022.
- V. The parties were summoned to oral proceedings before the Board according to all parties' requests.
- VI. With its letter of 19 June 2023, the respondent withdrew its request for oral proceedings and stated that all other requests as well as all submissions and observations in the present appeal proceedings were maintained.

The respondent also requested a decision based on the

documents on file.

VII. The oral proceedings were cancelled.

VIII. Claim 1 of the patent has the following wording (feature numbering in square brackets as provided for example on page 12 of the respondent's reply to the statements of grounds of appeal):

"[a] A dispersible non-woven fabric, comprising
[b] natural pulp fibers
[b1] in an amount of from 70 to 90 wt.-% based on the total weight of the non-woven fabric,
[b2] wherein at least 50% of the natural pulp fibers have a fiber coarseness of from 1.1 to 1.8 dtex;
and
[c] cellulosic fibers
[c1] in an amount of from 10 to 30 wt.-% based on the total weight of the non-woven fabric,
[c2] wherein the cellulosic fibers have a fiber length of from 8 to 14 mm,
[d] wherein at least a part of the pulp fibers and of the cellulosic fibers are entangled with each other."

IX. The following evidence referred to by the parties is relevant for the present decision.

E1 : EP 0 303 528 A1

E2 : "Morphology Of Wood Pulp Fiber From Softwoods And Influence On Paper Strength", R.A. Horn

E5 : US 8 426 031 B2

E6 : US 7 718 036 B2

E7 : "The effect of fiber length and coarseness on the tensile strength of wet webs: a statistical geometry explanation", R. Seth, pp. 99-102, Vol. 78, No. 3 Tappi Journal, March 1995

E8 : "Canadian pulp fibre morphology: Superiority and considerations for end use potential", P. Watson et al., pp. 401-408, VOL. 85, NO. 3, The Forestry Chronicle, May/June 2009

E20 : "Northern bleached softwood kraft" from Wikipedia

E27 : "Södra Product Information - green Z", June 2012

- X. The appellants' arguments as far as relevant to the present decision may be summarised as follows

Main request

If the subject-matter of claim 1 were novel over E1 due to feature b2, this did not provide the technical effects acknowledged by the opposition division. The objective technical problem was merely to provide a suitable pulp fiber. The skilled person only had to select a specific pulp appropriate for the intended use in E1, notably with a low coarseness as hinted at specifically in line 25 on page 3. Moreover, NBSK pulps were preferred according to E1. NBSK pulps with a fiber coarseness in the claimed range were commonly known and commercially available, see for example E2, E5, E6, E7, E8 and E27. The specific range defined in claim 1 constituted only an arbitrary selection.

Auxiliary requests 1 to 5

Auxiliary requests 1 to 5 should not be admitted into the proceedings since the respondent had failed to substantiate them, contrary to Articles 12(1)(c) and (3) RPBA 2020 (see page 4 of the letter by appellant 1, dated 12 June 2020).

XI. The respondent's arguments as far as relevant to the present decision may be summarised as follows.

Main request

Claim 1 was distinguished over the nonwoven fabric of E1 by feature b2. This provided the technical effect stated in paragraph 9 of the patent. The effect was supported by the examples disclosed in the patent which demonstrated the improved wet strength without impairing dispersibility. The objective technical problem was thus to provide for a dispersible non-woven fabric having an increased wet strength, which was favorable in terms of its manufacture and use, without impairing the dispersibility the nonwoven fabric so that it could readily be decomposed and dispersed in water upon flushing in a toilet. There was no evidence in E1 and the appellants had failed to demonstrate beyond mere speculation that E1 in fact achieved equal results as achieved by the invention according to claim 1. The calculations submitted by appellant 1 in this respect were based on assumptions which had no basis in E1. As demonstrated by the experimental results shown in Figure 1 of the patent specification, Examples 1 and 2 exhibited a significantly higher wet strength than Comparative Example 2. The experimental results shown in Figure 2 of the patent specification demonstrated that the dispersibility of Example 1 was comparable to that of Comparative Example 2 and far better than that of Comparative Example 1. There was no hint or suggestion in the prior art referred to by the appellants which rendered obvious the problem-solution relationship departing from the closest prior art E1. E1 focussed on the selection of appropriate short staple length regenerated cellulose fibers as regards the composition of fibers and further taught to

optimize the hydroentanglement conditions for an adequate wet strength of the web. The mention of NBSK pulps in E1 gave no hint to the skilled person to choose a pulp with a fiber coarseness in the claimed range. E2 demonstrated in Table 1 that a number of the specific wood pulp fibers mentioned in E1 presented a fiber coarseness clearly outside the claimed range. Likewise, NBSK pulps did not necessarily involve a fiber coarseness within the claimed range in view of the large diversity of NBSK (cf. E20). The other documents were essentially silent about dispersibility or disintegration of the wet webs, and failed in particular to teach or suggest that finer pulp fibers, while leading to higher sheet tensile strength, nevertheless did not impair the dispersibility of the webs.

Auxiliary requests 1 to 5

The auxiliary requests had already been submitted before the opposition division. Since the claims of the main request complied with the requirements of the EPC, the same held true for the claims of the auxiliary requests so that no detailed discussion thereof was necessary. Observations with regard to patentability of the claims of the auxiliary requests, obviously depended on the specific, yet unknown reason for non-allowability of the claims of the main request, and would be filed later if necessary.

Reasons for the Decision

Main request - Articles 100(a) and 56 EPC

1. Contrary to the impugned decision, the subject-matter of claim 1 does not involve an inventive step starting from the dispersible nonwoven fabric disclosed in E1 as the closest prior art and combining common general knowledge with this.
 - 1.1 The parties agree that only feature b2 could be considered as distinguishing the subject-matter of claim 1 over E1. The Board has no reason to see this differently.
 - 1.2 The appellants contested that the technical problem considered by the opposition division in the impugned decision was an objective one, whereas the opposition division and the respondent considered that the single distinguishing feature b2 provided the technical effect stated in paragraph 9 of the patent, namely to positively influence (i.e. to improve) the wet strength without impairing the dispersibility of the nonwoven fabric. The Board concurs however with the appellants' view for the following reasons.
 - 1.2.1 As argued for example by appellant 1, E1 strives for the same effects as the patent, namely sufficient (high) wet strength and dispersibility (cf. page 1, lines 4 to 6 of E1, and par. 1 of the patent).

It is neither apparent from the patent in suit that feature b2 provides an improvement of wet strength compared to the wet strength achieved by the fabrics or webs disclosed in E1, nor is there any evidence in the

patent that this feature does not impair dispersibility (while allegedly at the same time improving wet strength).

- 1.2.2 There is no data in the patent documenting an improvement in wet strength compared to E1.

The respondent rejected calculations performed by appellant 1 to support its argument of comparable wet strengths between the nonwovens according to claim 1 and those disclosed in E1. Whilst the respondent's counter-arguments can be followed, this means however in turn that the respondent's allegation of an improvement of the wet strength compared to E1 is also merely speculative, since there is no data showing an improvement with respect to E1.

- 1.2.3 As further argued by appellant 3, the only two comparable examples in the patent relating to feature b2, for which data on dispersibility is provided, i.e. Comparative Example 2 ("C.Ex.2") and Example 1 ("Ex. 1") suggest that dispersibility is in fact impaired. The respondent's comparison of C.Ex.1 and Ex.1 is not pertinent in regard to an effect of feature b2 on dispersibility, not least since the precise constitution of C.Ex.1 is not disclosed.

- 1.2.4 Moreover, appellant 1 disputed that the alleged effects attributed by the respondent to the distinguishing feature b2 were achieved over the whole breadth of claim 1. Purely as an example, appellant 1 argued that claim 1 merely specified broadly that "at least part of the pulp fibers and the cellulosic fibers are entangled with each other". However, claim 1 does not specify the amount of entanglement or any entangling conditions, and so the features of claim 1 do not even necessarily

result in a web which has any specific degree of tensile strength. In fact, as shown in E1, the entangling conditions can significantly affect the tensile strength of a nonwoven web. The respondent has not refuted these arguments and the Board considers them convincing.

1.3 Absent any technical effect necessarily achieved by the distinguishing feature b2 over the whole scope of claim 1, an objective technical problem can only be seen in the indication or selection of an appropriate natural pulp for the dispersible non-woven web of E1, as argued for example by appellant 1. The skilled person is anyway faced with this problem when wanting to put into practice any of the embodiments of E1, see in particular page 3, lines 24 to 26.

1.4 From this paragraph of E1 (i.e. page 3, lines 24 to 26) the skilled person receives the indication to preferably select pulp fiber characterised by a thin wall or small diameter and low fines (emphasis added), preferably from Northern bleached softwood Kraft (NBSK) as further evidenced by the examples in Table 1. It is undisputed and belongs to the common general knowledge of the skilled person that many of the known and commercially available NBSK pulp fibers have coarseness values which fall in the claimed range. This was acknowledged by the opposition division and by the respondent. Evidence for this is also found in at least E2 (for example Table 1), E7 (for example Fig. 2), E8 (for example Figure 3) or E27. Under these circumstances and absent any proven technical effect achieved over the whole scope of claim 1, the selection of natural pulp fibers having a coarseness within the claimed range and within the claimed relative amount constitutes merely a suitable if not arbitrary

selection and therefore does not involve an inventive step, as also argued for example by appellant 2.

- 1.5 The respondent's counter-arguments are to a large extent based on the assumption of the existence of an improvement of the wet strength while not impairing dispersibility. These arguments are not convincing for the reasons indicated above in point 1.2.

The fact that E1 teaches the improvement of wet web strength notably by controlling other properties of the fiber employed and of the process carried out for manufacture of the nonwoven fabric, i.e. by selecting appropriate short staple length regenerated cellulose fibers and by optimising the hydroentanglement conditions, does not affect the above conclusion. When wanting to put the invention disclosed in E1 into practice, while also controlling the above mentioned parameters, the skilled person has in any case to select a specific NBSK pulp. The solution of this task does not involve an inventive step for the reason indicated above in point 1.4.

Also, the fact that not all NBSK fiber pulps necessarily have a fiber coarseness within the claimed range does not alter the Board's conclusion. The respondent did not dispute that many of the commonly available NBSK pulps presented a fiber coarseness in the claimed range. Consequently, the selection of one of these, for whatever purpose, does not involve an inventive step.

The respondent's further argument according to which the expression "low fines" used in E1, page 3, line 25, had nothing to do with coarseness, also does not change the Board's conclusion. Evidence for a different

meaning has not been submitted. As to the arguments in the subsequent letter of 8 July 2021, these again are essentially based on the assumption of a technical problem which the Board does not consider to be objective.

2. As a consequence, the opposition ground pursuant to Article 100(a) in conjunction with Article 56 EPC prejudices maintenance of the patent.

Auxiliary requests 1 to 5 - Article 12(4) RPBA 2007

3. The Board decided not to take into account auxiliary requests 1 to 5 submitted with the respondent's reply to the statement of grounds of appeal (Article 12(4) RPBA 2007) for the following reasons.
 - 3.1 Article 12(2) RPBA 2007 which corresponds essentially to the wording of Article 12(3) RPBA 2020, referred to by appellant 1 in this context, sets out that the statement of grounds of appeal and the reply shall contain a party's complete case. They shall set out clearly and concisely the reasons why it is requested that the decision under appeal be reversed, amended or upheld, and should specify expressly *inter alia* all the facts, arguments and evidence relied on. According to Article 12(4) RPBA 2007, the Board shall take into account everything filed with *inter alia* the reply to the statement of grounds of appeal if and to the extent it relates to the case under appeal and meets the requirements set out above.
 - 3.2 Auxiliary requests 1 to 5 correspond to those requests submitted before the opposition division. Appellant 1 had raised objections against the amended claims according to these requests with its statement of

grounds of appeal. Similarly, appellant 3 had raised objections covering the subject-matter of auxiliary requests 1 to 3 in the context of its objections against the dependent granted claims 4 and 7 on which these requests are based.

3.3 The respondent submitted no comments in regard to these objections, nor did it explain why the respective amendments had the potential of overcoming any of the particular grounds for opposition. Referring simply to the main request and submitting that the auxiliary requests would meet the requirements of the EPC for the same reasons as the main request is not considered convincing. Not knowing which argument or objection the Board might finally follow cannot relieve the respondent from the fact that the respondent must have had a reason for filing a particular amendment (i.e. which of the particular objections brought forward in the appellants' statements of grounds of appeal were being addressed and how).

3.4 Even with the later submissions dated 15 June 2021 and 8 July 2022, the respondent failed to provide a substantiation for the auxiliary requests. By further withdrawing the request for oral proceedings and filing concurrently the request for a decision based on the documents on file (letter dated 19 June 2023), the respondent also did not fulfil its intention to (possibly) submit further observations with regard to the patentability of the auxiliary requests as announced for example in the letter of 8 July 2022.

3.5 Thus, in its complete case in reply to the statements of grounds of appeal, the respondent did not present the necessary substantiation in regard to auxiliary requests 1 to 5, contrary to Article 12(2) RPBA 2007.

Consequently the Board decided not to take these requests into account pursuant to Article 12(4) RPBA 2007.

4. Absent any set of claims complying with the requirements of the EPC, the patent has to be revoked (Article 101(3)(b) EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



D. Grundner

M. Harrison

Decision electronically authenticated