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**Datasheet for the decision
of 17 April 2020**

Case Number: T 0256/17 - 3.2.07

Application Number: 08739654.5

Publication Number: 2138467

IPC: C03B17/06, G02F1/1333

Language of the proceedings: EN

Title of invention:

PROCESS FOR PRODUCING GLASS PLATE AND GLASS PLATE PRODUCING
EQUIPMENT

Patent Proprietor:

Nippon Electric Glass Co., Ltd.

Opponent:

Schott AG

Headword:

Relevant legal provisions:

EPC Art. 54, 56, 83, 113(1), 116(1)

RPBA Art. 12(2), 12(4), 15(1)

RPBA 2020 Art. 12(2), 12(3), 12(8), 13(1), 15(3), 25(1), 25(2)

Keyword:

Decision in written proceedings after cancellation of oral proceedings

Late-filed line of attack - admitted (no)

Novelty - (yes)

Inventive step - (yes)

Sufficiency of disclosure - (yes)

Decisions cited:

T 0003/90

Catchword:



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Case Number: T 0256/17 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 17 April 2020

Appellant: Schott AG
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 2 December 2016
rejecting the opposition filed against European
patent No. 2138467 pursuant to Article 101(2)
EPC.**

Composition of the Board:

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

Summary of Facts and Submissions

I. The opponent lodged an appeal in the prescribed form and within the prescribed time limit against the decision of the opposition division to reject the opposition against the European patent No. 2 138 467.

II. The opposition had been filed against the patent as a whole based in substantiated manner on Article 100(a) and (b) EPC (lack of novelty and inventive step, insufficiency of disclosure).

III. The appellant (opponent) requested:

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

The appellant initially requested that oral proceedings be arranged.

IV. The respondent (patent proprietor) requested:

that the appeal be dismissed,
or, in the alternative,
that, when setting aside the decision under appeal, the patent be maintained in amended form according to auxiliary requests 1 to 4, filed together with the grounds of appeal.

The respondent also requested to arrange for oral proceedings if the appeal could not be dismissed.

V. In the present decision reference is made to the following documents:

D2: DE 10040640 A;
D5: US 2006236722 A;
D6: DE 2648269 A;
D13: JP 2004338994 A;
D13a: English translation of D13;
D18: daboline.de/wp-content/uploads/grafiken_schlanke_scheiben1.pdf;
D19: Laboratory notes LN/2015-xxx, pages 8, 10;
D20: Declaration of A. Carré;
D22: JP H 10 053426;
D23: JP 2001 031435 A.

VI. To prepare the oral proceedings scheduled upon the parties' requests, the Board communicated its preliminary assessment of the case to the parties by means of a communication pursuant to Article 15(1) RPBA 2007. The Board indicated that the subject-matter of claim 1 and 10 of the patent as granted appeared to be new and inventive and that the claimed invention appeared to be sufficiently disclosed. The Board also indicated that admittance of the new lines of attacks on inventive step submitted for the first time in response to the respondent's reply to the statement of grounds of appeal would have to be discussed at the oral proceedings and that those lines of attack appeared not convincing.

VII. With letter dated 16 March 2020 the appellant withdrew their request for oral proceedings.

VIII. The lines of arguments of the parties are dealt with in detail in the reasons for the decision.

IX. Independent claim 1 of the patent as granted, reads:

A glass sheet producing method, in which a sheet-shaped glass ribbon (B) is formed by supplying molten glass (A) into a forming body (2) and causing the molten glass (A) to flow downward on a conveyance path extending in a lower direction from the forming body (2), and the glass ribbon (B) is cut into a predetermined dimension in a cutting chamber (6) provided on the conveyance path so that glass sheets (C) are produced, the glass sheet producing method comprising a waste glass sheet collecting step of collecting waste glass sheets (D) of the glass sheets (C) by dropping the waste glass sheets (D) through a drop hole (8) provided in a floor surface of the cutting chamber (6) into a collection chamber (7) provided under the cutting chamber (6), the glass sheets (C) being obtained by cutting.

X. Independent claim 10 of the patent as granted, reads:

A glass sheet production installation (1), in which a sheet-shaped glass ribbon (3) is formed by supplying molten glass (A) into a forming body (2) and causing the molten glass (A) to flow downward on a conveyance path extending in a lower direction from the forming body (2), and the glass ribbon (B) is cut into a predetermined dimension in a cutting chamber (6) provided on the conveyance path so that glass sheets (C) are produced, the glass sheet production installation (1) comprising:
a drop hole (8) provided in a floor surface of the cutting chamber (6) and a collection chamber (7) provided under the cutting chamber (6),

wherein waste glass sheets (D) of the glass sheets (C) obtained by cutting are collected after being dropped through the drop hole {8} into the collection chamber (7).

Reasons for the Decision

1. Procedural aspects

The present decision is taken in written proceedings without holding oral proceedings. The principle of the right to be heard pursuant to Article 113(1) EPC is however observed since that provision only affords the opportunity to be heard. By explicitly declaring their intention not to attend the oral proceedings, to which both parties were duly summoned, the appellant gave up that opportunity and said declaration is considered equivalent to a withdrawal of the request for oral proceedings under Article 116(1) EPC, whereby the appellant is to be treated as relying only on its written case (see the Case Law of the Boards of Appeal, 9th edition 2019, III.B.2.7.3 and V.A.4.5.3, in particular with reference to T 3/90, OJ EPO 1992, 737).

The respondent's request for oral proceedings is auxiliary to their main request that the appeal be dismissed. Thus, since the respondent's main request is followed by the Board, the aforementioned auxiliary request does not become active.

In view of this and of the fact that the case is ready for decision on the basis of the extensive parties' written submissions and the decision under appeal, the Board, while cancelling the oral proceedings, issues

this decision in written proceedings in accordance with Article 12(8) RPBA 2020 and Article 15(3) RPBA 2020.

2. Sufficiency of disclosure (Articles 100(b) and 83 EPC)

2.1 The appellant argues that contrary to the decision under appeal the claimed invention is insufficiently disclosed since neither the specific materials to be used nor the corresponding characterizing parameters for the glass manufacturing process, which are material dependent (viscosity, residence time in the downdraw device, etc.), are provided in the patent in suit.

The appellant argues that the process claimed is essentially a downdraw process, as it can be derived from D18, and that the invention is not sufficiently disclosed within the full breadth of the claim, since the person skilled in the art is required an undue effort to identify the materials and the corresponding parameters suitable for carrying out such downdraw process.

Documents D19 and D20 provide proof that not every glass can be subject to a downdraw process. Documents D22 and D23, cited in the patent in suit, do not overcome this issue since they do not provide enough information in relation to all the unknown parameters and in relation to all possible materials claimed.

2.2 The respondent argues that the downdraw process is well known in the art, as well as suitable materials and the corresponding operating conditions. There is no obstacle for the person skilled in the art for putting the process into practice with the support of the common general knowledge in the field. Furthermore, materials which cannot be downdrawn are not covered by

the claim and thus do not affect the sufficiency of disclosure of the invention.

- 2.3 The Board cannot follow the arguments of the appellant and substantially concurs with the respondent for the following reasons.

It is established jurisprudence of the Boards of Appeal that an objection of lack of sufficient disclosure presupposes that there are serious doubts substantiated by verifiable facts. The burden of proof is upon the opponent to establish on the balance of probabilities that a skilled reader of the patent, using his common general knowledge, would be unable to carry out the invention (see the Case Law of the Boards of Appeal, *supra*, II.C.9).

In the present case the Board is of the opinion that the objection of insufficiency of disclosure raised by the appellant is not substantiated by verifiable facts and that therefore the appellant has failed to discharge its burden of proof.

It appears to be undisputed that a downdraw process, which is essentially the process referred to in claim 1, is well known in the art (see also D13/D13a, paragraph [0039]).

Thus, it appears that is not necessary to indicate a specific material and corresponding operative conditions for carrying out the invention, since these are also well known to the person skilled in the art, who is aware of the downdraw process.

That this is not the case has not been plausibly shown by the appellant.

The arguments of the appellant remain thus assertions which are unsubstantiated and are consequently not convincing.

The above view of the Board has been communicated to the parties with the communication pursuant to Article 15(1) RPBA 2007. 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 the preliminary opinion.

The Board therefore fails to identify an error in the findings of the opposition division and considers the claimed invention to be sufficiently disclosed (see point 1.2.4 and 1.2.5 of the reasons for the decision under appeal).

3. Novelty of the subject-matter of claim 1
(Articles 100(a) and 54 EPC)

3.1 The appellant argues that document D13/D13a shows in combination all the features of claim 1. From paragraph [0039] it is known that the glass plates disclosed therein are obtained by a downdraw process. Therefore, the following steps of claim 1:

"...A glass sheet producing method, in which a sheet shaped glass ribbon is formed by supplying molten glass into a forming body and causing the molten glass to flow downward on a conveyance path extending in a lower direction from the forming body..."

are disclosed in document D13/D13a.

The appellant also argues that a collection chamber is implicitly derivable from paragraph [0039] and the figures of D13/D13a and that a person skilled in the art would understand that a floor is to be implicitly present in the cutting chamber, since a collection chamber is clearly located under the cutting chamber. The person skilled in the art would thus read from document D13/D13a all the features of claim 1 in combination.

3.2 The respondent argues that while the patent in suit is concerned with glass chips which occur with waste of glass sheets directly obtained by a ribbon, D13/D13a relates to failures in the glass which occur in subsequent steps. The collecting step is thus not disclosed in D13/D13a as well as a cutting chamber and a drop hole provided on a floor surface of the cutting chamber and any collecting chamber provided below the floor of the cutting chamber.

3.3 The Board cannot follow the opinion of the appellant and substantially concurs with the respondent for the following reasons.

It is true, as the appellant argues, that in paragraph [0033] of D13/D13a it is mentioned that the glass sheet which is used in the method therein described can be obtained by the downdraw method, however there is no disclosure of the cutting of the glass ribbon as such.

At least the step of cutting the ribbon in a cutting chamber, the cutting chamber having a drop hole in a floor surface trough which waste glass sheets are dropped into a collection chamber provided under the cutting chamber is not to be derived from document D13/D13a. In D13/D13a what is cut by the cutting device

therein disclosed is the glass sheet itself and not the glass ribbon.

The above view of the Board has been communicated to the parties with the communication pursuant to Article 15(1) RPBA 2007. 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 the preliminary opinion.

The Board therefore shares the opinion of the opposition division (see points 1.3.4 and 1.3.5 of the reasons for the decision under appeal), and the subject-matter of claim 1 is considered to be new.

4. Admittance of the appellant's lines of attack of lack of inventive step filed with the response to the respondent's reply to the statement setting out the grounds of appeal

The appellant submitted for the first time with its comment to the respondent's reply to statement setting out the grounds of appeal, that the combination of D2 with D5 would render the subject-matter of claim 1 obvious. The appellant also argued against inventive step starting from D2 in combination with the common general knowledge or with D13/D13a considering as technical problem that of avoiding the curving of the glass band.

No reasons have been given for submitting these objections for the first time after having filed the statement setting out the grounds of appeal. The Board itself does not see any.

In the communication pursuant to Article 15(1) RPBA 2007 the Board indicated that the admittance of the new submissions into the proceedings should be dealt with at the oral proceedings (see point 8.3, second last paragraph).

The appellant has not commented on this issue or provided any justification for the late submissions and withdrew their request for oral proceedings.

The Board does not see any reason for the appellant not having submitted the newly filed lines of attack in opposition proceedings.

By their course of action the appellant impeded the respondent to react to their attack during the opposition proceedings and the opposition division to decide on the matter. With their late submission the appellant confronted the Board and the respondent with a fresh case, which is contrary to the very aim of the appeal proceedings, which is to revise the decision under appeal in a judicial manner (see Article 12(2) RPBA 2020).

The Board thus decides to exercise its discretion not admitting into the proceedings the new lines of inventive step attack pursuant to Article 12(4) RPBA 2007 in combination with Article 12 (2) RPBA 2007, which essentially corresponds to Article 12(3) RPBA 2020, and with Article 25(2) RPBA 2020 as well as pursuant to Article 13(1) RPBA 2020 in combination with Article 25(1) RPBA 2020.

5. Inventive step of the subject-matter of claim 1 (Articles 100(a) and 56 EPC).

5.1 The appellant agrees with the opposition division that the subject-matter of claim 1 differs from the method of document D2 in that:

"...the glass sheet producing method comprising a waste glass sheet collecting step of collecting waste glass sheets by dropping the waste glass sheets through a drop hole provided in a floor surface of the cutting chamber into a collection chamber under the cutting chamber..."

and that following the patent in suit (see paragraph [0010]) the objective problem to be solved can be seen as:

"...to suppress a situation where glass chip produced as a result of breakage of the waste glass sheets floats in the cutting chamber when the waste glass sheets produced in the glass sheet producing steps are collected..."

The same problem is solved according to the appellant in document D13/D13a as indicated in paragraph [0013] of the same document, stating that the aim of this document is:

"...to suppress the generation of the improper product... caused by the residual deposited glass chipping..."

The appellant argues, contrary to the reasoning of the decision under appeal, that the problem is solved in D13/D13a (see paragraph [0035]) by providing a closed space which is divided in two parts, an upper box

section 40x and a lower box section 40y, corresponding respectively to the cutting chamber and the collection chamber according to the invention, since the glass after being cut is collected in the lower box section 40y. The cutting chamber and the collection chamber in D13/D13a are not divided by a floor, however the floor as such does not contribute to the presence of an inventive step, since it does not provide any technical contribution to the invention. By combining D2 with D13/D13a the person skilled in the art would thus arrive at the subject-matter of claim 1.

The appellant also argues that the person skilled in the art would also arrive at the subject-matter of claim 1 starting from D5 as closest prior art in combination with D13/D13a, in particular the realization of the scoring device (150) of D5 as a cutting chamber is an obvious technical choice for a person skilled in the art.

Furthermore, the use of collection containers below cutting devices is known in the art as shown in D6. The provision of collection containers below a glass band is known from D6 in combination with D2 and D5.

- 5.2 The respondent argues that D2 cannot be considered as the closest prior art and in any case, starting from D2 the person skilled in the art would not find a solution of the posed problem in D13/D13a, since this document does not relate to collecting waste glass sheets of glass sheets obtained by cutting a glass ribbon as in claim 1 but rather deals with edge cutting and disposal thereof.

The respondent also argues that the combination of D5 and D13/D13a does not lead to the subject-matter of claim 1, furthermore D5 also lacks a cutting chamber.

5.3 The Board cannot follow the argumentation of the appellant and substantially concurs with the respondent, irrespective of the respondent's dissenting opinion concerning the choice of the closest prior art document, that the decision of the opposition division is correct for the following reasons.

The Board concurs with the opposition division and the parties that document D2 does not disclose the following features of claim 1:

"...the glass sheet producing method comprising a waste glass sheet collecting step of collecting waste glass sheets by dropping the waste glass sheets through a drop hole provided in a floor surface of the cutting chamber into a collection chamber under the cutting chamber..."

and that the objective problem can be formulated according to paragraph [0011] of the patent in suit as

"...to suppress a situation where glass chips produced as a result of breakage of the waste glass sheets floats in the cutting chamber when the waste glass sheets produced in the glass sheet producing steps are collected..."

As argued by the respondent and in the appealed decision (see the reasons for the decision, page 9, fourth paragraph), D13/D13a does not deal with the problem outlined above as it is rather concerned with the edge cutting of already produced discrete glass sheets. The person skilled in the art has therefore no

incentive to look in this document for a solution to the objective problem outlined above. Furthermore, a cutting chamber and a collection chamber under the floor of the cutting chamber, the floor being provided with a drop hole are not shown by this document. Even if the person skilled in the art would consider to forcibly incorporate the arrangement disclosed in D13/D13a in D2, he would thus still not arrive at the subject-matter of claim 1.

The argument of the appellant that the feature of the floor does not contribute to inventive step and thus is to be disregarded, cannot be followed.

It is not just the feature of the floor which is not present in D13/D13a, but the whole combination of features identified above. D13/D13a discloses a single chamber for cutting the glass edges and collecting the glass waste, whereas the claim of the patent in suit foresees two chambers separated by a floor with a drop hole. While in D13/13a a single chamber is disclosed in which gas flows to remove the glass chips in order to avoid contamination of the glass, in the patent in suit the glass chip generation and the cutting of the ribbon take place in different chambers. The floor with the drop hole is indeed part of the realization of the technical solution of the invention and cannot be disregarded.

It is thus concluded that starting from D2 as closest prior art the person skilled in the art would not arrive at the subject-matter of the claim due to the teaching of D13/D13a.

The parties agree that the subject-matter of the claim is distinguished from the method of D5 at least by the

same features as indicated above for D2. For the same reasons as for D2 the person skilled in the art would not arrive at the subject-matter of the claim in view of a combination of D5 with D13/D13a, since the latter document, as discussed above, does not show the distinguishing features of the claim.

The Board sees therefore no need to discuss whether the realization of the scoring device (150) of D5 as a cutting chamber is obvious for a person skilled in the art.

The argument of the appellant, that the location of the containers to collect waste under cutting devices is known in the art as shown by D6 does not bring the appellant's line of attack any forward, since the distinguishing features of the claim with respect to documents D2 and D5 are not shown in document D6 either.

The above view of the Board has been communicated to the parties with the communication pursuant to Article 15(1) RPBA 2007. 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 the preliminary opinion.

The Board therefore concurs with the conclusion of the opposition division that the subject-matter of claim 1 is based on an inventive step (see point 1.3.4 of the reasons for the decision)

6. Inventive step of the subject-matter of claim 10
(Article 100(a) and 56 EPC)

The parties and the opposition division consider that the same line of arguments followed for claim 1 essentially applies also to claim 10. The Board sees no reason not to follow the position of the parties in this respect and concurring with the opposition division concludes that the subject-matter of claim 10 is also based on an inventive step (see point 1.3.5 of the reasons for the decision).

7. As a consequence, the Board, in reviewing the decision under appeal on the basis of the parties' mutual submissions in the appeal proceedings, has come to the conclusion

that the appellant has not convincingly demonstrated the validity of the grounds for opposition according to Article 100(a) and (b) EPC and that the claimed subject-matter according to the patent as granted does not meet the requirements of Articles 54, 56 and 83 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



G. Nachtigall

I. Beckedorf

Decision electronically authenticated