Internal distribution code:

(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 17 October 2018

Case Number: T 0328/14 - 3.2.05

Application Number: 09159718.7

Publication Number: 2080630

IPC: B41M5/00, B41J3/407

Language of the proceedings: EN

Title of invention:
Production line for manufacturing of flat wood-based panels with a printed upper surface

Patent Proprietor:
Dante Frati

Opponents:
Interglarion Limited
Flooring Technologies Ltd.
Hymmen Industrieanlagen GmbH
Ernst-Peter Heilein

Headword:

Relevant legal provisions:
EPC Art. 54(1), 56, 76(1), 83, 84, 113(1), 123(3)
RPBA Art. 12(4)

Keyword:
Right to be heard - opposition procedure (not violated)
Late-filed documents - admitted (yes)
Amendments - extension beyond the content of the earlier application as filed (no) - extension of the protection (no)
Sufficiency of disclosure (yes)
Claims - clarity, main request (yes)
Novelty - main request (yes)
Inventive step - main request (yes)

Decisions cited:
G 0003/14

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0328/14 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 17 October 2018

Appellant I: (Opponent 1)
Interglarion Limited
2 Andrea Zakou Street
2404 Engomi, Nikosia (CY)

Representative:
Markus Herzog
Weickmann & Weickmann
Patent- und Rechtsanwälte PartmbB
Postfach 860 820
81635 München (DE)

Appellant II: (Opponent 2)
Flooring Technologies Ltd.
Portico Building
Marina Street
Pieta PTA 9044 (MT)

Representative:
Kai Stornebel
Gramm, Lins & Partner
Patent- und Rechtsanwälte PartGmbB
Theodor-Heuss-Strasse 1
38122 Braunschweig (DE)

Appellant III: (Opponent 3)
Hymmen Industrieanlagen GmbH
Theodor-Hymmen-Str. 3
33613 Bielefeld (DE)

Representative:
Jan Henning Dantz
Loesenbeck - Specht - Dantz
Patent- und Rechtsanwälte
Am Zwinger 2
33602 Bielefeld (DE)

Appellant IV: (Opponent 4)
Ernst-Peter Heilein
Robert-Bosch-Str. 22
85716 Unterschleißheim (DE)

Respondent: (Patent Proprietor)	Dante Frati Via Anselma, 43 46030 Dosolo MN (IT)
Representative:	Andrew Hammond Valea AB Box 1098 405 23 Göteborg (SE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 16 December 2013 concerning maintenance of the European Patent No. 2080630 in amended form.**

Composition of the Board:

Chairman	M. Poock
Members:	P. Lanz
	J. Geschwind

Summary of Facts and Submissions

I. The appeals by the four opponents were directed against the interlocutory decision of the opposition division stating that European patent No. 2 080 630 in amended form according to the main request meets the requirements of the European Patent Convention.

II. During the opposition proceedings, the opponents had raised the grounds for opposition according to Articles 100(a) (lack of novelty and lack of inventive step), 100(b) and 100(c) EPC.

III. Oral proceedings were held before the board of appeal on 17 October 2018.

IV. The requests of appellants I to IV (opponents 1 to 4) were that the decision under appeal be set aside and that the patent be revoked.

V. The respondent (patent proprietor) requested that the appeals be dismissed. In the alternative, it requested that the decision under appeal be set aside and that the patent be maintained on the basis of the claims filed under cover of a letter dated 15 September 2014 as first auxiliary request.

VI. Reference is made to the following documents:

D2: US 2003/0020767 A1;

D3: WO 02/00449 A1;

D7: US 2003/0207083 A1;

D22: US 2005/0212835 A1;

D26: DE 100 31 030 B4;

GB'415: GB 2 343 415 A;

WO'095: WO 2005/108095 A2;

D35: DE 25 23 670 A1;

D36: DE 195 23 363 A1;

D37: WO 98/04390 A1;

D38: DE 195 32 724 A1.

VII. Claim 1 of the main request reads as follows (using the opposition division's feature analysis in square brackets):

"A floor production process in which surfaces of flat wood-based panels (10) **[feature a]** obtained from wood-based flat products produced using double-belt continuous presses **[feature a1]** are printed with a design or an image representing a wood type, a type of stone or rock **[feature a2]**, the printing process being applied to a squaring line and comprising the steps of **[feature a3]**:
starting with panels covered with sheets of paper **[feature a4]**;
performing a preliminary graphic composition step of a design or image by means of an electronic processor and relative software **[feature b]**;
advancing said flat wood-based panels in an advancement direction (D) past an ink-jet printer (12) **[feature c]** using a belt drive device (16) of suction type or a drive device provided with gripper means **[feature c1]**,

said ink-jet printer being of the single pass type comprising stationary print heads (12.1-12.4) **[feature d]** arranged in rows one after another in said advancement direction **[feature e];**
each row comprising a number of print heads sufficient to cover the entire width of the panels (10) **[feature e1];**
propelling ink microdroplets of the relative colour from said print heads onto said surfaces **[feature f]** in response to signals sent by said electronic processor connected to said print heads to thereby reproduce said design or image on said surfaces**[feature g]**, and
applying a coating or covering products to the printed surfaces of the panels to form a substantially transparent protective layer in order to give the printed surfaces greater resistance to the effects of abrasion or scratching **[feature h]**."

VIII. The arguments of the appellants in the written and oral proceedings can be summarised as follows:

Filing of the present main request during the opposition proceedings and the right to be heard

Appellant III argues that features a, a1, a2, a3, a4 and c1, which were introduced into the process claim of the main request approximately one month before the date of the oral proceedings before the opposition division, were taken from the description. Thereby the focus was changed in an unforeseeable manner from a printing process to a floor production process, which would have required an additional search. That the opposition division admitted such a substantial shift of the claimed subject-matter filed shortly before the oral proceedings was contrary to the principles of procedural fairness and the right to be heard.

Clarity, main request

Appellants I and III object to feature a3 as being unclear in view of the wording that the printing process was applied to a squaring line. In particular, it was not clear what "*squaring line*" meant and whether the cutting operation was part of the claimed process. In particular, it was not clear whether the printing process was done during the cutting operation. It was also observed that the respondent used feature a3 to justify the novelty and the presence of an inventive step of the subject-matter of claim 1. According to appellant I, due to the fact that there was no relation apparent from the claim between the cutting operation and the printing process, feature a3 had to be understood in the broad sense that the floor panels resulting from the claimed process are cut to the desired size.

Sufficiency of disclosure

Appellant I argues that the patent in suit did not contain any information as to the details and potential problems regarding the ink's suitability for printing on wood-based panels covered with paper sheets and concerning the production and preparation of such panels.

Added subject-matter in view of the earlier application

All appellants submit that the subject-matter of claim 1 went beyond the content of the earlier (parent) application for essentially the following reasons:

From a general point of view, present claim 1 contained aspects (in particular features a to a4, c1, d, e, e1 and h) which were not interrelated and which were disclosed independently of each other in different parts of the earlier application. Combining these aspects in an independent claim added subject-matter to the disclosure of the earlier application as filed.

Regarding feature a: The claim wording *"wood-based panels"* went beyond the original terminology *"wood-based flat elements"* used in the earlier application. Moreover, according to the earlier application, the panels could only be chipboard, HDF, MDF or OSB panels. In view of that, the terminology *"wood-based panels"* was too general.

Regarding feature a4: The earlier application as filed disclosed panels covered with sheets of paper only in the context of the discussion of the prior art but not in connection with the invention (see page 1, first paragraph).

Regarding feature d: The earlier application as filed stated that the ink-jet printer was fixed (page 5, first paragraph and claim 2) and of the single-pass type (page 5, last paragraph). It was noted that the print heads of a single-pass printer were not necessarily stationary. For example, document WO'095 disclosed a single-pass printer, the print heads of which were moved ¼ to ½ of a pixel diameter and could therefore not be considered as being stationary. Moreover, the height of the print heads had to be adjusted because the panels to be printed had a thickness of between 0.5 and 50 mm (page 1, second paragraph). In that respect, reference could also be made to document GB'415 (see abstract). In view of

that, the feature that the print heads were stationary had no basis in the original earlier application.

Regarding feature e: The claim wording *"in rows one after another in said advancement direction"* was an unallowable generalisation of the original disclosure showing an arrangement of four rows. Moreover, the essential feature that each of the four rows was foreseen for one of the colours cyan, magenta, yellow and black was omitted.

Regarding feature g: The terminology *"in response to signals sent by the electronic processor connected to the print heads"* meant that the printing was triggered by the processor. This went beyond the original wording that the printer used for implementing the process was controlled by an electronic processor (see for example page 4, lines 10 to 14 of the earlier application), which implied that the printing was continuously influenced by the processor.

Extension of protection conferred by the patent

The appellants argue that the post-grant amendments from a printing process to a floor production process shifted the scope of the independent process claim, contrary to the provisions of Article 123(3) EPC. Appellant II also puts forward that the subject-matter of amended claim 1 was unsearched and therefore not in compliance with the requirements of Rule 137(5) EPC.

Novelty, main request

Appellant IV is of the opinion that the subject-matter of claim 1 lacked novelty in view of document D26 (read in combination with document D38 referenced therein).

Inventive step, main request

The appellants consider documents D2, D3, D7, D22 or D26 as possible starting points for assessing inventive step.

Compared with document D26, the subject-matter of claim 1 differed in features a1, a4 and c1. These features were not functionally interdependent and their obviousness had to be assessed independently of each other. In such a case, it had to be examined whether the various partial solutions were obvious for a team of skilled persons composed of a production engineer, a printing engineer and an engineer specialised in assembly technology.

The partial technical problem solved by feature a1 was to provide a suitable process for producing the panels. The solution to this problem was known from document D36 suggesting the use of double-band presses for manufacturing the panels (see D36, reference sign 19). The partial technical problem solved by feature a4 was to prepare the panels for printing. The solution to this problem was equally known from document D36 which taught to cover the panel surface with paper sheets (see D36, column 1, lines 28 to 36). Finally, the partial technical problem solved by feature c1 was to provide a suitable transport system. The solution in the form of suction tables was mentioned in document D36 (see column 2, line 31). Alternatively, document D35 (see in particular page 4, second and third paragraph) suggested the claimed partial solutions. Finally, it had to be taken into account that even the introductory part of the patent in suit presented features a1, a4 and c1 as generally known. Contrary to

the respondent's submissions, document D26 was not limited to veneer surfaces but mentioned a variety of surface types (see D26, paragraph [0033]). The same was true for documents D35 and D36. In view of document D26, the claimed subject-matter in fact boiled down to ink-jet printing of a paper surface which was common practice already before the priority date of the patent. The subject-matter of claim 1 was therefore not based on an inventive step.

IX. The respondent's arguments during in the written and oral proceedings were essentially as follows:

Filing of the present main request during the opposition proceedings and the right to be heard

The present main request was submitted within the time limit under Rule 116 EPC. Its consideration by the opposition division was therefore correct.

Admissibility of documents D37 and D38

Documents D37 and D38 should not be admitted into the appeal proceedings under Article 12(4) RPBA because these documents could have been filed during the opposition proceedings.

Clarity, main request

Feature a3 of the printing process being applied to a squaring line was based on granted claim 12, which related to the production line to be used in the process of present claim 1. In view of that and in accordance with decision G 3/14, feature a3 must not be examined for compliance with the requirements of Article 84 EPC. Moreover, the skilled person would

immediately understand the contested feature of the printing process being applied to a squaring line to mean that the production line includes the printing process. Hence, the subject-matter of claim 1 was clear.

Sufficiency of disclosure

Printing on paper using an ink-jet printer as well as ink compositions suitable for that purpose were generally known. In view of that, the disclosure of the claimed invention in the opposed patent was sufficient.

Added subject-matter in view of the earlier application

The opposition division was correct in finding that the now claimed subject-matter was clearly and unambiguously derivable from the earlier application as filed.

Extension of protection conferred by the patent

Rule 137 EPC related to the amendment of the European patent application and not to post-grant amendments of the European patent. Moreover, present claim 1 was of the same category as and contained all features of granted claim 14. The additional aspects introduced during the opposition proceedings limited the subject-matter claimed. Hence, the requirements of Article 123(3) EPC were met.

Novelty, main request

Document D26 did not disclose the features relating to the double-belt continuous press, the squaring line and

the wood-based panels covered with sheets of paper. The subject-matter of claim 1 was therefore novel.

Inventive step, main request

The subject-matter of claim 1 differed from document D26 in features a1, a4 and c1.

The present invention hinged on feature a4. Due to the fact that the printing was not done on a wood surface as in document D26 but on a (blank) paper the presently claimed process allowed for more flexibility regarding the design of the printed image. Based on this technical effect, the objective technical problem to be solved by feature a4 was to obtain an easily variable design pattern.

The proposed solution was not obvious. None of documents D35 and D36 mentioned the suitability of the panel surface for ink-jet printing. Hence, the skilled person would not have taken documents D35 and D36 into account. Even if, such a combination would not lead to the present invention: document D35 disclosed a chipboard panel covered on the top with a layer of burlap 8 (see Figures 2 and 3), which rendered the panel surface unsuitable for ink-jet printing. The panel of document D36 was covered with a decorated paper sheet 29, which obviated the need for a printer. This approach was even contrary to the present invention of printing a design or an image representing a wood type, a type of stone or rock on panels already covered with sheets of paper. In order to find a solution to the objective technical problem, the skilled person would possibly consider document D7. However, this document (see paragraph [0016]) suggested treating the wood surface before printing by ground

coating and sanding, which likewise taught away from the claimed solution of printing on a paper-covered panel. Finally, it was important to note that paragraph [0055] of document D26 described the behaviour of the ink droplets on the veneer surface and was not a teaching to replace the veneer layer by a sheet of paper. For these reasons, the prior art on file could not render obvious the subject-matter of claim 1.

Reasons for the Decision

1. Filing of the present main request during the opposition proceedings and the right to be heard

1.1 The decision under appeal concerns the present main request, which is essentially based on claim 9 of a first auxiliary request submitted on 27 September 2013, i.e. more than one month before the date of the oral proceedings before the opposition division. In view of that, the subject-matter underlying the decision under appeal was filed within the time limit set in the opposition division's summons to attend oral proceedings.

1.2 Moreover, it appears from the minutes of the oral proceedings that the merits of the present main request were extensively discussed prior to the opposition division's conclusion that the request met the requirements of the EPC. It is also observed that, during the debate of the issue of inventive step, appellant III requested the oral proceedings to be adjourned in order to perform an additional search and to safeguard its right to be heard (see minutes, point 2.3.1). It later withdrew this request (see minutes, point 2.3.3). In view of the above, it is not apparent that the opposition division violated appellant III's

right to be heard before arriving at the contested decision, Article 113(1) EPC.

2. Admissibility of documents D35 to D38

2.1 Together with their respective statements setting out the grounds of appeal, appellants II, III and IV filed additional documents D35 to D38 in order to challenge the inventive merits of the features a, a1, a4 and c1.

2.2 The admissibility of documents D35 to D38 is governed by Article 12(4) RPBA. Following this provision, the non-admission of facts and evidence which could have been submitted before the department of first instance into the appeal proceedings is at the discretion of the board. According to the established case law, the filing of new facts and evidence before the board of appeal can be justifiable if it is an appropriate and immediate reaction to developments in the last phase of the previous proceedings. Hence, an appellant who has lost the opposition proceedings should be given the opportunity to fill the gaps in its arguments by presenting further evidence in this regard (cf. cases cited in Case Law of the Boards of Appeal of the European Patent Office, 8th edition, 2016, IV.C.1.3.6 a)).

2.3 Applying these principles to the case at hand, it is noted that features a, a1, a4 and c1, which the opposition finally considered decisive for the question of inventive step, did not form part of the process claims as granted. Rather, they were inserted from the description into the claim about one month before the date of the oral proceedings, i.e. at an advanced stage of the opposition proceedings. Under these circumstances, the filing of documents D35 to D38 by

the appellants at an early stage of the appeal proceedings has to be considered a legitimate reaction to these developments in the last phase of the opposition proceedings and to the impugned decision.

For these reasons, the board concludes that documents D35 to D38 are to be admitted into the appeal proceedings under Article 12(4) RPBA.

3. Clarity, main request

3.1 The contested feature relating to the squaring line forms part of granted claim 12, an apparatus claim depending on granted apparatus claim 1. By contrast, present claim 1 is directed to a floor production process based on granted claim 14. In view of the fact that granted claim 14 does not contain any direct or indirect reference to granted apparatus claim 12, the insertion of one of the apparatus features, specifically of feature a3, into the independent process claim results in a combination of features which did not form part of the claims as granted. Hence, the alleged lack of clarity was not present in the granted process claim but introduced into present claim 1 by way of a post-grant amendment. In accordance with decision G 3/14 (OJ EPO 2015, A102), such an amendment may be examined for compliance with the requirements of Article 84 EPC.

3.2 As to the substance, in the context of present claim 1, feature a3 specifies that the printing process, which forms part of a floor production process and comprises the steps defined in features a4 to h, is applied to a squaring line. It is therefore not apparent that, based on this understanding, the reference to the squaring

line renders the subject-matter of process claim 1 unclear.

Hence, present claim 1 of the main request meets the requirements of Article 84 EPC.

4. Sufficiency of disclosure

4.1 As a rule, an objection of lack of sufficient disclosure presupposes that there are serious doubts in that respect, substantiated by verifiable facts. In order to establish an insufficiency of disclosure, the burden of proof initially is upon an opponent to establish that a skilled reader of the patent, using common general knowledge, would be unable to carry out the invention (cf. Case Law of the Boards of Appeal of the European Patent Office, 8th edition, 2016, II.C.8).

4.2 In the present case, appellant I raised doubts as to the sufficiency of the disclosure regarding the preparation of and the printing on wood-based panels covered with paper sheets. However, these doubts were not substantiated. It is uncontested that printing on paper using an ink-jet printer as well as ink compositions suitable for that purpose are generally known. In these circumstances, the disclosure in the patent as a whole has to be considered sufficient to enable the skilled person to carry out the invention as defined in present claim 1 of the main request, Article 83 EPC.

5. Added subject-matter in view of the earlier application

5.1 The earlier application as filed relates, *inter alia*, to a process for printing surfaces of wood-based flat elements, for example semi-finished wooden panels

covered with paper (see page 1, first paragraph). The wooden panels can be obtained from wood-based flat products produced using double-belt continuous presses (see paragraph bridging pages 1 and 2). The printing process can be applied to a squaring line for floor production (see page 6, lines 13 and 14). It uses a single-pass printer (as opposed to a plotter, see page 5, lines 5 to 7) in which the print head nozzles propel ink micro-droplets of the required colour onto the surface of the panel (page 5, lines 23 to 25). Advancing the panels relative to the printer can be done using a belt drive of the suction type or a drive device provided with gripper means (page 9, lines 10 to 13). The process comprises the steps of applying a coating to the printed surface to form a substantially transparent protective layer in order to give the printed surfaces greater resistance to the effects of abrasion or scratching (page 5, lines 12 to 17).

In view of the above, the various elements of the present claims are mentioned in the earlier application as optional aspects of the process as originally claimed and disclosed. Consequently, their combination, as such, does not go beyond the disclosure in the earlier application.

5.2 Regarding the specific wording, the following is noted:

As to feature a relating to the *"wood-based panels"*, reference can be made to page 1, lines 4 and 5 of the earlier application, according to which the invention relates to *"a process for printing surfaces of wood-based flat elements, for example wooden panels"*. It is also taken into account that, in the earlier application as filed, the wood-based flat elements to be printed on are all in the form of panels. On page 1,

second paragraph, the specific types of panels (chipboard, HDF, MDF and OSB panels) are presented as non-limiting examples. In view of the above, the general wording *"wood-based panels"* according to present feature a does not go beyond the content of the earlier application as filed.

Regarding feature a4, the first paragraph of page 1 of the earlier application does not primarily relate to the prior art but states that the printing process of the present invention can be carried out on wooden panels covered with sheets of paper.

Features d and f define that the printing is done with a single-pass ink-jet printer provided with print heads having nozzles which propel micro-droplets of the required colour onto the surface to be printed, which is based on page 7, lines 19 to 26 of the earlier application. Furthermore, in single-pass ink-jet printing, the print head carriage does not reciprocate laterally in respect of the print media (as it is the case in scan or plotter printing) but remains in position; image printing is completed in a single pass while the print material is conveyed underneath. This is in line with the presentation of the present invention in the earlier application as filed (see page 3, lines 9 to the end of page 4). In view of that, in the context of the present claim the skilled person would understand from features c and d that according to claim 1 the print heads are stationary in the sense that they do not reciprocate laterally in respect of the wood-based panel and that the printing is completed in a single pass while the panel is conveyed underneath. For the skilled person, this interpretation would not exclude inevitable minimal adjustments of the print heads in lateral direction (e.g. ¼ to ½ of a

pixel diameter) and regarding their height. Consequently, features c and d do not go beyond the earlier application as filed.

Features e and e1 are based on original Figure 1 in combination with page 4, lines 18 to 25 and page 7, lines 13 to 19 of the earlier application. In particular, the above reference on page 4 discloses that the number of colours is not necessarily four but depends on the desired result. Also the prime colours cyan, magenta, yellow and black are mentioned as preferred.

Finally, regarding feature g, original claim 1 as well as page 6, lines 9 and 10 of the earlier application define that the ink-jet printer is controlled by an electronic processor, normally a simple PC. Moreover, in the context of Figure 1, it is specifically stated that the print heads form part of the ink-jet printer of the single-pass type, that the nozzles of print heads propel micro-droplets of the required colour onto the surface to be printed and that the printer is controlled by a PC (page 7, line 21 to page 8, line 2). Such an arrangement necessarily implies that the ejection of the ink droplets is in response to a corresponding signal sent by the electronic processor to the print head.

For these reasons, the subject-matter of claim 1 of the main request does not go beyond the content of the earlier application as filed, Article 76(1) EPC.

6. Extension of protection conferred by the patent

6.1 As submitted by the respondent, Rule 137 EPC relates to the amendment of the European patent application and

not to post-grant amendments of the European patent. It is thus not an issue in the present opposition appeal proceedings.

6.2 On the issue of Article 123(3) EPC, the board notes that present claim 1 of the main request is of the same category as and contains all features of granted claim 14. The additional aspects introduced during the opposition proceedings further restrict the subject-matter claimed. In particular, the extent of protection conferred by granted process claim 14 already covered the floor production process of present process claim 1.

Hence, the European patent was not amended in such a way as to extend the protection conferred, Article 123(3) EPC.

7. Novelty, main request

Document D26 does not directly and unambiguously disclose, *inter alia*, the printing on wood-based panels covered with sheets of paper. In fact, paragraph [0055] of document D26, which appellant IV relied upon in that respect, is directed to the printing on chipboard panels covered with a wood veneer.

Already for this reason the subject-matter of claim 1 of the main request is novel over document D26.

8. Inventive step, main request

8.1 Closest prior art

8.1.1 Following the jurisprudence of the boards of appeal (cf. Case Law of the Boards of Appeal of the European

Patent Office, 8th edition, 2016, I.D.3.1), the closest prior art for examining inventive step is normally a prior art document disclosing subject-matter conceived for the same purpose as and having the most relevant technical features in common with the subject-matter claimed.

8.1.2 In the case at hand, document D26 concerns a floor production process (see paragraph [0018]) in which surfaces of flat wood-based panels (see paragraph [0033]) are printed with a design or an image representing a wood type, a type of stone or rock (see paragraphs [0011] and [0018]), the printing process being applied to a squaring line (see Figure 12) and comprising the steps of:
performing a preliminary graphic composition step of a design or image by means of an electronic processor and relative software (see paragraph [0044]);
advancing said flat wood-based panels in an advancement direction past an ink-jet printer (28) using a belt drive device (12), said ink-jet printer being of the single-pass type (see paragraph [0048]) comprising stationary print heads arranged in rows one after another in said advancement direction (see paragraph [0048]);
each row comprising a number of print heads sufficient to cover the entire width of the panels (see paragraph [0048]);
propelling ink micro-droplets of the relative colour from said print heads onto said surfaces (see paragraph [0038]) in response to signals sent by said electronic processor connected to said print heads to thereby reproduce said design or image on said surfaces (see paragraphs [0033] and [0048]), and
applying a coating or covering products to the printed surfaces of the panels to form a substantially

transparent protective layer in order to give the printed surfaces greater resistance to the effects of abrasion or scratching (see paragraph [0062]).

The subject-matter of claim 1 therefore differs from document D26 in features a1, a4 and c1.

8.1.3 Document D3 belongs to the same family as document D26 and discloses the ink-jet printing on wood-based panels, however without specifying that the panels can be floor panels. The same applies to document D2. Document D22 is directed to the single-pass ink-jet printing on paper. There is no reference to the printing on wood-based panels. Finally, document D7 concerns a floor production method without disclosing single-pass printing and that the printing is done on panels covered with paper sheets.

8.1.4 In summary, document D26 discloses subject-matter conceived for and aiming at the same purpose as the claimed invention and having the most relevant technical features in common. Therefore, it is the most promising starting point for assessing the inventive merits of the claimed subject-matter.

8.2 Technical effect and objective technical problem

8.2.1 As established above, the subject-matter of claim 1 differs from document D26 in the following features:

feature a1: the flat wood-based panels are obtained from wood-based flat products produced using double-belt continuous presses;

feature a4:the process is started with panels covered with sheets of paper;

feature c1: the belt drive device is of the suction type or a drive device provided with gripper means.

8.2.2 According to the respondent, the inventive merits of the subject-matter of claim 1 primarily reside in feature a4. Concerning the technical effect of this feature, it is noted that the core of the teaching of the closest prior art document D26 is to modify the base grain appearance of the (wooden) outer surface of the panel by ink-jet printing an additional grain pattern. Thereby a high variety of outer appearances can be produced with a low variety of raw material pieces (see D26, paragraph [0011]). Hence, the solution suggested in document D26 aims at varying the appearance of the panel surface by supplementing the existing wood grains with a printed pattern. By printing the (entire) image representing a certain type of wood, stone or rock on a paper covered panel surface the process of present claim 1 allows for more flexibility regarding the design of the panels.

Based on this technical effect, one aspect of the objective technical problem to be solved by feature a4 is to obtain an easily variable design pattern on the panel surface.

8.2.3 Obviousness of the solution

Regarding the proposed solution, the appellants primarily rely on documents D35 and D36. Both of these documents disclose chipboard panels covered with paper, however without making any reference to ink-jet printing. In that respect, it is observed that the surface of the chipboard panel of document D35 is covered with a top layer of burlap 8 (see Figures 2 and

3), which renders the panel surface basically unsuitable for ink-jet printing. With regard to document D36 it is noted that the cover sheets on the panel are selected from paper, plastic, metal or a composite material (see D36, claim 3). Moreover, according to one embodiment, a decorating film is provided on top of the cover sheets (see D36, column 3, lines 11 to 14). The approach of document D36 obviates the need for a printing on the sheet-covered panel and does therefore not provide a pointer to the proposed solution of printing a design or an image representing a wood type, a type of stone or rock on panels covered with paper. In the judgement of the board, the skilled person would rather turn to document D7 for a solution to the objective technical problem. This document suggests printing on the wooden surface of a wood-based panel, which has been suitably treated by ground coating and sanding (see D7, paragraph [0016]). In view of this indication and taking into account the presentation of the prior art in paragraph [0005], document D7 in fact teaches away from the concept of printing on a paper-covered panel. Finally, regarding paragraph [0055] of the closest piece of prior art D26, it is observed that this passage illustrates the behaviour of the ink droplets on the veneer surface by analogy with wet paper. As such, it does not constitute a technical teaching to replace the veneer layer of document D26 by a sheet of paper.

Already for these reasons, starting from document D26 the prior art on file does not, from an objective point of view and without knowledge of the present invention, render obvious the subject-matter of claim 1. This conclusion applies *a fortiori* if a more remote starting point such as any of documents D2, D3, D7 and D22 is used for the assessment of inventive step.

The subject-matter of claim 1 of the main request is therefore based on an inventive step within the meaning of Article 56 EPC.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar: The Chairman:

N. Schneider M. Poock

Decision electronically authenticated