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**Datasheet for the decision
of 31 May 2017**

Case Number: T 1034/15 - 3.3.05

Application Number: 01128417.1

Publication Number: 1215039

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B32B17/10, C03B37/04,
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C03B27/04

Language of the proceedings: EN

Title of invention:
Laminated glass and glass plate used for producing it

Patent Proprietor:
Asahi Glass Company, Limited

Opponent:
Saint-Gobain Glass France

Headword:
Sliding window/ASAHI GLASS

Relevant legal provisions:
EPC Art. 83

Keyword:
Sufficiency of disclosure - enabling disclosure (no)

Decisions cited:

T 0409/91, T 0435/91, T 1743/06, T 0045/09, T 0641/09,
T 1875/12

Catchword:



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Chambres de recours

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Case Number: T 1034/15 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 31 May 2017

Appellant I: Asahi Glass Company, Limited
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted on
10 March 2015 maintaining European patent
No. 1215039 in amended form.

Composition of the Board:

Chairman H. Engl
Members: J.-M. Schwaller
O. Loizou

Summary of Facts and Submissions

- I. European patent EP-1 215 039 B1, which relates to a laminated sliding window for automobiles comprising two or more glass plates and an interlayer bonded between them, was granted with 7 claims.

Claim 1 as granted reads as follows:

"1. A sliding window for automobiles which comprises two or more glass plates and an interlayer bonded between adjacent glass plates wherein at least one of the glass plates has a thickness from 1.5 to 3 mm, and it has a peripheral region having a predetermined width along the edge line of the plate and having its principal stress difference of compressive properties, an intermediate region having a predetermined width adjacent to an inner periphery of the peripheral region and having its principal stress difference of tensile properties and a central region occupying an inner peripheral side of the intermediate region, characterized in that the central region has an averaged surface compression stress of from 15 to 35 MPa, and the peripheral region has a width of from 5 to 20 mm; the maximum value of the principal stress difference the plate along its center line is from 20 to 40 MPa, and the minimum value of the principal stress difference along the center line is from 8 to 25 MPa, wherein the principal stress difference of an upper side portion of the sliding window is larger than the principal stress difference of a lower side portion of the sliding window."

- II. The present appeal lies from the interlocutory decision of the opposition division to maintain the patent in amended form on the basis of the set of claims

according to the sixth auxiliary request, claim 1 of which reads as follows (differences with respect to the claim as granted are highlighted in bold):

*"1. A sliding window for automobiles which comprises two or more glass plates and an interlayer bonded between adjacent glass plates wherein **each of** the glass plates has a thickness from 1.5 to 3 mm, and **each** has a peripheral region having a predetermined width along the edge line of the plate and having its principal stress difference of compressive properties, an intermediate region having a predetermined width adjacent to an inner periphery of the peripheral region and having its principal stress difference of tensile properties and a central region occupying an inner peripheral side of the intermediate region, characterized in that the central region has an averaged surface compression stress of from 15 to 35 MPa, and the peripheral region has a width of from 5 to 20 mm; the maximum value of the principal stress difference of **each of** the plates along its center line is from 20 to 40 MPa, and the minimum value of the principal stress difference along the center line is from 8 to 25 MPa, wherein the principal stress difference of an upper side portion **of each of the plates** is larger than the principal stress difference of a lower side portion **of each of the plates.**"*

III. With the statement of grounds of appeal dated 14 July 2015, the appellant I (also "the patent proprietor") submitted new sets of claims in accordance with a main request and auxiliary requests 1a, 1b, 1c, 1d, 2, 2a, 2b, 2c, 2d, 3, 3a, 3b, 3c, 3d, 4, 4a, 4b, 4c, 4d and 5 to 12.

An auxiliary request 2e followed with letter dated

24 November 2015 and additional arguments were submitted with letter dated 13 June 2016.

- IV. The statement of grounds of appeal of appellant II (also "the opponent") was filed with letter of 1 July 2015. Further submissions were received with letter dated 9 November 2015.
- V. In response to the board's communication raising *inter alia* an objection under Article 83 EPC, further observations and evidence were received on 28 April 2017 from the parties.
- VI. At the oral proceedings, which took place on 31 May 2017, sufficiency of disclosure was discussed.
- VII. At the end of the oral proceedings, the chairman established the parties' requests to be as follows:

Appellant I requested that the decision under appeal be set aside and that the patent be maintained as granted (main request) or, in the alternative, in amended form on the basis of one of the sets of claims according to auxiliary requests 1a to 1d, 2, 2a to 2d, 3, 3a to 3d, 4, 4a to 4d or 5 to 12, all filed with the statement of grounds of appeal dated 14 July 2015, or auxiliary request 2e filed with its reply dated 24 November 2015 and ranking between auxiliary requests 2d and 3.

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

- VIII. The arguments of the parties, insofar as they are relevant to the present decision, can be summarised as follows:

Appellant I argued that the opposed patent disclosed the invention in a manner sufficiently clear and complete for it to be carried out by the skilled person; in particular it disclosed a method for measuring the principal stress difference on a portion of the sliding window/glass plate, which was to be carried out on a large number of points and the average then taken.

Appellant II argued that the requirements of Article 83 EPC were not met because the patent did not disclose the number and location of the measurement points for determining the principal stress difference of an upper side portion of a glass plate/window, in particular when the upper side comprised a leading inclined portion; moreover, the exact meaning of the term "portion" was not explained.

Reasons for the Decision

1. Sufficiency of disclosure

1.1 Case law

It is established jurisprudence that the requirements for sufficiency of disclosure are met if:

(a) the invention as defined in the claims can be performed at the filing date of the application by a person skilled in the art in the whole area claimed without undue burden, using common general knowledge and having regard to further information given in the patent in suit (see for example decisions T 409/91, OJ 1994, 653, reasons 3.5; T 435/91, OJ 1995, 188, reasons 2.2.1; T 1743/06, reasons 1.1);

(b) if the definition of the claimed invention moreover includes one or more parameters, the skilled person is also able to check whether the parameters are complied with when the invention is carried out (see for example decisions T 0045/09, reasons 1.1 and 1.3; T 0641/07, reasons 1; T 1875/12, reasons 2).

1.2 The invention as claimed

1.2.1 The patent discloses a method for producing glass plates according to the invention (paragraphs [0023] and [0024]), so that requirement (a) is evidently satisfied.

The patent also discloses in paragraph [0037] a method for measuring the surface compression stress which characterises the central region of the glass plate. Therefore, the board is satisfied that requirement (b) is met as regards this claim parameter.

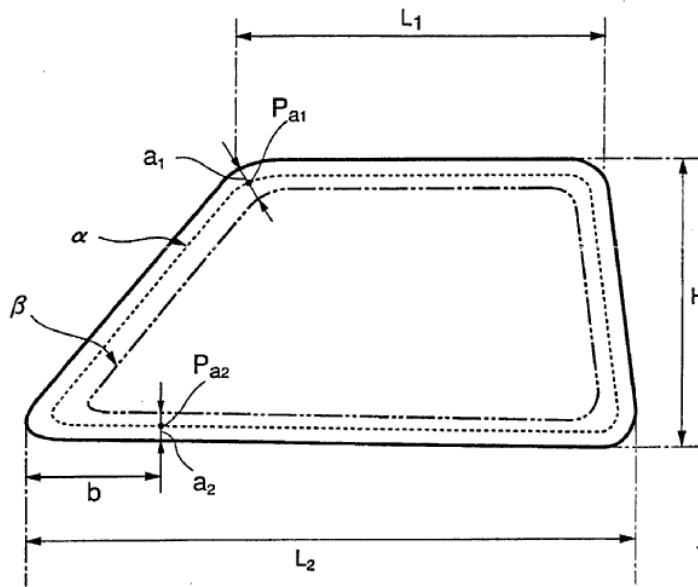
1.2.2 Independent claim 1 contains yet other parameters, namely that the glass plate/sliding window has a maximum/minimum value of the principal stress difference along the centre line of 20 to 40 MPa/8 to 25 MPa, and that the principal stress difference of an upper side portion is larger than the principal stress difference of a lower side portion.

Here the board comes to the conclusion that, in spite of a method for measuring the "principal stress difference" being described at paragraphs [0037] to [0043] of the patent, requirement (b) **is not satisfied**, because the skilled person is not in a position to ascertain, using common general knowledge and having regard to the information given in the patent in suit,

whether said parameters are complied with when carrying out the invention. The reasons are as follows.

1.3 Regarding the measurement of the "principal stress difference", the board observes that the information given at paragraphs [0037] to [0043] of the patent provides the details necessary for determining said parameter at **one** specific point of the glass plate or of the sliding window, but not for a "portion", let alone "an upper side portion" or "a lower side portion" thereof, as required by the claimed subject-matter.

1.3.1 In the sole example of the patent, illustrated by Figure 5 reproduced below,



the values $\Delta\sigma_{a1}$ and $\Delta\sigma_{a2}$ disclosed in Table 4 of the patent are described as representing the principal stress difference at the points P_{a1} and P_{a2} respectively. Thus also in the example, instead of being measured on a portion as required by the claimed invention, the parameter in question is measured only at one point of the "upper side" and one point of the "lower side" of the glass plate.

1.3.2 It follows that neither the description nor the specific example gives any information as to how the principal stress difference of a "portion" is to be measured.

Regarding this issue, appellant I referred to paragraph [0043] of the patent and argued that the skilled person would understand that a multitude of measurements had to be made along the upper and lower side of the window and that the values obtained had to be averaged.

The board does not accept this argument, because paragraph [0043] refers to determining the position of the border line β and identifying the maximum and minimum values of the principal stress difference on the centre line α . Paragraph [0043] furthermore discloses that "it is preferable to measure the principal stress difference of a portion [of the glass plate] in the vicinity of the edge portion", however without disclosing that a multitude of measurements is to be made along said portion and that the values had to be averaged. Importantly, this argument is in contradiction with the information in the patent itself that the measurement is made at one point P_{a1} of the upper side and one point P_{a2} of the lower side of the glass plate (see also point 1.3.1 above).

1.3.3 In addition to the circumstance that the board is not convinced that the skilled person finds sufficient information in the patent for measuring the above parameter on or over "a portion", it has even more reservations regarding the measurement of said parameter on an "upper side portion" or "lower side portion" of said glass plate/window, as required by the claimed subject-matter.

According to the patent, the "upper side" and the "lower side" are clearly and unambiguously described in Figure 5 to be L_1 and L_2 , respectively, and so they correspond to the horizontal upper and lower parts of the glass plate, with the consequence that the leading inclined portion of the window illustrated e.g. in Figure 5 evidently does not belong to the "upper" or "lower" side portion.

According to appellant I this is however not supposed to be the case, since it stated at the oral proceedings and in its letter of 28 April 2017 (see in particular Annexes A and B) that the inclined portion did belong to the upper side portion of the window.

1.3.4 As argued by appellant II, if the skilled person were confronted with the following embodiment representative of claim 1 as granted, he would not be able to ascertain whether the above parameter was complied with when the invention was carried out.

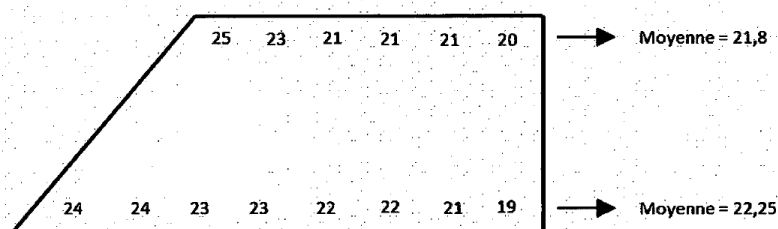


Figure A

In particular, if the skilled person were to take the two upper left values as the "upper side portion" and the two lower right values as the "lower side portion", the sliding window would have a principal stress difference of an upper side portion **larger** than the principal stress difference of a lower side portion of the window, while if he were to take the average of all

the measurements made at the upper side and the lower side of the glass plate, this would result in a principal stress difference of an upper side portion **smaller** than the principal stress difference of a lower side portion of the window.

It follows that, on the basis of the information in the patent, the measurement results significantly depend on the "portion" selected by the skilled person. However, as pointed out above, the patent does not provide sufficient guidance as to the correct meaning of the claim features "upper side portion" and "lower side portion".

- 1.4 Therefore and bearing in mind the above considerations, the board judges that the skilled person trying to ascertain whether the above parameter is complied with while reproducing the invention is left without clear instruction and guidance in the patent as to the meaning of the features "upper side portion" and "lower side portion".

Moreover, if the skilled person followed the instructions given in the sole example of the patent, namely that a "portion" corresponded to a point and that the "upper side portion" corresponded to the horizontal upper part of the window, this would be in contradiction with the explanations given by appellant I.

In the absence of information in the patent as to the precise meaning of these features, and as this missing information is also not derivable from common general knowledge, the board concludes that the disclosure of the contested patent is not sufficiently clear and

complete for the invention to be carried out by a person skilled in the art, contrary to Article 83 EPC.

2. This deficiency affects the claimed subject-matter of all requests on file, since the feature according to which the "principal stress difference of an upper side portion" is "larger than the principal stress difference of a lower side portion" is present in all independent claims of all the requests.

None of the claims provides additional and sufficient information for closing the information gap defined above, and in particular not for ascertaining whether or not the "upper side portion" included the inclined portion of the glass plate/window.

The pending requests are therefore not allowable (Article 83 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:



C. Vodz

H. Engl

Decision electronically authenticated