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**Datasheet for the decision
of 21 July 2016**

Case Number: T 1056/13 - 3.2.07

Application Number: 10001543.7

Publication Number: 2359996

IPC: B27L5/00, B44C5/04

Language of the proceedings: EN

Title of invention:
Method for producing a veneer

Applicant:
HD Wood Technologies Limited

Headword:

Relevant legal provisions:
EPC Art. 52, 56, 111(1)

Keyword:
Inventive step - Claim 1 (non-obvious over the teaching of D1 alone and over the combination of the teachings of D1 and D3)
Appeal decision - remittal to the department of first instance (yes)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 1056/13 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 21 July 2016

Appellant: HD Wood Technologies Limited
(Applicant) 7 Frederick Street
Valletta (MT)

Representative: Ricker, Mathias
Wallinger Ricker Schlotter Tostmann
Patent- und Rechtsanwälte
Zweibrückenstrasse 5-7
80331 München (DE)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted on 26 November
2012 refusing European patent application No.
10001543.7 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman H. Meinders
Members: K. Poalas
I. Beckedorf

Summary of Facts and Submissions

- I. The appellant (applicant) lodged an appeal against the decision refusing European patent application 10 001 543.7.

- II. In its decision the Examining Division held that each of the subject-matters of the claims 1 of the main request filed with letter of 31 January 2011 and of the auxiliary request filed on 15 October 2012 respectively, does not involve an inventive step over the teaching of D1 (US 3 205 11 A) considered alone or in combination with the teaching of D3 (EP 1 688 228 A).

- III. With its statement setting out the grounds of appeal the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of one of the sets of claims filed together with said statement as main request, which is identical with the main request underlying the impugned decision, and as auxiliary requests 1 to 10.
Oral proceedings have been requested as an auxiliary measure.

- IV. Together with its above-mentioned statement the appellant filed the following documents:

D6: US 2 019 834 A;
D7: US 2 413 624 A;
D8: US 2 399 980 A.

- V. During a telephone conversation with the rapporteur of the Board on 17 March 2016 the appellant's representative was informed that the Board considers on the one hand that the teachings of documents D1 and D3

did not seem to render the subject-matter of claim 1 of the main request obvious to the person skilled in the art. On the other hand, the combination of the teaching of D1 with the teaching of one of the documents D4 (US 3 878 016 A) or D5 (US 3 977 449 A) seemed to be of particular relevance when assessing inventive step of the subject-matter of said claim.

VI. With its submission dated 26 April 2016 the appellant withdrew its request for oral proceedings and agreed to the remittal of the case to the Examining Division for consideration of this issue.

VII. Independent claim 1 of the main request reads as follows:

"Method for producing second wood sheets from first wood sheets, comprising steps (i) to (iv):

(i) providing first wood sheets having a laminarly developed front side and backside, wherein the moisture content of said first wood sheets is below the fiber saturation point of the wood;

(ii) applying a water-comprising adhesive to one or more front sides and/or one or more backsides of said first wood sheets provided in step (i);

(iii) adhering said wood sheets from step (ii) and optionally from step (i) with laminar sides to each other in order to form a block which comprises adhered layers of said first wood sheets, wherein the adhering is performed such to increase the moisture content of said formed block up to or above the fiber saturation point of the wood;

(iv) slicing said block formed in step (iii) to form said second wood sheets;

characterized in that the moisture content of the block obtained in step (iii) prior to the slicing according

to step (iv) is above 30 % up to 100 %, the moisture content being determined according to DIN 52183".

Reasons for the Decision

1. *Claim 1 according to the main request - Inventive step, Article 56 EPC*
- 1.1 The method according to claim 1 differs from the one known from D1 by its characterising part, namely that the moisture content of the block obtained in step (iii) prior to the slicing according to step (iv) is above 30 % up to 100 %, the moisture content being determined according to DIN 52183.
- 1.2 Starting from the method known from D1 the Examining Division considered as the problem to be solved the finding of a block moisture content range resulting in a desirable block slicing step, see point 3.3 of the Reasons for the Decision.
- 1.3 It has thus to be evaluated whether the solution to the above-mentioned problem via the features of the characterising part of claim 1 is rendered obvious to the person skilled in the art by the teaching of D1, either taken alone or in combination with the teaching of D3.
- 1.4 *Teaching of D1 taken alone*
- 1.4.1 The adjustment of the moisture content of the laminated wood block "within a preferred range" is considered as the "primary object" of D1, see column 1, lines 20 to 27. Thus, D1 clearly teaches that in order to successfully apply the method of D1, the moisture content has to be within said preferred range. As

becomes apparent from column 5, lines 18 to 57 together with Table 1 of D1, said preferred range is within 10 to 25 % by weight, with a preference towards 17.5 % by weight, see also claim 2. When referring to the moisture contents of 10%, 25% and 17.5 %, column 5, line 22 clearly refers to those values as the "minimum, maximum and optimum weights". Thus, those values are not to be regarded as examples, as argued by the Examining Division but they define the preferred range recited in column 1, lines 22 to 27 of D1. Furthermore, D1 explicitly warns the person skilled in the art against a too high moisture content since gluing via commercial adhesives will be impaired, see column 5, lines 52 to 57.

1.4.2 The Examining Division did not present any evidence for its allegation in Section 3.1 of the Reasons for the Decision that the glues commercially available in the plywood industry before the filing date of D1 failed to adhere wood sheets to each other above a moisture content of 25 % by weight. The Board considers the disclosures of documents D6, see page 1, left column, lines 31 to 39, page 1, right column, lines 33 to 35, examples 1 and 2; D7, see title, column 3, lines 46 and 47, column 2, lines 11 to 19; and D8, see claim 1, page 2, left column, line 65, as evidencing that before the filing date of D1 commercial glues were known to have a water content considerably exceeding the 25% by weight limitation taught in D1 and were exhibiting good laminating properties when gluing laminated wood.

1.4.3 The phrase in column 2, lines 32 to 34 of D1 refers only to (the known) fact that hard wood has in its green state the addressed moisture content. This passage neither teaches that a face veneer is directly made from the "green" hard wood, nor does it teach

anything in relation to the moisture content to be applied in a method for producing a veneer. Rather, D1 teaches that a face veneer may be produced in accordance with its disclosure, see column 1, lines 55 to 58, thus at a moisture content between 10 and 25 % by weight, with a preference towards 17.5 % by weight.

- 1.4.4 The Examining Division argued *inter alia* that the person skilled in the art would learn from column 3, lines 11 to 32 of D1 that 30 % by weight moisture content is a "critical point". This may or may not be true. However, said point is considered in D1 not to be suitable, at least for the solution of the problem underlying the invention of D1, since otherwise D1 would have selected a moisture content including said "critical point" but not a moisture content range of from 10 to 25 % by weight excluding and below said "critical point".
- 1.4.5 The statements in Section 3.4 of the Reasons for the Decision that "Assuming glues can take the high moisture..." and "...if commercial glues were available ... which do not fall above 25 % moisture" as argued by the Examining Division are mere assumptions and speculations to the solution as claimed, which are not supported by the teaching of D1.
- 1.4.6 In view of the teaching of D1 that
- the moisture content contained within the laminated block must be high enough to permit the transfer of externally applied heat to allow for a proper cutting, yet low enough to allow the aqueous adhesive used for lamination to securely bond the laminations together,
 - a moisture content between 10 to 25 %, preferably 17.5 %, meets these requirements, and
 - said moisture content is a combination of the

residual moisture content of said wooden layers when increased by water absorbed from said water-comprising adhesive during gluing,
the person skilled in the art would not apply a moisture content above 30 % up to 100 % during the lamination due to the expected drawbacks of a failure of the adhesive according to the corresponding teaching of D1.

1.4.7 The skilled person thus would not arrive in an obvious manner at the solution according to claim 1 based only on the teaching of D1, since D1 teaches away from the method of claim 1.

1.5 *Combination of the teachings of D1 and D3*

1.5.1 D3 teaches that a block of wood sheets is sliced, in which the moisture content is above 30% up to 100% by weight, whereby the water content of the veneer to be sliced is increased via an additional step of watering.

1.5.2 The adhesives used in D3 are fundamentally different from the glues used in D1, since they are water-free. D3 discloses adhesives based on polyurethanes, either one-component or two-component adhesives, which consume water while curing and thus have to be applied in an anhydrous form, otherwise they fail, see column 8, paragraphs 48 to 60. Such adhesives react with the wood humidity and/or polar groups contained in the wood, see paragraphs 49 and 51. It is obvious that an adhesive that reacts via isocyanate groups with moisture in the wood while curing cannot be applied in aqueous form for gluing purposes since the isocyanate groups would untimely react with water in the aqueous formulation. Accordingly, the moisture content of the laminated block of D3 of 30 % by weight and above must be set

after the gluing of the laminates with a water-free adhesive, i.e. after the adhesive has been cured and properly fixed the laminates within the block.

- 1.5.3 Contrary to this, in D1 the water content within the wood block to be sliceable is provided by the used adhesives.
- 1.5.4 Thus, the methods of D1 and D3 fundamentally differ from one another. The adhesives used in the method of D3 do not increase the water content of the wood as is required in the method of D1 and in claim 1 of the main request, but rather decrease the moisture content.
- 1.5.5 Consequently, it would be technically incompatible to use the adhesives used in the method of D3 in the method of D1.
- 1.5.6 Thus, the person skilled in the art would not consider the method as taught by D3 for application in the method of D1 due to a completely different technology of gluing laminates to a laminated block. This applies the more if D1 already teaches away from a moisture content above 30% and up to 100% by weight.
- 1.5.7 In point 5 of the Reasons for the Decision, the Examining Division argues that D3 teaches the skilled person that a block with its higher level of above 30% is desirable. However, the respective disclosure of D3 refers to a method using water-free adhesives and not to water-comprising adhesives as the ones used in the method of D1.
- 1.5.8 Thus, the combination of the teachings of documents D1 and D3 does not render obvious the subject-matter of claim 1 of the main request to the person skilled in

the art.

2. *Remittal of the case to the department of first instance*

2.1 Due to the Board's finding above that the subject-matter of claim 1 involves an inventive step over the teaching of D1 alone and also over the combination of the teachings of D1 and D3, the impugned decision has to be set aside.

2.2 Given that

a) the Board understands that the teachings of D4 and D5 could be of particular relevance when assessing inventive step of the subject-matter of claim 1, see point V above,

b) this issue has not been addressed in the impugned decision and it has not been put to the appellant's attention during the examination proceedings,

c) it is not for the Board to conduct for the first time the necessary evaluation in detail of said issue,

the Board exercises its discretion according to Article 111(1) EPC to remit the case to the Examining Division for further prosecution.

2.3 Since the appellant withdrew its auxiliarily filed request for oral proceedings, see submissions dated 26 April 2016, the present decision could be arrived at without conducting oral proceedings.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the Examining Division for further prosecution.

The Registrar:

The Chairman:



G. Nachtigall

H. Meinders

Decision electronically authenticated