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**Datasheet for the decision
of 30 June 2022**

Case Number: T 0594/20 - 3.2.07

Application Number: 14194891.9

Publication Number: 3026173

IPC: B65D65/40, B65D81/38,
B65D85/24, D21H27/10,
D21H27/40, D21F3/02, D21F11/12,
D21H11/02, B65D85/34

Language of the proceedings: EN

Title of invention:
Method of producing a containerboard from pulp comprising NSSC
pulp and corrugated board

Patent Proprietor:
BillerudKorsnäs AB

Opponents:
Mondi AG
International Paper Company (opposition withdrawn)
Smurfit Kappa Ireland Limited
Stora Enso Oyj (opposition withdrawn)

Headword:

Relevant legal provisions:

EPC Art. 113(1), 83, 54, 56

EPC R. 115(2)

RPBA 2020 Art. 15(3)

Keyword:

Right to be heard - non-attendance at oral proceedings

Oral proceedings - held in absence of party

Sufficiency of disclosure - (yes)

Novelty - (yes)

Inventive step - (yes)

Decisions cited:

G 0003/14, T 0014/83, T 0182/89, T 0019/90, T 1764/06

Catchword:



Beschwerdekammern

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Case Number: T 0594/20 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 30 June 2022

Appellant: BillerudKorsnäs AB
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Respondent: Smurfit Kappa Ireland Limited
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted on
3 February 2020 concerning maintenance of the
European Patent No. 3026173 in amended form.

Composition of the Board:

Chairman I. Beckedorf
Members: A. Cano Palmero
A. Pieracci

Summary of Facts and Submissions

- I. The patent proprietor and opponent 1 (appellants) lodged appeals within the prescribed period and in the prescribed form against the decision of the opposition division to maintain European patent No. 3 026 173 in amended form on the basis of the then auxiliary request 1.
- II. Four oppositions were originally filed. Opponents 2 and 4 withdrew their oppositions with letters of 20 May 2022 and 9 December 2021 respectively. As far as opponent 3 had filed an appeal, this appeal was subsequently withdrawn in the course of the appeal proceedings with letter dated 13 June 2022.
- III. The remaining oppositions filed by opponents 1 and 3 were directed against the patent in its entirety and based on the grounds for opposition pursuant to Article 100(a) and (b) EPC (lack of novelty, of inventive step and of sufficiency of disclosure).
- IV. In preparation for oral proceedings the Board communicated its preliminary assessment of the case to the parties by means of a communication pursuant to Article 15(1) RPBA 2020. The Board indicated that the decision under appeal was likely to be set aside and the patent could be maintained according to the main request.
- V. Oral proceedings before the Board took place on 30 June 2022 in the absence of opponent 3. At the conclusion of the proceedings the decision was announced. Further details of the proceedings can be found in the minutes thereof.

VI. The lines of arguments of the parties, which are focused on sufficiency of disclosure and on novelty and the inventive step of the subject-matter of claim 1 according to the main request, are dealt with in detail in the reasons for the decision.

VII. Opponent 1 requested:

that the decision under appeal be set aside and that the patent be revoked;

VIII. The patent proprietor requested:

that the decision be set aside and that the patent be maintained in amended form according to the set of claims filed as main request with the statement of grounds of appeal which corresponds to claims 1 to 8 of the main request decided upon in the decision under appeal, or, in the alternative, that the appeal of opponent 1 be dismissed, *i.e.* that the patent be maintained in the amended form found allowable by the opposition division according to auxiliary request 1 re-filed with the statement of grounds of appeal, or, in the further alternative, that the patent be maintained in amended form according to one of the sets of claims filed as auxiliary requests 2 to 4, 4a, 5, 5a, 6 to 10, 10a, 11, 11a, 12 to 16, 16a, 17, 17a, 18 to 22, 22a, 23, 23a and 24 re-filed with the statement of grounds of appeal.

IX. Opponent 3 at least implicitly requested

that the appeal of the patent proprietor be dismissed.

X. Independent **claim 1** according to the main request reads as follows:

"Method of producing a containerboard, comprising the step of pressing a web formed from a pulp comprising NSSC pulp in a shoe press, wherein the line load in the shoe press is above 1200 kN/m, such as above 1300 kN/m, such as above 1400 kN/m and wherein the geometric SCT index according to ISO 9895 of the containerboard is above 37 Nm/g, such as at least 38 Nm/g, such as least 40 Nm/g and wherein at least 70 % by dry weight of the pulp is NSSC pulp."

XI. As the auxiliary requests do not form part of this decision, it is not necessary to reproduce them here.

Reasons for the Decision

1. *Procedural issues*

1.1 Because **opponents 2 and 4 withdrew their respective oppositions**, they ceased to be a party in the present appeal proceedings. Opponent 2 made no requests. The initial requests made by opponent 4 (mainly the revocation of the patent) became obsolete.

1.2 Further, since **opponent 3 withdrew its appeal**, only opponent 1 and the patent proprietor remain as

appellants and opponent 3 as respondent to the patent proprietor's appeal in the present case.

1.3 From this it also follows that the objections and the lines of argument which had been submitted by opponents 2 and 4 up to the withdrawals, but which were not relied upon by opponent 1 are not discussed in this decision beyond the Board's opinion expressed in its communication pursuant to Article 15(1) RPBA 2020.

2. *Oral proceedings in the absence of opponent 3*

2.1 Although opponent 3 did not attend the oral proceedings before the Board, the principle of the right to be heard pursuant to Article 113(1) EPC is observed since that provision only affords the opportunity to be heard and, by absenting itself from oral proceedings, a party gives up that opportunity (see Case Law of the Boards of Appeal [CLB], 9th edition, 2019, V.A.4.5.3).

2.2 In accordance with Rule 115(2) EPC and Article 15(3) RPBA 2020, the submissions of opponent 3 contained in its reply to the patent proprietor's statement of grounds of appeal have been taken into account and are discussed in the present reasons for the decision.

3. *Evidence*

The following documents referred to in the appealed decision are relevant in the present decision:

D4: ISO 9895, 2008;

D6: Lavrov et al., "The influence of Fiber Composition", 2011, including English translation;

D14: WOTOL/Carcano, "Semi Chemical fluting liner paper machine", 2011;

- D19:** Lange, "Shoe pressing of paper grades", 1996;
- D21:** Panchapakesan, "Press Dryer Section Operation", 1996;
- D27:** WOTOL/Carcano, "Semi Chemical fluting liner paper", 2012;
- D28:** Lange, "Shoe presses and their application to recycled fibers", 1991;
- D36:** Spachman, "Not just hot air", 2007;
- D38:** Fourdrinier Kraft Board Group, "Optimization of machine properties", 1982;
- D43:** Richardson et al., "Note on the compression strength of fluting", 1985;
- D47:** Rydholm, "Pulping Processes", 1965;
- DXX:** Statement regarding a paper machine trial
- X2:** "Papermaking Part 1, Stock Preparation and Wet End", 2000;
- E1:** Experimental report filed by the patent proprietor ;
- E2:** Corrected data of Figure 7 of the patent in suit.

4. *Main request - Sufficiency of disclosure, Article 83 EPC*

4.1 The opposition division found that the invention according to claim 1 of the then main request, which corresponds to claim 1 of the main request in appeal is not sufficiently disclosed. In particular, the division held that the only embodiment in the patent achieving a geometric SCT index of at least 37 Nm/g required a line load in the shoe press of 1500kN/m, which is higher than the lower value defined in claim 1. The opposition division also held in the first complete paragraph of page 8 of the decision under appeal that, although some other measures apart from the line load in the shoe press are suggested in the description (such as the use of steaming, or the parameters such as the grammage,

the refining ranges and/or an increase of tilt), these are not reflected in claim 1. Consequently, the opposition division concluded that the method of claim 1 according to the main request is not sufficiently disclosed.

4.2 The Board disagrees with the findings of the opposition division in this respect and follows the submission of the patent proprietor, that the patent as granted is sufficiently disclosed. The opposition division acknowledges that the patent gives an indication on how to achieve the SCT values of claim 1. In the Board's view, the absence in these essential measures in the claim could amount to a clarity objection which is not open to examination in the present proceedings in accordance with the decision of the Enlarged Board of Appeal G 3/14. The Board is convinced that the main request meets the requirements of sufficiency of disclosure for which the whole patent disclosure must be taken into account, for the following reasons.

4.2.1 According to the established case law an objection of lack of sufficiency disclosure presupposes that there are serious doubts substantiated by verifiable facts. **The burden of proof is upon the opponent(s)** to establish on the balance of probabilities that a person skilled in the art, using his common general knowledge, would be unable to carry out the invention (see CLB, *supra*, II.C.9, first two paragraphs, in particular with reference to T 19/90 and T 182/89).

4.2.2 It seems to be common ground that

- an increase in the line load in the shoe press (which is proportional to the machine speed and the press

impulse) increases the value of the geometric SCT index of the produced containerboard; and that

- when the containerboard is formed of a mixture consisting of NSSC pulp and recycled fibres, an increase in the amount of NSSC pulp results in an increase the geometric SCT index of the produced containerboard, or, in other words, when the containerboard is formed of a mixture consisting of NSSC pulp and recycled fibres (see point 2 the reply to the statement of grounds of appeal of **opponent 3** with reference to D21) the increase of amount of recycled fibres will weaken the finished product.

4.2.3 In summary, it appears from the submissions of the parties that a container board consisting of 70% of NSSC and 30% of recycled fibres could amount to an inconvenient starting point in order to achieve a high value of geometric SCT index. Although the patent proprietor argued at the oral proceedings before the Board that claim 1 of the main request did not refer to recycled fibers at all, the Board notes that a containerboard with such relative amount of recycled fibers is covered by the claim and can be thus considered for the sake of argument.

4.2.4 The Board finds it appropriate that in the present case the question to be answered in order to assess sufficiency of disclosure is whether the skilled person would be capable of carrying out the invention departing from the worst possible conditions for which the patent seeks protection.

This results in the question whether the skilled person, with the help of the patent disclosure and the common general knowledge, is able to obtain, without

undue burden, a containerboard with a geometric SCT index according to ISO 9895 (D4) of at least 37 Nm/g wherein:

- (a) the containerboard contains not more than 70% of NSSC pulp by dry weight of the pulp (the rest of the content being recycled fibers) and wherein
- (b) the line load in the shoe press is not higher than 1200 kN/m.

4.2.5 The **patent proprietor** indicated in point 3.1.2 of its statement of grounds of appeal that the patent in suit provides guidance to the skilled person that an increase of the geometric SCT index can be achieved by taking one or more of the following measures:

- (1) increasing the peak nip pressure,
- (2) refining the NSSC pulp,
- (3) applying steam and thereby increasing the temperature of the web,
- (4) increasing the NSSC content, and
- (5) increasing total press impulse.

In addition to these measures, and as correctly held by the opposition division in the second and third complete paragraph of page 12 of the decision under appeal, claim 1 of the patent in suit does not specify the material or materials other than NSSC pulp of which the containerboard is composed. It follows that as it has been indicated by the **patent proprietor** in its statement of grounds of appeal, point 1.1.1, apart from recycled fibres, the part of the pulp not being NSSC pulp could be any other material such as, but not limited to, reject pulp, which is pulp prepared by refining the screen reject from another process (see

patent in suit, paragraph [0022]). The skilled person therefore would have in this

(6) replacement of recycled fibers with reject pulp

another possible theoretical measure to adjust in an attempt to carry out the invention without departing from the claimed ranges of NSSC pulp.

- 4.2.6 As already discussed above, the invention according to claim 1 of the main request already seeks protection for a range in the values of NSSC content in the containerboard (measure (4)) and line load in the shoe press (which is directly proportional press impulse, *i.e.* measure (5)).
- 4.2.7 As regard the measures of replacing the recycled fibres with reject pulp (measure (6)) it has to be noted that these have been merely mentioned as possible embodiments in the patent in suit and not linked to the desired effect. The same is the case for the measure of refining of the NSSC pulp (measure (2)). Although at least opponent 1 and the patent proprietor seemed to agree during the oral proceedings before the Board that, within certain boundaries, the refining of the NSSC pulp could have a positive effect in the SCT index, it is still not apparent to the Board that the skilled person could immediately derive in view of the patent disclosure or from the common general knowledge within which boundaries the refining of the pulp should be adjusted in order to achieve an increase in the geometric SCT index.
- 4.2.8 In contrast, the effects of **increasing the peak nip pressure** (measure (1)) and **increasing the temperature (by applying steam)** (measure (3)) seem to be

unambiguously derivable from figures 9 and 7 respectively, as correctly identified by the opposition division in the first complete paragraph of page 8 of the decision under appeal, so that there appears to be a clear teaching of these measures in the patent in suit.

4.2.9 The question of sufficiency of disclosure in the case at hand may be thus further restricted as to whether there are serious doubts substantiated by verifiable facts that the skilled person departing from the limited values of

(a) a containerboard containing not more than 70% of NSSC pulp by dry weight of the pulp (the rest of the content being recycled fibers) and

(b) the line load in the shoe press is not higher than 1200 kN/m

would, in view of the teaching of the patent and with help of the common general knowledge, be able to obtain, without undue burden, a containerboard with the required geometric SCT index of 37 Nm/g according to ISO 9895, namely by applying the measures of

(1) increasing the peak nip pressure, and/or

(3) applying steam and thereby increasing the temperature of the web.

4.3 Effect of steaming on the geometric SCT index

4.3.1 According to **opponent 1**, (see point III.A.4. of its statement of grounds of appeal) and **opponent 3** (see point 1 of its statement of grounds of appeal, pages 8-9) the opposition division erred in its conclusion that it has been proven by the patent proprietor that a

higher geometric SCT index can be obtained by the application of steam. This allegation would be unfounded and cannot be derived from the contested patent, which does not contain a single embodiment which achieves the claimed SCT index (see Fig. 7 and the corresponding description passages and table 1). In page 6 of its reply to the statement of grounds of appeal, **opponent 1** even points out that it cannot be derived from the patent, specially not from paragraph [0033] why the increase of temperature via steaming should involve an increase in the geometric SCT index. In Figure 7 the only trial (#3017) that apparently meets this SCT index value was erroneous as acknowledged by the patent proprietor in its submission of 8 July 2019, point 4, in which it was confirmed that trial #3017 achieved a geometric SCT value of 38.63 Nm/g. However, these trials employ a line load in the shoe press of 1500kN/m. The opposition division in view of the comparison between the trials #3007 and #3017 therefore reached the erroneous conclusion that also under a line load in the shoe press of 1200 kN/m and the use of steam the claimed SCT index value can be achieved.

4.3.2 The Board is not persuaded by these arguments for the following reasons.

It seems uncontested that trials #3007 and #3017 differ solely in the use of steaming. Although it can be acknowledged that the the trials #3007 and #3017 do not contemplate a line load of 1200 kN/m, it seems quite plausible (even after the correction of the SCT index value of trial #3017) that an increase on the geometric SCT index caused by the application of the steam occurs for any line load in the shoe press. There is thus no lack of a "fully self-sufficient technical concept" as

argued by **opponent 3** in point 5 of its statement of grounds of appeal and reply to statement of grounds of appeal. The **opponents**, who bear the burden of proof, have not demonstrated that the effect of steaming in the geometric SCT index is absent or disappears for a line load of 1200 kN/m.

4.3.3 In the absence of any verifiable facts, it is thus concluded that there are no serious doubts that the application of steaming and the consequent increase of temperature does not involve an increase of the geometric SCT index of the containerboard, as indicated by the patent in suit.

4.4 Effect of peak nip pressure

4.4.1 In page 4 of its reply to the statement of grounds of appeal, **opponent 1** argues that there is no teaching in the patent on how the different variables must be adjusted in order to achieve the desired geometric SCT index, in particular no teaching to adjust the peak nip pressure. In page 5, last paragraph, of its reply to the statement of grounds of appeal, **opponent 1** specifically notes that there is no mention in the patent that an increase in peak nip pressure results in an increase of the geometric SCT index.

4.4.2 The Board cannot agree with **opponent 1's** view. Indeed, it would seem from table 2 and figures 3, 4 and 9 and paragraph [0065] of the patent in suit that given a constant line load (in that case 1400kN/m), the increase of the tilt (and therefore the increase of the peak nip pressure) has a positive effect in the increase of the density and the geometric SCT index. There is thus no lack of a "fully self-sufficient technical concept" as argued by **opponent 3** in point 5

of its statement of grounds of appeal and reply to statement of grounds of appeal. There is no evidence as to why this effect of the nip pressure should not be present at a line load of 1200 kN/m and a NSSC content of 70%. Additionally, an increase of tilt seems to be independent of other parameters such as applying steaming or refining the pulp, which the skilled person could further adjust in its attempt to carry out the invention.

4.4.3 The further reference to document X2 made by **opponent 1** in its reply to the statement of grounds of appeal, page 10, seems to focus on the water removal in the general paper-making process which does not appear to demonstrate that with an increase of the nip length an increase in the geometric SCT index cannot be achieved.

4.4.4 In the absence of any verifiable facts, it can thus be concluded that there are no serious doubts that the increase of peak nip pressure does not involve an increase of the geometric SCT index of the containerboard, as indicated by the patent in suit.

4.5 Reference to document DXX

4.5.1 **Opponents 1 and 3** rely on document DXX, which would demonstrate or at least would cast severe doubts that the claimed geometric SCT index cannot be obtained for the whole range foreseen in the invention, especially not by a line load of 1200 kN/m (**opponent 1** in point 5 of its statement of grounds of appeal, **opponent 3** in point 4 of both statement of grounds and its reply to the statement of grounds of appeal). According to the opponents, the linear extrapolation of the experiments carried out in DXX which have been performed under an increased peak nip pressure of 78,5 bar and a

temperature of 52,1 °C would show that not even by a press load of 1500kN/m, let alone 1200kN/m the minimum value required for the geometric SCT index could be achieved.

4.5.2 The Board cannot follow these arguments either. Quite apart from the fact the DXX contemplates a line load below the claimed range, namely up to 1138 kN/m, those experiments are silent on how a further increase of the other measures that have an influence in the geometric SCT index (such as peak nip pressure above 78,5 bar and a temperature increase over 52.1°C through steaming), for which a teaching in the patent in suit is given. In addition, as correctly indicated by the patent proprietor in point 3.1.4 of its statement of grounds of appeal, that the obtained SCT index values can be linearly extrapolated in view of the line load alone, is to be seen as a mere allegation of the opponents in the absence of any other evidence. Therefore, the trials in DXX cannot serve in the case at hand as facts on which an objection of sufficiency of could be based.

4.6 Alleged lack of support

4.6.1 **Opponent 3** argues in point 2 of its reply to the patent proprietor's statement of grounds of appeal that the claims are not supported across their entire range, as all examples in the patent including those that failed to meet the claim requirement, involved **pure, 100% NSSC pulp**. Further, in point 3 of both its statement of grounds of appeal and its reply to the patent proprietor's statement of grounds of appeal, **opponent 3** argues that the entire ambit of the claim is not supported, specially not the optional feature of claim 1, that the geometric SCT index according to ISO 9895 is (such as) **at least 40 Nm/g** which is, according to

all evidence provided by the patent proprietor including E1 or E2, simply unachievable and it is certainly unachievable using the information in the patent. There is thus no support in the patent for either "at least 38 Nm/g" or "at least 40 Nm/g" and the claim 1 according to the main request is, as a result, not supported, resulting in a lack of sufficiency of disclosure.

4.6.2 The Board disagrees. Indeed, this alleged lack of support could at the most rather involve a clarity objection. As for the allegation that the geometric index cannot be achieved, the Board insists that the burden of proof lies on the **opponents** in this case to demonstrate that there are serious doubts, substantiated by verifiable facts that under the measures indicated by the patent as a whole, the geometric SCT index cannot be achieved.

4.7 Alleged undue burden

4.7.1 **Opponent 1** argues in page 5 of its reply to the patent proprietor's statement of grounds of appeal that the skilled person, in its attempt to carry out the invention in view of the information provided by the patent in suit, would still be confronted with an undue burden, in the sense that they would not be in place quickly and reliably adjust the parameters in the event of a failure, but rather that, a research work would be necessary in order to carry out the invention in the claimed range.

4.7.2 **Opponent 1** further refers in page 7 of its reply to the patent proprietor's statement of grounds of appeal to the decision T 14/83, according to which a sufficiency of disclosure is given when a teaching is contained in

the patent as to which parameters are to be changed and what consequences the change of such a parameter entails. In such cases it is reasonable to expect the skilled person to accept a few trial and error attempts. This teaching is not present in the patent, and **opponent 1** additionally provides a table in its reply to the patent proprietor's statement of grounds of appeal in pages 11 and 12 with an extensive list of parameters including grammage, refining grade, humidity and lignin content that might have an influence on the measurement of the values of geometric SCT index, on the NSSC and on the shoe press, making *inter alia* reference to documents D6, X2, D43 and D47. In view of the large number of influencing factors, it is clear to a skilled person would be forced to face a very large number of failed attempts and thus confronted with an undue burden in its attempt to carry out the invention.

4.7.3 The Board is not persuaded by the arguments of **opponents 1**. In contrast, the Board is of the view that the patent in suit gives a precise guidance on the effects that the individual measures of peak nip pressure and temperature have an impact on the geometric SCT index of the containerboard, so that the condition of the first paragraph of the headnote of decision T 14/83 is met. Furthermore, the Board is not convinced that the skilled person would be facing an undue burden when applying these two measures. As already explained, the **opponents** bear the burden of proof to demonstrate that even by adjusting these two parameters, the skilled person would not achieve the claimed geometric SCT index for the whole claimed process ranges.

- 4.8 SCT index and norm ISO 9895 (D4)
- 4.8.1 The reference made by **opponent 1** to documents D43 in its reply to the statement of grounds of appeal, pages 8 and 9 is directed to show the influence of the humidity of paper and the measurement position in the obtained value of geometric SCT index.
- 4.8.2 According to **opponent 1** in point III.A.7 of its statement of grounds of appeal, the reference in the claim to ISO 9895 (D4) does not unequivocally define the SCT index, and that said index is, due to the number of influencing variables, subject to large variations. Since it is not specified in the patent under which exact conditions the SCT index is measured, the skilled person cannot carry out the invention.
- 4.8.3 The Board disagrees. As correctly reasoned by the opposition division in the first paragraph of page 13 of the decision under appeal, the patent describes in paragraphs [0038] to [0041] how the SCT index is calculated. Further, as indicated by the patent proprietor in its reply to the statement of grounds of appeal, point 1.4, page 17, the reference to ISO norm 9895 appears to define precisely the boundary conditions in which the compressive strength values CD and MD are to be measured. As for the alleged lack of information on measurement position, even in the case that the norm would be silent on this aspect, this would rather result in a broad subject-matter of claim 1 rather than amounting to a lack of clarity, let alone to a lack of sufficiency of disclosure. The geometric mean value of these CD and MD values results in the geometric SCT index, which cannot therefore be seen as an unusual parameter at all. Additionally, the Board notes that **opponent 1** has succeeded in delivering

geometric SCT values according to ISO norm 9895 with its test DXX, so that this objection does not seem to hold.

4.9 In summary, the Board concludes that it has not been demonstrated by the **opponents**, who bear the burden of proof, that there are serious doubts substantiated by verifiable facts that the skilled person is not able to carry out the invention, namely to deliver a containerboard with a geometric index of 37 Nm/g according to ISO 9895 by a line load in the shoe press of 1200 kN/m and departing from a NSSC-pulp with 70% NSSC without undue burden, taking into account that the patent in suit gives the indication to apply steam and thereby increasing the temperature of the web as much as possible and to increase the peak nip pressure as much as possible.

4.10 In view of the above, the request of **opponent 1** in point 8 of its statement of grounds of appeal not to admit evidence E1 and E2 in appeal proceedings does not require to be assessed.

4.11 It follows that, in reviewing the decision under appeal, the Board finds that the patent proprietor has convincingly demonstrated the incorrectness of the decision of the opposition division that the invention according to the main request is not sufficiently disclosed for it to be carried out by a person skilled in the art using his common general knowledge. The decision is thus to be set aside.

5. *Main request - Novelty, Article 54 EPC*

5.1 **Opponent 3** argued in points 8 to 10 of its reply to the patent proprietor's statement of grounds of appeal that

the subject-matter of claim 1 of the main request lacks novelty in view of D19, D21 (with "linked" reference to D28) or D14/D27.

5.2 As regards document D21 the opposition division held in the assessment of inventive step of the auxiliary request 1 that this document does not provide any data which can be compared to the claimed geometric SCT index. Even in the case that it could be acknowledged that document D28 is part of the disclosure of D21, the required SCT index value would still be missing. Indeed figure 3 of D28, discloses values up to 32 Nm/g of STFI, which can be equated to an SCT index value in the case of isotropic probes. The Board concurs with this findings.

5.3 **Opponent 3** argues in its reply to the statement of grounds of appeal that, even in the case that the prior art does not explicitly disclose the claimed geometric SCT index values, this feature must seen as being implicitly disclosed as an inevitable result falling within the terms of the claim, since the starting product and the claimed method steps are the same as the ones of the prior art. According to **opponent 3** the burden of proof for an alleged distinguishing feature in this case lies with the applicant/patent proprietor to provide evidence in support to that allegation (see decision T 1764/06).

5.4 The Board cannot follow this view. As it has been discussed in the question of sufficiency of disclosure, the claimed geometric SCT index values is not automatically achieved with the other claimed method steps present in the claim (NSSC content of at least 70% and line load of 1200 kN/m) as some of the trials of the patent show. Therefore, the Board sees that

claimed geometric SCT index values are of a **limitative and distinguishing nature**, since it necessarily implies the provision of further measures indicated in the patent disclosure, such as those related with at least a temperature increase through steaming and the peak nip pressure.

- 5.5 Since the patent already provides a teaching of the effect of these measures at least in the description and figures, the invention is sufficiently disclosed. The lack of these apparent essential features in the claims could amount at the most to a clarity objection which is, as explained above, not open to examination in the present proceedings in accordance with the decision of the Enlarged Board of Appeal G 3/14.
- 5.6 Therefore, it can be concluded that D21 (also in combination with D28) does not, at least directly and unambiguously, anticipate the feature of claim 1 of the main request that the geometric SCT index according to ISO 9895 of the containerboard is above 37 Nm/g.
- 5.7 In view of the arguments presented by **opponent 3** in points 8 to 10 of its reply to the patent proprietors' statement of grounds of appeal, the same argumentation above applies, *mutatis mutandis* to documents D14/D27 and D19.
- 5.8 The above view of the Board has been communicated to the parties with the communication pursuant to Article 15(1) RPBA 2020 (see point 9). The parties have neither reacted nor objected to the opinion expressed in that communication. After having reconsidered all the legal and factual aspects of the case the Board does not see any reason to deviate from its preliminary

opinion. The subject-matter of claim 1 of the main request is thus considered new.

6. *Main request - Inventive step, Article 56 EPC*

6.1 Opponents 1 and 3 argued that the subject-matter of claim 1 of the main request is not inventive in view of the following combinations identified by the Board:

- D21 and D28 alone or in combination as the closest prior art in combination with the teachings of D19 and D43 (opponent 1)
- D21 or D28 as closest prior art alone or in combination with the teaching of any of D19, X2, D28, D36, D38 or the common general knowledge (opponent 3)

6.2 Thus, it appears that D21 or D28 alone or in combination can be taken as closest prior art.

6.2.1 In points 10.2 of its communication under Article 15(1) RPBA 2020, the Board expressed its view that none of the documents available in the prior art (therefore including D21, D28, D19, X2, D36 and D38) explicitly disclosed the feature that the geometric SCT index of the containerboard is above 37 Nm/g. This has not been further disputed by the opponents as regards these documents.

6.2.2 **Opponent 1** however argued that document D43 does at least implicitly disclose an SCT index of at least 37 Nm/g. In the paragraph "Results" (page 303, right-hand column of D43) it is described that at 50% RH and 23°C the MD and CD values for NSSC based values of 44 and 27 Nm/g in MD and CD were measure. Furthermore, an error of 8 % is indicated in this paragraph. The measured MD and CD values result in a geometric SCT-index of 34.47

Nm/g and taking into account the error of 8 %, a maximum geometrical SCT index of about 37.2 Nm/g is achievable. If the method as described in D21 or D28 alone or in combination is applied to a pulp containing more than 70 % NSSC, the skilled person would undoubtedly arrive at the teaching of D43 and thus at the desired result of claim of the main request without exercising an inventive skill.

- 6.2.3 The Board disagrees. As correctly indicated by the patent proprietor, the MD and CD values of D43 considered by opponent 1 correspond to the measurements of figure 2 of that document, which do not correspond to the measurements for which a coefficient of variation of 8% was identified. Furthermore, the Board concurs with the patent proprietor that even in the case that an alleged value of 37.2 Nm for the SCT index could be taken into account from D43, this value would still not be comparable with the value according to the main request, since claim 1 requires that the SCT index is according to ISO 9895 (D4), which foresees at least 20 determinations and standard atmosphere conditions (see points 7 to 9 of D4).
- 6.2.4 The Board thus concludes that none of the documents relied upon by the opponents in their attacks on inventive step disclose the feature that the geometric SCT index according to ISO 9895 of the containerboard is above 37 Nm/g.
- 6.3 The opponents further argued that even if it could be considered the SCT-index value as the the only distinguishing feature, this is an obscure and seldom parameter which inherently achieved by the prior art. **Opponent 1** even assumes that with the geometric SCT index the CD is meant. In other line of argumentation,

the opponents argue that this feature constitutes a result to be achieved and that the combination of the claimed method steps does not reach that result. Both conclusions would imply a lack of inventive step. According to the opponents, this alleged distinguishing feature should thus not be taken into account when assessing inventive step. Alternatively, if a technical problem must be identified, it is how to achieve any increase in compressive strength. The measures to do this are not claimed and therefore inventive step is lacking.

- 6.4 The Board disagrees. As already underlined in the assessment of novelty in point 5.4, the Board sees in the feature in question a distinguishing and limitative nature, since it necessarily implies the provision of further measures indicated in the patent disclosure. The Board further cannot follow the argument that the geometric SCT index according to ISO 9895 is of an obscure parameter. This index indeed results directly from the geometric mean the well-known parameters MD and CD (which are the compressive strength in machine and cross direction respectively). The assumption of **opponent 1** that in reality CD is meant cannot be acknowledged, since this would be the case only in isotropic products.
- 6.5 The measures described in the patent in suit that involve the claimed values in the geometric SCT index according to ISO 9895 in combination with the other requirements of the claim enable not only an improved compressive strength, but also minimise major differences between MD and CD.
- 6.6 Starting from either D21 or D28 or a combination thereof as closest prior art, it is agreed with the

patent proprietor that the problem to be solved by this distinguishing feature can be seen the provision of an improved method for producing containerboard showing increased compressive strength.

- 6.7 As already discussed above, none of the documents relied upon the opponents alone or in combination seems to hint, let alone discloses, measures that could result in a geometric SCT index according to ISO 9895 as claimed in combination with the other requirements. The skilled person could thus only arrive at the subject-matter of claim 1 as a result of an *ex post facto* analysis, *i.e.* exercising an inventive skill.

7. *Conclusions*

The patent proprietor has convincingly demonstrated the incorrectness of the findings in the decision under appeal with respect to lack of sufficiency of disclosure of the main request. The decision under appeal is to be set aside. Furthermore, opponents 1 and 3 have not submitted allowable and convincing arguments that could prejudice the maintenance of the patent in accordance to the main request. The case is thus remitted to the the opposition division with the order to maintain the patent as amended according to the main request.

Order

For these reasons it is decided that:

1. The appeal of opponent 1 is dismissed.
2. The decision under appeal is set aside.
3. The case is remitted to the opposition division with the order to maintain the patent as amended in the following version:

Claims

No. 1 to 8 filed as main request with the statement setting out the grounds of appeal of 12 June 2020;

Description, Pages

2 to 7 filed during the oral proceedings of 30 June 2022;

Drawings, Figures

No. 1 to 11 of the patent specification.

The Registrar:

The Chairman:



G. Nachtigall

I. Beckedorf

Decision electronically authenticated