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Case Number: T 0267/12 - 3.2.03

Application Number: 05707801.6

Publication Number: 1709243

IPC: D21F11/00, D21F11/14, D21F9/00

Language of the proceedings: EN

Title of invention:
APPARATUS FOR AND PROCESS OF MATERIAL WEB FORMATION ON A STRUCTURED FABRIC IN A PAPER MACHINE

Patent Proprietor:
Voith Patent GmbH

Opponent:
Valmet Aktiebolag

Headword:

Relevant legal provisions:
EPC Art. 54(1), 56
RPBA Art. 12(4), 13(1), 13(3)

Keyword:

Decisions cited:

Catchword:

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Case Number: T 0267/12 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 4 February 2016

Appellant: (Patent Proprietor)	Voith Patent GmbH St. Pöltener Str. 43 89522 Heidenheim (DE)
Representative:	Manitz, Finsterwald & Partner GbR Postfach 31 02 20 80102 München (DE)
Respondent: (Opponent)	Valmet Aktiebolag 851 94 Sundsvall (SE)
Representative:	Reiner, Per Jörgen Onsagers AS P.O. Box 1813, Vika 0123 Oslo (NO)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 6 December 2011 revoking European patent No. 1709243 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman G. Ashley
Members: Y. Jest
E. Kossonakou

Summary of Facts and Submissions

I. By its decision dated 6 December 2011 the opposition division revoked European Patent No. 1709243 on the grounds that the claimed subject-matter according to the main request and six auxiliary requests either lacked novelty as compared to the state of the art disclosed in document US-A-6547924 (D1) or did not meet the requirements of Article 123(2) EPC.

II. The patentee, hereinafter the appellant, lodged an appeal on 1 February 2012 and paid the appeal fee on the same day. The statement of grounds was received on 16 April 2012.

III. Requests

The appellant requested that the decision of the opposition division to revoke the patent be set aside and the patent be maintained in amended form on the basis of an amended set of claims of the main request or one of auxiliary requests 1 to 17, whereby:
- the main request and the auxiliary requests 1, 3 and 6 had been filed with the grounds of appeal dated 16 April 2012 as main request and auxiliary requests 1, 4 and 5 respectively, and
- the remaining requests, namely auxiliary requests 2, 4, 5 and 7 to 17 were filed with letter dated 1 December 2015.

The opponent (hereinafter the respondent) requested that the appeal be dismissed.

IV. The independent claims of the set of claims according to the main request and auxiliary requests have the following wording:

a) Main request
(features added to the independent claims as granted are underlined in the text)

Claim 1:
" A method of forming a structured web (38) with a paper machine, comprising the steps of:
providing a fiber slurry (24) through a headbox (22) to a nip formed by a structured fabric (28) and a forming fabric (26); and collecting fibers from said fiber slurry (24) predominantly in a plurality of valleys (28b) of said structured fabric (28) in said nip, characterized in
that moisture (M) that leaves said fiber slurry (24) travels through said forming fabric (26) and not through said structured fabric (28) and said fiber slurry (24) becomes a fiber web (38) after said moisture is removed through said forming fabric (26) and that said fiber slurry (24) becomes the structured web (38) by way of said collecting step."

Claim 11:
" A fiber web forming apparatus for forming a structured web (38), comprising:
a headbox (22); a forming roll (34); a structured fabric (28); a forming fabric (26), a portion of one of said structured fabric (28) and said forming fabric (26) in contact with a portion of said forming roll (34), a side of said structured fabric (28) and a side of said forming fabric (26) becoming proximate to each other thereby forming a nip, said headbox (22) discharging a fibrous slurry (24) directed at said nip in which fibers from said fiber slurry (24) are collected predominantly in a plurality of valleys (28b) of said structured fabric (28), said fibrous slurry (24) losing moisture through said forming fabric

(26) and not through said structured fabric and said fiber slurry (24) becomes a fiber web (38) after said moisture is removed through said forming fabric (26), with said fiber slurry (24) becoming the structured web (38) by way of said collecting said fibers in said valleys (28b) of the structured fabric (28) in said nip."

b) Auxiliary request 1

Claim 1:
" A method of forming a structured web (38) ... *[having all the features of claim 1 of the main request and further characterized by the following features:]*, wherein said structured fabric (28) includes a plurality of peaks (28a) each of said peaks (28a) associated with at least one of said plurality of valleys (28b), wherein said fiber slurry (24) substantially covers a portion of a surface of said structured fabric (28) including at least one of said plurality of valleys (28b) and at least one adjacent peak (28a), and wherein the structured web (38) has a pillow basis weight associated with the structured web (38) formed in said valleys (28b), the structured web (38) having a top surface basis weight associated with the structured web (38) formed on said peaks (28a), said pillow basis weight being greater than said top surface basis weight."

Claim 8:
A fiber web forming apparatus for forming a structured web (38) ... *[having all the features of claim 11 of the main request and further characterized by the following features:]*,
wherein said structured fabric (28) includes a plurality of peaks (28a) each of said peaks (28a)

associated with at least one of said plurality of valleys (28b), wherein said fiber slurry (24) substantially covers a portion of a surface of said structured fabric (28) including at least one of said plurality of valleys (28b) and at least one adjacent peak (28a), and wherein the structured web (38) has a pillow basis weight associated with the structured web (38) formed in said valleys (28b), the structured web (38) having a top surface basis weight associated with the structured web (38) formed on said peaks (28a), said pillow basis weight being greater than said top surface basis weight."

c) Auxiliary request 2

Claim 1, which is the sole independent claim, comprises all the features of claim 1 of auxiliary request 1 in combination with an additional feature F2 taken from the description.

Feature F2:

"wherein the structured web (38) has a sheet absorbency capacity as measured by the basket method as described in the specification for a nominal 20 gsm web of at least 12 grams water per gram of fiber and a sheet bulk of at least 10 cm^3/g."

d) Auxiliary request 3

Claim 1:

" A method of forming a structured web (38) ... *[having all the features of claim 1 of the main request and further characterized by the following features:]*

wherein said structured fabric (28) includes a plurality of peaks (28a) each of said peaks (28a) associated with at least one of said plurality of valleys (28b), wherein said fiber slurry (24)

substantially covers a portion of a surface of said structured fabric (28) including at least one of said plurality of valleys (28b) and at least one adjacent peak (28a),
said method further comprising the steps of: removing said forming fabric (26) from the structured web (38); contacting the structured web (38) with a dewatering fabric (82); and applying pressure to the structured web (38) through said structured fabric (28), and further comprising the step of applying a negative air pressure against a portion of a surface of said dewatering fabric (82) thereby removing moisture from the structured web (38) through said dewatering fabric (82)."

Claim 7:
A fiber web forming apparatus for forming a structured web (38) ... *[having all the features of claim 11 of the main request and further characterized by the following features:]*
wherein said structured fabric (28) includes a plurality of peaks (28a) each of said peaks (28a) associated with at least one of said plurality of valleys (28b), wherein said fiber slurry (24) substantially covers a portion of a surface of said structured fabric (28) including at least one of said plurality of valleys (28b) and at least one adjacent peak (28a), and wherein said apparatus further comprises a suction roll (60), said fibrous web (38) conveyed in a machine direction, said suction roll (60) being downstream in said machine direction from said nip."

e) Auxiliary request 4

Claim 1, which is the sole independent claim, comprises all the features of claim 1 of auxiliary request 3 in combination with the additional feature F2:

Feature F2:

"wherein the structured web (38) has a sheet absorbency capacity as measured by the basket method as described in the specification for a nominal 20 gsm web of at least 12 grams water per gram of fiber and a sheet bulk of at least 10 cm^3/g."

f) Auxiliary request 5

Claim 1, which is the sole independent claim, is based on the combination of all the features of claims 1, 5 and 6 of auxiliary request 3, whereby dependent claims 5 and 6 of auxiliary request 3 correspond to dependent claims 10 and 11 as granted.

g) Auxiliary request 6

(features added to the independent claims as granted are underlined in the text)

Claim 1:

" A method of forming a structured web (38) with a paper machine, comprising the steps of:
providing a fiber slurry (24) through a headbox (22) to a nip formed by a structured fabric (28) and a forming fabric (26); and collecting fibers from said fiber slurry (24) predominantly in a plurality of valleys (28b) of said structured fabric (28),
characterized in
that moisture (M) that leaves said fiber slurry (24) travels through said forming fabric (26) and not

through said structured fabric (28) and said fiber slurry (24) becomes a fiber web (38) after said moisture is removed through said forming fabric (26), wherein said structured fabric 128) includes a plurality of peaks (28a) each of said peaks (28a) associated with at least one of said plurality of valleys (28b), wherein said fiber slurry (24) substantially covers a portion of a surface of said structured fabric (28) including at least one of said plurality of valleys (28b) and at least one adjacent peak (28a), wherein said fiber slurry (24) becomes the structured web (38) by way of said collecting step, wherein the structured web (38) has a pillow thickness (C') associated with the structured web (38) formed in said valleys (28b), the structured web (38) having a top surface thickness associated with the structured web (38) formed on said peaks (28a), said pillow thickness (C') being greater than said top surface thickness, and further comprising the steps of: removing said forming fabric (26) from the structured web (38); contacting the structured web (38) with a dewatering fabric (82); and applying pressure to the structured web (38) through said structured fabric (28) with a belt press (64) with a permeable belt (66) having a fabric tension of greater than 30 kN/m capable of applying pressure to the non-sheet contacting side of the structured fabric (28) such that moisture is drawn from the web (38) through the dewatering fabric (82).

Claim 7:

A fiber web forming apparatus, comprising:
a headbox (22); a forming roll (34); a structured fabric (28); a forming fabric (26), a portion of one of said structured fabric (28) and said forming fabric (26) in contact with a portion of said forming roll

(34), a side of said structured fabric (28) and a side of said forming fabric (26) becoming proximate to each other thereby forming a nip, said headbox (22) discharging a fibrous slurry (24) directed at said nip, said fibrous slurry (24) losing moisture through said forming fabric (26) and not through said structured fabric and said fiber slurry (24) becomes a fiber web (38) after said moisture is removed through said forming fabric (26), wherein said structured fabric (28) includes a plurality of valleys (28b) and a plurality of peaks (28a), wherein said fiber web (38) has a pillow thickness (C') associated with said fiber web (38) formed in said valleys (28b), said fiber web (38) having a top surface thickness associated with said fiber web (38) formed on said peaks (28a), said pillow thickness (C') being greater than said top surface thickness, and wherein said apparatus further comprises a press section including: a dewatering fabric (82), said forming fabric (26) being removed from said fiber web (38) and said dewatering fabric (82) contacting said fiber web (38); and a belt press (64) with a permeable belt (66) having a fabric tension of greater than 30 kN/m capable of applying pressure to the non-sheet contacting side of the structured fabric (28) such that moisture is drawn from the web (38) through the dewatering fabric (82)."

h) Auxiliary requests 7 to 17

Concerning the wording of the independent claims of auxiliary requests 7 to 17, reference is made to the appellant's written submission dated 1 December 2015.

V. The appellant submitted essentially the following arguments:

a) Invention

According to the essential aspect of the invention defined by the patent in suit, the structure of the paper web 38 is almost fully created during the forming step, i.e. by passing a fibrous paper slurry through the forming nip defined between a forming fabric 26 and a substantially impermeable structuring fabric 28. The moisture that leaves the fiber slurry travels through the forming fabric 26 and not through the structuring fabric 28. The structure formed in the paper web at the forming stage remains substantially unchanged during further processing.

b) Admissibility of the requests

The main and auxiliary requests are filed in reaction to the conclusion of the opposition division in its decision concerning the disclosure of the implicit features that can be read into the embodiment of figure 5 of D1. These requests could thus be filed only after receipt of the contested decision and are therefore to be considered in the proceedings.

c) State of the art disclosed in D1

The process and apparatus disclosed in D1 differ in substance from the disputed invention in that the structuring of the paper web is performed only after the forming or wet unit 2, namely in a subsequent press section 3. The common characteristic of all the embodiments shown in D1 is that an impermeable structured belt 16 is used for structuring the web in the press section 3, and for further transporting the

structured web to the Yankee dryer 5 (see for instance column 3, lines 60 to 67; column 4, lines 14 to 20; column 13, lines 30 to 37).

The specific embodiment shown in figure 5 of D1 offers a simplified arrangement, in which the impermeable structured belt 16 is used right from the beginning, i.e. in the wet section 2, and then subsequently for carrying the paper slurry from the wet section 2 to the press section 3.
There is however no explicit disclosure in D1 that in the special embodiment of figure 5 the fibrous slurry is already structured in the wet section with a relief corresponding to the structure of the structured belt 16. The skilled person would thus consider that the structuring process still takes place in the press section 3, as is the case for all the embodiments of D1.
A structuring of the fibrous slurry in the wet section 2 by the impermeable structured belt 16 is not to be considered as implicit, because D1 is silent on how the fibrous slurry is delivered in the wet section 2 by the headbox 7. One could envisage several options like projecting the slurry mainly against the forming fabric 10, just before it enters the forming nip of the wet section 2. In such a case, the slurry would be compressed, dewatered and densified, thereby forming a compacted web, physically unable to fill the depressions of the structured belt 16 as it passes through the wet section. Of course, the skilled person could also consider an alternative mode, in which the fibrous slurry is injected into the forming nip. In this case, it can be that the depressions of the structured belt 16 are still not filled, for instance if the forming fabric, the structure of which is not defined further in D1, was structured too.

d) Novelty

The result of these considerations is that the feature defining the forming of a fibrous slurry into a structured web during its passage through the wet section 2 is neither explicitly nor implicitly disclosed in D1. The subject-matter of the main request is therefore new.
As a consequence, the additional features according to the first auxiliary request relating to the formation of pillows having a basis weight greater than the top surface basis weight are also new as compared to D1.
The further additional features according to auxiliary request 3 are not known from D1 either. The disclosure in lines 41 to 50 of column 7 of D1 does not unambiguously disclose the use of a dewatering fabric and the application of a negative pressure as claimed, but merely presents a multiple choice between different developments.

e) Inventive step

The shoe press used in the press section 3 of D1 differs substantially from the claimed belt press, in terms of levels of pressure applied and of contact surface with the web to be pressurised. The skilled person would thus not envisage replacing the shoe press by a belt press in consideration of the invention generally disclosed in D1. The subject-matter claimed in auxiliary request 6 is thus new and involves an inventive step.

VI. In summary the respondent argued as follows:

a) Admissibility of the requests

The auxiliary requests should not be admitted because they could have been filed during the opposition proceedings, since the embodiment of figure 5 of D1 was an important issue right from the beginning.

b) Main request, auxiliary requests 1 and 3

The person skilled in the art would consider that the paper web is formed with pillows and connecting regions during the wet section of the embodiment shown in figure 5 of D1. On the basis of the alternative mode described lines 41 to 50 of column 7, it is clear that the embodiment of figure 5 could alternatively comprise a suction roll applying a negative pressure for dewatering the paper web.
The subject-matter defined in the claims of the main request and auxiliary requests 1 and 3 therefore lacks novelty.

c) Auxiliary request 6

The claimed apparatus/method differs from D1 by the type of press used in the press section, namely a belt press having an extended press zone. The objective problem thus consists in modifying the embodiment of figure 5 of D1 so as to preserve the structure of the paper web formed in the wet section. It is part of the common general knowledge that a band or belt press provides a more gentle way of applying pressure to an object than a press nip or a shoe press.
The subject-matter of the claims of auxiliary request 6 therefore infringes the requirements of article 56 EPC.

VII. At the end of the oral proceedings, which took place on 4 February 2016, the board announced its decision.

Reasons for the Decision

1. Admissibility of the requests

1.1 Main request and auxiliary requests 1, 3 and 6

The sets of claims of the main request and of auxiliary requests 1, 3 and 6 were filed respectively as main request and auxiliary requests 1, 4 and 5 with the grounds of appeal dated 16 April 2012.

Pursuant to article 12(4) RPBA, it lies within the board's discretion not to admit requests which could/ should have been presented in the first instance.
In the current case, the board takes into consideration the following aspects:
- the independent claims of the main request and of auxiliary requests 1, 3 and 6 are based on combinations of claims of the patent as granted,
- the independent claims of these requests contain features which are intended to limit the claimed subject-matter, in order to render it novel as compared to D1, thereby taking into consideration the grounds of the contested decision, in which the opposition division defined the scope of disclosure of figure 5 of D1, on the basis of which it refused requests filed during the opposition proceedings because of a lack of novelty.

Taking these aspects into consideration when using its power of discretion, the board arrived at the conclusion that the main request and auxiliary requests

1, 4 and 5 filed with the grounds of appeal are admissible pursuant to article 12(4) RPBA.
Therefore the corresponding main and auxiliary requests 1, 3 and 6 filed with letter of 1 December 2015 are admitted into the proceedings.

1.2 Auxiliary requests 2, 4, 5 and 7 to 17

The remaining requests, namely auxiliary requests 2, 4, 5 and 7 to 17 are new and filed for the first time with the letter dated 1 December 2015.
When exercising its power of discretion pursuant to articles 12 and 13 RPBA, the board arrived at the decision not to admit these late filed requests:
- in view of the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy (article 13(1) RPBA),
- because these auxiliary requests should at least have been presented with the grounds of appeal pursuant to article 12(2) and (4) RPBA,
- and because the new requests are filed after the oral proceedings had been arranged and *prima facie* raise new issues/deficiencies (articles 84, 123 EPC, lack of convergency of the claimed subject-matter, features (possibly unsearched) taken from the description for addition to independent claims, etc.), which the board and the respondent could not reasonably be expected to deal with without adjournment of the oral proceedings (article 13(3) RPBA).

These conclusions apply especially to the independent claims of auxiliary requests 2, 4 and 5.

More particularly it is noted that a feature (F2), which is not defined in the set of claims as granted,

but is derived from the description, has been added to the independent claims of auxiliary requests 2 and 4. Moreover feature F2 differs from the original text (as published in paragraph [0060] of the patent and originally defined at page 22, lines 18 to 23 of the application), since the original text was considered by the appellant to be obviously wrong, and had therefore to be corrected. Furthermore, it is not prima facie apparent if the amended text of feature F2 fulfills the requirement of article 123(2) EPC and if it was comprised within the scope of the searched subject-matter.

With regards to claim 1 of auxiliary request 3, it is questionable if the addition of the combination of the characterising features of claims 8 and 9 as granted fulfills the requirement of article 123(2) EPC, since each of claims 8 and 9 as granted was directly dependent on claim 5 as granted.

2. Novelty - Main request

2.1 Document D1 refers to a method of texturing and drying a wet fibrous paper web and a paper machine therefore.

2.1.1 In all the embodiments illustrated in D1, the apparatus for texturing a structured paper web comprises a wet section 2, a press section 3 and a drying section. The wet section 2 includes a headbox 7 for discharging a fibrous paper slurry, a forming roll 8, a guide roll 11, an endless, carrying inner clothing 9 and an endless, covering outer clothing 10 consisting of a forming fabric (see for instance column 6, lines 10 to 14). A portion of said inner clothing 9 is in contact with a portion of said forming roll 8. A side of the inner clothing 9 and a side of the outer clothing 10 become proximate to each other, so as to form a nip. A

fibrous paper slurry provided by the headbox 7 is conveyed between the inner and outer clothings 9, 10. The paper web exiting the wet section 2 is then conveyed to a press section 3 including a shoe press and a press nip. The press section 2 comprises an endless press felt 15 and a substantially impermeable texturing belt 16 which pass, together with the fibrous web 1, through the press nip (see for instance column 6, lines 5 to 49). During its passage through the press nip 3, the fibrous web 1 is formed with a relief pattern corresponding to the multitude of uniformly distributed depressions of the texturing belt 16 (see figure 6).

2.1.2 According to the particular mode of realisation illustrated by figure 5 of D1, the substantially impermeable structuring belt 16 is used right from the beginning, i.e. not only in the press section 3 but prior to this in the wet section 2, where it has the function of the inner clothing 9, see column 7, lines 32 to 40.

The board is of the opinion, that, contrary to the analysis made by the appellant regarding the teaching of the embodiment shown in figure 5, the paper web formed in the wet section 2 also receives a structure at this stage because of structuring belt 16.
It is clear for the skilled reader that the headbox 7 delivers the fibrous paper slurry between the structuring belt 9, 16 and the forming fabric 10, i.e. into the forming nip defined between the forming roll 8 and the counter roll 12. The alternative mode of delivery, by which the slurry is projected with high pressure against the forming belt 10 at a position before the forming nip, which according to the appellant would render the slurry deposited onto the

belt already highly compact before even entering the forming nip so that no structuring could occur in the wet section, would not be considered by the skilled person. Such an alternative is neither explicitly described, nor is it an obvious implicit alternative to the injection of fibrous slurry into the vicinity of the forming nip.

The fibers of the paper slurry, which is conventionally directed into the forming nip of the wet section, will inevitably occupy the space between the forming belt 10 and the structuring belt 9, 16.
In doing so, it is inevitable that the fibers will be collected predominantly in the depressions (e.g. valleys) of the structured belt 9, 16 as it passes through the wet section 2.
The paper web formed in the wet section 2 according to the embodiment of figure 5 is therefore inevitably a structured web having pillow areas and thinner areas interconnecting the pillow areas.
Since the structuring belt 9, 16 is substantially impermeable, the fibrous slurry can lose moisture in the wet section 2 only through the forming fabric 10 of the outer clothing and not through the inner structuring belt/clothing 9, 16. The structured paper web becomes a fiber web as the moisture is removed through the forming fabric 10.

2.1.3 The fact that the structured web, resulting from the collection of slurry fibers in peaks 28a and valleys 28b of the structuring fabric 9, 16, receives further treatment downstream of the wet section 2, and in particular the final structure in the press section 3, does not alter the fact that the web produced during the wet section in figure 5 of D1 is already structured

with pillow areas interconnected by thinner areas of the web.

In this respect, the board is not convinced that the skilled person would read the sentence at column 8, lines 10 to 13 of D1, as meaning that the web acquired its structure only when passing through the press section 3, as is argued by the appellant. Rather, compression of the web in the press section constitutes a post-forming operation for a web that already has a structure when it leaves the wet section, the structure being generally maintained thereafter.
It may be added, that the claimed subject-matter does not specify whether the structured web issued from the collecting step is the end product or rather an intermediate paper web structure requiring further treatment, as indeed is foreseen by the patent itself (see for instance press section 64 in figures 13 to 18).

2.2 In view of the state of the art disclosed in D1, both explicitly and implicitly derivable by the skilled person, as set out in paragraph 2.1 above, the board arrives at the conclusion that the method of claim 1 as well as the associated apparatus of claim 11 are known from D1 and thus lack novelty within the meaning of article 54(1) EPC.

3. Novelty - Auxiliary request 1

Claim 1 of auxiliary request 1 is based on claim 1 of the main request combined with a group of added features defining the geometry of the structuring fabric and the resulting pillow structure of the paper web.

The same geometry is to be found in D1 (in the embodiment of figure 5) which uses in the wet section 2 a structuring belt 16 having a multitude of uniformly distributed depressions (valleys) 35 with flat or arched surface portions (peaks) 36 situated there between (see column 7, lines 51 to 55; figures 6 to 9). The fiber slurry delivered by headbox 7 in the wet section 2 will, as mentioned previously, substantially cover a portion of a surface of the structuring belt 16, including at least one of the plurality of depressions 35 and at least one adjacent flat or arched surface portion 36. As a result of collecting fibres predominantly in the valleys of the structuring belt 16, the structured fibrous web has a pillow basis weight associated with the structured web formed in the valleys 35 and a top surface basis weight formed on the peaks 36, whereby the pillow basis weight is inevitably greater than the top surface basis weight.

The method of claim 1 and the apparatus of claim 8, which has similar additional features, therefore lack novelty when compared to D1.

4. Novelty - Auxiliary request 3

The new aspect defined in independent claims 1 and 7 of auxiliary request 3, as compared to the main request and auxiliary request 1, lies substantially in the provision of additional method steps or additional components of the apparatus for contacting the structured web leaving the wet section with a dewatering fabric, for applying pressure to the structured web through said structured fabric, and further for applying a negative air pressure against a portion of a surface of said dewatering fabric in order

to remove moisture from the structured web through said dewatering fabric.

The paragraph from line 41 to line 50 of column 7 of D1 discloses an alternative embodiment based on a reversed arrangement of rolls 14, 19 of the press section 3, as compared to the design shown in figures 1 to 5, and on the counter roll being selected as a suction roll. When figuring out a concrete configuration for this embodiment, for which there is no figure, the skilled person understands that on the basis of the arrangement of figure 5, the change will entail placing the shoe press roll 14 above the structuring belt 16 and the counter roll 19 underneath of the press felt or dewatering fabric 15. Since the counter roll 19 is also a suction roll, it will apply a negative air pressure against a portion of the press felt 15 so as to remove moisture from the structured web through said dewatering fabric 15.

In conclusion, the independent claims 1 and 7 contain no feature which renders the claimed subject-matter novel over D1 and thus do not meet the requirements of article 54(1) EPC.

5. Auxiliary request 6

5.1 The board considers that both the method of claim 1 and the apparatus of claim 7 differ from the state of the art disclosed in D1 by the use of a belt press with a permeable belt having a fabric tension of greater than 30 kN/m for applying pressure to the non-sheet contacting side of the structured fabric, such that moisture is drawn from the web through the dewatering fabric. This is not disputed by the respondent.

5.2 The belt press enables a "softer" dewatering as compared to the shoe press used in D1, because the applied pressure by a belt press is ten times less than the pressure provided by a shoe press. The desired degree of dewatering using a belt press can nevertheless be achieved because of a larger area on which pressure is applied by the belt as compared to a press shoe.
Using a belt press for dewatering the paper web produced by the forming section of the process/ apparatus avoids alteration of the structure initially conferred to the paper web.
Accordingly, there is a synergy between the new and distinguishing feature defining the use of a belt press and the structuring of the paper web in the forming stage.

5.3 The objective problem deriving from this distinguishing feature is to provide a method and an apparatus for making a structured paper web with increased fluid absorbing capacity.

5.4 In all the embodiments of D1 the press section 3 consists of a shoe press. During its passage through the press nip of the shoe press, the paper web formed in the wet section 2 gets structured by the relief of the texturing belt 16; in the case of the embodiment according to figure 5, the structure already formed in the forming/wet section 2 by the texturing belt 9, 16 is finalized. It is therefore clear for the person skilled in the art that a substantial press force is required in the press section and is an essential part of the paper machine arrangement. This consideration applies for all the embodiments of D1, including the embodiment of figure 5 amended according to the

alternative arrangement of the press and counter rolls suggested at column 7, lines 43 to 50.

Contrary to the respondent's arguments, the board is convinced that the person skilled in the art of paper making processes and machines is not prompted by general knowledge alone to replace the shoe press of D1 by a belt press, because of the significantly lower pressures applied by a belt press as compared to those exerted in the press nip of a shoe press. The step of exchanging one press type by another would in this case amount to an ex post facto approach based on the knowledge of the invention in advance.

The general concept of the invention as defined in auxiliary request 6, which is actually based on the synergy between the feature requiring the structuring of the paper web already in the forming section and the feature introducing a more gentle dewatering step to be performed by a belt press, cannot be derived from D1.

5.5 The set of claims of auxiliary request 6 thus meet the requirements of the EPC, in particular those of articles 52(1), 54(1) and 56 EPC.

Order

For these reasons it is decided that:

1. The contested decision is set aside.

2. The case is remitted to the opposition division with the order to maintain the European patent Nr. 1709243 in amended form on the basis of the set of claims 1 to 14 of auxiliary request 6 filed with letter dated 1 December 2015 and a description and drawings to be adapted.

The Registrar: The Chairman:

I. Aperribay G. Ashley

Decision electronically authenticated