

Internal distribution code:

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

**Datasheet for the decision
of 13 August 2009**

Case Number: T 0889/07 - 3.2.07

Application Number: 99917824.7

Publication Number: 1086054

IPC: C03B 37/05

Language of the proceedings: EN

Title of invention:

Man-made vitreous fibres batts and their production

Patentee:

Rockwool International A/S

Opponent:

Paroc Oy Ab

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56

Relevant legal provisions (EPC 1973):

-

Keyword:

"Novelty (yes)"

"Inventive step - main and first to fourth auxiliary requests
(no)"

"Inventive step - fifth auxiliary request (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0889/07 - 3.2.07

D E C I S I O N
of the Technical Board of Appeal 3.2.07
of 13 August 2009

Appellant: Paroc Oy Ab
(Opponent) Neilikkatie 17
FIN-01300 Vantaa (Fl)

Representative: Maskula, Silla Marjatta
Turun Patenttitoimisto Oy
P.O. Box 99
FIN-20521 Turku (Fl)

Respondent: Rockwool International A/S
(Patent Proprietor) Hovedgaden 501
DK-2640 Hedehusene (DK)

Representative: Samuels, Lucy Alice
Gill Jennings & Every LLP
Broadgate House
7 Eldon Street
London EC2M 7LH (GB)

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
29 March 2007 concerning maintenance of the
European patent No. 1086054 in amended form.

Composition of the Board:

Chairman: H. Meinders
Members: P. O'Reilly
I. Beckedorf

Summary of Facts and Submissions

- I. Opposition was filed against European patent No. 1 as a whole based on Article 100(a) EPC (lack of novelty and lack of inventive step).

The opposition division decided to maintain the patent in amended form in accordance with the main request.

- II. The appellant (opponent) filed an appeal against that decision.

- III. The appellant requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that in setting aside the decision under appeal the patent be maintained in amended form on the basis of the set of claims according to the main request, or, alternatively, one of the first to fifth auxiliary requests all filed with letter of 13 July 2009.

- IV. Claim 1 of the **main request** reads as follows (amendments when compared to claim 1 of the patent as granted are depicted in bold or struck through):

"1. A process of making an MMVF batt comprising

centrifugally fiberising mineral melt by feeding the melt to first and second centrifugal spinners (1, 2) arranged in substantially side-by-side relationship and optionally one or more third centrifugal spinners (3) between the first and second spinners, wherein each centrifugal spinner comprises at least one fiberising

rotor (4) mounted for rotation about a substantially horizontal axis wherein the or each rotor provides an acceleration field,

entraining the fibres from each spinner in a stream of air around at least one fiberising rotor of each spinner wherein the stream of air has a flow field and thereby forming a single cloud of fibres entrained in air,

collecting the fibres on a permeable conveyor (5) as a web (7) having first and second opposed edge regions (R_1 and R_2) and a centre region (R_3) by sucking the air from the cloud through the conveyor whereby the first and second spinners form the fibres which predominantly provide the first and second edge regions respectively, and

cross lapping (8) the web to make the batt whereby a first face section (10) of the batt is formed mainly of the first edge region of the web and the opposed second face section (11) of the batt is formed mainly of the second edge region of the web and the batt has a core section between its first and second face sections,

characterised in that the centrifugal fiberisation on one or more spinners is controllable independently from the centrifugal fibersation on one or more other spinners by independent adjustment on ~~one or~~ different spinners of at least two fiberising parameters before or during the production of MMVF batt so as to vary one of more web edge region or web core region properties selected from (1) mean fibre diameter, (2) mean fibre length, (3) shot content, (4) tensile strength of wool, (5) density and (6) chemical analysis, the fiberising parameters being selected from (a) the physical properties and/or chemical analysis of the melt

fed to a spinner, (b) the rate of melt flow to a spinner, (c) the position of the fiberising rotor, or at least one of the fiberising rotors, on a spinner with respect to the position of the feed of melt to that spinner, (d) the acceleration field or fields on a spinner and (e) the flow field of the or each stream of air associated with a spinner, **whereby at least two of said fiberising parameters are different on different spinners in the process.** "

Claim 1 of the **first auxiliary request** is identical with claim 1 of the main request though claims 20 to 23 of the main request have been deleted.

The independent claim of the **second auxiliary request** reads as follows (amendments when compared to claim 1 of the **main** request are struck through):

"1. A process of making an MMVF batt comprising
centrifugally fiberising mineral melt by feeding the melt to first and second centrifugal spinners (1, 2) arranged in substantially side-by-side relationship and ~~optionally~~ one or more third centrifugal spinners (3) between the first and second spinners, wherein each centrifugal spinner comprises at least one fiberising rotor (4) mounted for rotation about a substantially horizontal axis wherein the or each rotor provides an acceleration field,
entraining the fibres from each spinner in a stream of air around at least one fiberising rotor of each spinner wherein the stream of air has a flow field and thereby forming a single cloud of fibres entrained in air,

collecting the fibres on a permeable conveyor (5) as a web (7) having first and second opposed edge regions (R_1 and R_2) and a centre region (R_3) by sucking the air from the cloud through the conveyor whereby the first and second spinners form the fibres which predominantly provide the first and second edge regions respectively, and

cross lapping (8) the web to make the batt whereby a first face section (10) of the batt is formed mainly of the first edge region of the web and the opposed second face section (11) of the batt is formed mainly of the second edge region of the web and the batt has a core section between its first and second face sections,

characterised in that the centrifugal fiberisation on one or more spinners is controllable independently from the centrifugal fibersation on one or more other spinners by independent adjustment on different spinners of at least two fiberising parameters before or during the production of MMVF batt so as to vary one of more web edge region or web core region properties selected from (1) mean fibre diameter, (2) mean fibre length, (3) shot content, (4) tensile strength of wool, (5) density and (6) chemical analysis, the fiberising parameters being selected from (a) the physical properties and/or chemical analysis of the melt fed to a spinner, (b) the rate of melt flow to a spinner, (c) the position of the fiberising rotor, or at least one of the fiberising rotors, on a spinner with respect to the position of the feed of melt to that spinner, (d) the acceleration field or fields on a spinner and (e) the flow field of the or each stream of air associated with a spinner, whereby at least two of said fiberising

parameters are different on different spinners in the process."

Claim 1 of the **third auxiliary request** reads as follows (amendments when compared to claim 1 of the **main request** are depicted in bold):

"1. A process of making an MMVF batt comprising
centrifugally fiberising mineral melt by feeding the melt to first and second centrifugal spinners (1, 2) arranged in substantially side-by-side relationship and optionally one or more third centrifugal spinners (3) between the first and second spinners, wherein each centrifugal spinner comprises at least one fiberising rotor (4) mounted for rotation about a substantially horizontal axis wherein the or each rotor provides an acceleration field,
entraining the fibres from each spinner in a stream of air around at least one fiberising rotor of each spinner wherein the stream of air has a flow field and thereby forming a single cloud of fibres entrained in air,
collecting the fibres on a permeable conveyor (5) as a web (7) having first and second opposed edge regions (R_1 and R_2) and a centre region (R_3) by sucking the air from the cloud through the conveyor whereby the first and second spinners form the fibres which predominantly provide the first and second edge regions respectively, and
cross lapping (8) the web to make the batt whereby a first face section (10) of the batt is formed mainly of the first edge region of the web and the opposed second face section (11) of the batt is formed mainly of the second edge region of the web and the batt

has a core section between its first and second face sections,

characterised in that the centrifugal fiberisation on one or more spinners is controllable independently from the centrifugal fibersation on one or more other spinners by independent adjustment on different spinners of at least two fiberising parameters before or during the production of MMVF batt so as to vary one of more web edge region or web core region properties selected from (1) mean fibre diameter, (2) mean fibre length, (3) shot content, (4) tensile strength of wool, (5) density and (6) chemical analysis, the fiberising parameters being selected from (a) the physical properties and/or chemical analysis of the melt fed to a spinner, (b) the rate of melt flow to a spinner, (c) the position of the fiberising rotor, or at least one of the fiberising rotors, on a spinner with respect to the position of the feed of melt to that spinner, (d) the acceleration field or fields on a spinner and (e) the flow field of the or each stream of air associated with a spinner, whereby at least two of said fiberising parameters are different on different spinners in the process, **and wherein one of the fiberising parameters that is independently adjusted is (c).**"

Claim 1 of the **fourth auxiliary request** reads as follows (amendments when compared to claim 1 of the **main** request are depicted in bold):

"1. A process of making an MMVF batt comprising centrifugally fiberising mineral melt by feeding the melt to first and second centrifugal spinners (1, 2) arranged in substantially side-by-side relationship and optionally one or more third centrifugal spinners (3)

between the first and second spinners, wherein each centrifugal spinner comprises at least one fiberising rotor (4) mounted for rotation about a substantially horizontal axis wherein the or each rotor provides an acceleration field,

entraining the fibres from each spinner in a stream of air around at least one fiberising rotor of each spinner wherein the stream of air has a flow field and thereby forming a single cloud of fibres entrained in air,

collecting the fibres on a permeable conveyor (5) as a web (7) having first and second opposed edge regions (R_1 and R_2) and a centre region (R_3) by sucking the air from the cloud through the conveyor whereby the first and second spinners form the fibres which predominantly provide the first and second edge regions respectively, and

cross lapping (8) the web to make the batt whereby a first face section (10) of the batt is formed mainly of the first edge region of the web and the opposed second face section (11) of the batt is formed mainly of the second edge region of the web and the batt has a core section between its first and second face sections,

characterised in that the centrifugal fiberisation on one or more spinners is controllable independently from the centrifugal fibersation on one or more other spinners by independent adjustment on different spinners of at least two fiberising parameters before or during the production of MMVF batt so as to vary one of more web edge region or web core region properties selected from (1) mean fibre diameter, (2) mean fibre length, (3) shot content, (4) tensile strength of wool, (5) density and (6) chemical analysis,

the fiberising parameters being selected from (a) the physical properties and/or chemical analysis of the melt fed to a spinner, (b) the rate of melt flow to a spinner, (c) the position of the fiberising rotor, or at least one of the fiberising rotors, on a spinner with respect to the position of the feed of melt to that spinner, (d) the acceleration field or fields on a spinner and (e) the flow field of the or each stream of air associated with a spinner, whereby at least two of said fiberising parameters are different on different spinners in the process, **and in which the variation in web edge region and/or core region properties by the selection of the fiberising parameters has the effect of providing a web having substantially uniform properties across its width.**"

Claim 1 of the **fifth auxiliary request** reads as follows (apart from renumbering it is unamended compared to independent apparatus claim 29 of the patent as granted):

"1. Apparatus for forming a man-made vitreous fibre web comprising

first, third and second centrifugal spinners (1, 3, 2) arranged in side by side relationship,

a rigid gutter assembly (20) for receiving melt from a furnace at a receiving position (28) and for feeding melt from first, third and second discharge (21, 23, 22) positions to the first, third and second spinners (1, 3, 2) respectively,

and in which the gutter assembly has first and second gutter arms (25, 26) extending in generally opposite directions transversely away from the receiving position to the first and second discharge position respectively and a third arm (24) extending generally in

a forward direction from the receiving position to the third discharge position,

and means for independently tilting the gutter about a substantially horizontal axis that extends in a generally transverse direction and about a substantially horizontal axis that extends in a generally forward direction, whereby the rate of flow at each of the first, second and third discharge positions can be controlled independently of the rate of flow of melt at each of the other positions by the independent tilting of the gutter."

V. The documents of the opposition proceedings cited in the present decision are the following:

- D1: WO-A-96/18585
- D2: WO-A-96/36573
- D3: WO-A-92/06047
- D4: WO-A-92/12941
- D5: US-A-3 709 670

VI. The arguments of the appellant may be summarised as follows:

- (i) The subject-matter of claim 1 of each of the main request and the first auxiliary request is not novel over each of D1 and D2.

In particular D1 discloses two or more sets of rotors, i.e. spinners, in a side-by-side relationship (page 9, lines 33 to 38) which implicitly form a single cloud of fibres, and the web formed from this is then cross lapped (page 9, lines 25 to 28). At least parameters (a) - see

page 7, line 35 and page 8, lines 1 to 4, (c) - see page 7, lines 35 to 37, and (d) - see page 7, lines 17 to 19 and 30 to 31, are disclosed as independently controllable. The skilled person would arrange that two parameters differ on different spinners since it makes no sense to provide machines with variable parameters unless these parameters are actually varied so that also this feature of claim 1 is implicitly disclosed.

The same considerations apply to the disclosure of D2 wherein one parameter is explicitly disclosed as being different on the two spinners when they are in their non-synchronous mode.

- (ii) The subject-matter of claim 1 of each of the main request and the first auxiliary request does not involve an inventive step.

D1 is the closest prior art and the Board in its conclusion on the novelty of this claim found that the feature that at least two of said fiberising parameters are different on different spinners is not known from this document. This feature of the process, however, is obvious to the skilled person. The spinners according to D1 have several parameters that can be varied as already indicated with respect to novelty. When there are two or more spinners the skilled person would not keep the parameters the same on all the spinners since it would make no sense to have variable parameters available and then not vary them between the machines. Already in D2 there is a parameter - the air flow - which may be varied.

In D3 there are two side-by-side sets of rotors, i.e. spinners. The two spinners are not identical since there is independent control of the air flow (see page 6, line 31 to page 7, line 2). The same considerations apply to D4. The skilled person learns from these documents to vary the parameters in different spinners. Also in D5 the spinners are mirror images, which means that the parameters of the two spinners differ.

- (iii) The subject-matter of claim 1 of the second auxiliary request does not involve an inventive step.

D1 (page 9, lines 33 to 36) and D2 (page 11, lines 8 to 11) each disclose two or more spinners, which includes three or more spinners, and D3 shows that you can change parameters so that the subject-matter of claim 1 of this request is obvious for the same reasons as apply to claim 1 of the main request.

- (iv) The subject-matter of claim 1 of the third auxiliary request does not involve an inventive step.

It is already known from D1 (page 7, lines 35 to 36) to vary parameter (c) so that the subject-matter of claim 1 of this request is obvious for the same reasons as apply to claim 1 of the main request.

- (v) The subject-matter of claim 1 of the fourth auxiliary request does not involve an inventive step.

It is already known from each of D2 (page 5, lines 23 to 26 and page 6, lines 9 to 18), D3 (page 11, lines 7 to 9) and D4 (page 5, lines 2 to 7) that the web should have uniform properties across its width and these documents also disclose the presence of two or more spinners. Therefore the provision of the extra feature of claim 1 of this request is obvious to the skilled person.

- (vi) The subject-matter of claim 1 of the fifth auxiliary request does not involve an inventive step.

D4 shows an arrangement of three spinners. The problem is to feed all three spinners from a single gutter arrangement. The skilled person would consider D5 where this problem is solved for two spinners using a tiltable gutter. In addition there is a second gutter which is directed backwards. The skilled person would realise that this second gutter could be directed forwards and connect to the other gutter in order to accommodate a third spinner and would thus arrive at an apparatus in accordance with claim 1.

VII. The arguments of the respondent may be summarised as follows:

- (i) The subject-matter of claim 1 of the main request and the first auxiliary request is novel over each of D1 and D2.

D1 does not disclose that the two spinners disclosed therein are side by side, or that they form a single cloud of fibres. Although D1 discloses two spinners and discloses cross lapping the web to form a batt it does not disclose these in combination since cross lapping is disclosed therein as an alternative to batt formation in a single operation, and two spinners are disclosed as an alternative to one spinner. Also, D1 does not disclose the characterising features of claim 1 since although it discloses that parameters may be varied it does not disclose that any parameters should differ on the two spinners and even less so that two parameters should differ. Also, this feature is not implicitly disclosed in D1 since this document is concerned with changing the parameters of a spinner to make a different product on the same production line. Where two spinners are provided the parameters on both would be changed in the same manner when the production line is accordingly being changed to make a different product.

The same considerations apply to D2 except that in the case of D2 it is already known that one parameter can vary between the two spinners, i.e. the air flow when the spinners are not operating synchronously. However, two parameters are not varied and in the case of non-synchronous

operation a single cloud is even more clearly not formed.

- (ii) The subject-matter of claim 1 of the main request and the first auxiliary request involves an inventive step.

Taking D1 as the closest prior art and the conclusion of the Board with respect to novelty that the feature that at least two of said fiberising parameters are different on different spinners of the process is the only distinguishing feature the problem to be solved by this feature is to provide better control of the process. D1 itself does not give any help to solve this problem since there is no indication in the document to set up the two or more disclosed spinners differently. In practice the skilled person would set up the spinners identically since the extra spinner is provided simply for the purpose of increasing the capacity. The skilled person would not want to set up the spinners differently as that could lead to a non-uniform web. Even if the skilled person did consider altering one parameter as in D2 he would not realise the advantages to be gained of increased control by varying two.

D3 does not suggest providing differing parameters in side-by-side spinners. In this document the two spinners are identical. The problem of interference between the two airflows has been solved by providing a particular form of airflow. This is shown by the fact that the spinners are

described as "substantially identical" (page 6, lines 26 to 30) and this expression is defined to mean only insignificant differences (page 7, lines 3 to 11). There is thus no indication to set up the two spinners differently. The same applies to D4 wherein the sets of rotors, i.e. spinners, are also indicated as being identical (page 9, lines 18 to 26).

It should be noted that one of the inventors of each of D1, D3 and D4 is also an inventor of the present invention. If the distinguishing feature of claim 1 had been obvious then as a skilled person he would have realised this and disclosed it in those documents. The fact that he did not do this proves that it was not obvious to do it.

- (iii) The subject-matter of claim 1 of the second auxiliary request involves an inventive step.

First of all it is necessary for the skilled person to choose three or more spinners from the possibilities of one or two or more as disclosed in D1. There is no indication to do this and then to vary at least two parameters between these spinners. The arguments of the appellant in this respect are pure speculation.

- (iv) The subject-matter of claim 1 of the third auxiliary request involves an inventive step.

There is no indication in the prior art to specifically select the parameter (c) and to

arrange for it to be different in different spinners.

- (v) The subject-matter of claim 1 of the fourth auxiliary request involves an inventive step.

Even if the skilled person had considered varying the parameters between the adjacent spinners he would not have done this to achieve uniform properties since he would have considered that the properties would be non-uniform as a result and it is surprising that it is possible to obtain uniform properties when the parameters for different spinners are not the same. Thus in D4 on page 7, lines 17 to 25 there is no indication that when using multiple fiberising means, i.e. spinners, any parameters should be varied between the fiberising means even though these are intended to form a uniform web (page 5, lines 2 to 7).

- (vi) The subject-matter of claim 1 of the fifth auxiliary request involves an inventive step.

The skilled person looking to provide a melt supply system for the apparatus according to D4 would not find the solution in D5. D5 only shows a single gutter providing a variable melt supply for two spinners. The second gutter disclosed in D5 performs a completely different function, namely that of collecting melt after the spinners have been moved backwards into an inoperable position. There is nothing in D5 to suggest changing the

function of this second gutter, let alone to use it to supply a third spinner.

Reasons for the Decision

Main request

1. *Novelty*

1.1 The appellant argued that each of D1 and D2 took away the novelty of the subject-matter of claim 1.

1.2 The respondent argued that D1 does not disclose that the two or more spinners described therein are side by side, or that they form a single cloud of fibres. The Board cannot agree with the respondent in this respect. On page 9, lines 25 to 29 of D1 it is explained that "a web" is formed. Further in lines 33 to 36 of the same page it is explained that there may be two or more spinners "in side-by-side relationship". It is thus clear that these spinners together form "a web", i.e. one web. The respondent admitted that the patent contained no information as to the meaning of "a single cloud of fibres" but considered that it meant that there was no area of separation between fibres coming from two adjacent spinners. In the view of the Board the fact that the two spinners disclosed in D1 form "a web" implies that there is no gap between their respective clouds of fibres at least on arrival at the collector so that at that stage they form a single cloud of fibres.

The respondent further argued that D1 does not disclose the two features of two spinners and cross lapping the web to form a batt in combination. D1 discloses cross lapping as an alternative means of forming a batt to forming it in a single operation (page 9, lines 25 to 28). In the same paragraph it goes on to indicate that whilst there is normally one spinner there can be two or more spinners. It is therefore clear to the skilled person that the possibility of two spinners applies to both alternative forms of batt formation, particularly since cross lapping is normally intended amongst other things to even out density variations which would occur in the same way with two spinners as with one.

- 1.3 The disclosure of the characterising features of claim 1 in D1 is disputed by the respondent in that it considers that the document does not disclose that any parameters should differ on the two spinners and even less so that two parameters should differ.

The appellant acknowledged that this feature was not explicitly disclosed in D1 but considered that it was implicitly disclosed since there was no point in providing for variation of parameters on both spinners unless it was intended to vary them.

The Board agrees with the respondent that this feature is neither explicitly nor implicitly disclosed in D1. This document is concerned with changing the parameters of one or more spinners to make a different product on the same production line. When two spinners are provided there is nothing to indicate that when the parameters on the spinners are being changed to make a

different product that they would be changed in such a way as to differ between the spinners. D1 provides no indication that the purpose of providing variable parameters on a spinner is for any other purpose than to allow different products to be produced without needing a different machine and gives no indication that when two spinners are provided then the parameters must differ between these machines.

The same considerations apply to D2 except that in the case of D2 it is disclosed that one parameter could vary between the two spinners, i.e. the air flow when the spinners are not operating synchronously, which corresponds to parameter (e) of claim 1. However, there is no explicit or implicit disclosure in D2 that two parameters actually are independently varied.

1.4 Therefore, the subject-matter of claim 1 of this request is novel in the sense of Article 54 EPC.

2. *Inventive step*

2.1 The closest prior art is D1. This was the view of the appellant and was not disputed by the respondent.

The process of claim 1 is distinguished over the disclosure of this document by the feature that at least two of the fiberising parameters are different on different spinners of the process.

2.2 The respondent suggested that the objective problem to be solved by the distinguishing feature is to provide better control of the process. The Board does not dispute this suggested objective problem though it

notes that it is at least partly solved in D1 since it is already disclosed therein that a number of parameters can be **independently** (page 7, line 26) varied.

- 2.3 The skilled person would wish for better control of the process since this is a constant striving of a skilled person. It is already known that for instance the density may vary across a web laid down from a spinner (see patent in suit, page 2, lines 45 to 48). This is one reason why webs are commonly cross lapped.

When two spinners are used it is clear that they do not have identical air flows. For each spinner there is a side adjacent the other spinner and a side adjacent an enclosing wall, whereby the sides are interchanged for the respective spinners.

This asymmetry becomes more pronounced in the case of three spinners wherein the central spinner has a spinner on either side whilst the other spinners have a wall on one side and a spinner on the other. The existence of an asymmetry is acknowledged in the prior art wherein for example in D5 there are two mirror image sets of rotors (see figure 4). D3 (see page 6, lines 3 to 21) and D4 (see page 9, lines 10 to 17) each refer to D5 and to the fact that it contains mirror image sets of rotors. In D3 the problem of interference between the airflows of the adjacent sets of rotors is mentioned (see page 6, lines 8 to 11). The skilled person was thus aware that adjacent spinners require some changes to deal with the interference of the adjacent airflows. For the arrangement of D1 where there may be two or more side-by-side spinners the

problem of the interfering air flows also arises and the skilled person will know that the problem is there.

For the skilled person the means for solving the problem of more control in view of the interference between adjacent spinners are already provided in D1 in that the spinners disclosed therein are provided with the means for altering their operating parameters, which correspond to some of the parameters set out in claim 1, i.e. the physical property of the melt, which is parameter (a) (see page 7, line 35 and page 8, lines 1 to 4), the position of the fiberising rotor which is parameter (c) (see page 7, lines 35 to 37), and the acceleration field on a spinner, which is parameter (d) (page 7, lines 17 to 19 and 30 to 31). The skilled person would thus use the means already provided and alter these parameters either to negate the effects of the asymmetry of the spinners, i.e. keeping the web as uniform as possible, or to produce a variation of properties across the web if that is required.

The skilled person would have no reason to limit himself to varying just one parameter, in particular since the variation of a parameter can have more than one effect and it is often necessary to consequentially alter another parameter to eliminate unwanted side effects. Since the means are provided for varying more than one parameter there is no reason for the skilled person to stop at this point.

- 2.4 The respondent argued that one of the inventors of each of D1, D3 and D4 is also an inventor of the invention of the patent in suit so that if the distinguishing

feature of claim 1 had been obvious then he would have realised this and disclosed it in those documents.

The Board cannot agree with this line of argumentation. The fact that the possibility of varying more than one parameter is not mentioned in any of those earlier applications is not necessarily answering the question as to whether or not it was obvious to do so. The inventor could have thought of this possibility yet considered that it was obvious and hence did not belong in a patent application. Speculation as to the thoughts or lack of them of a particular inventor, who cannot automatically be set equal to the skilled person in the sense of Article 56 EPC, cannot influence the question of inventive step which is not concerned with the actions of a particular individual, but with an ordinary skilled person.

- 2.5 Therefore, the subject-matter of claim 1 of the main request does not involve an inventive step in the sense of Article 56 EPC.

First auxiliary request

3. *Inventive step*

Claim 1 of this request is identical to claim 1 of the main request. Therefore, the subject-matter of claim 1 of the first auxiliary request does not involve an inventive step in the sense of Article 56 EPC.

Second auxiliary request

4. *Inventive step*

4.1 According to claim 1 of this request there are one or more third spinners between the first and second spinners. This was an optional feature of claim 1 as granted which is now mandatory in this request.

4.2 According to page 9, lines 33 to 36 of D1 there may be two or more spinners so that the extra feature of claim 1 of this request in particular in its option of "more", is known from D1. In a situation where there are more than two spinners it is clear that the central spinner or spinners will have an air flow different to that of the outlying spinners since these central spinners will have another spinner on each side, whereas the outlying spinners have only one neighbouring spinner. In this situation the skilled person is even more encouraged to vary the parameters between the spinners, i.e. between the central and outlying spinners, to obtain a desired result, e.g. uniformity of the web.

4.3 Therefore, the subject-matter of claim 1 of the second auxiliary request does not involve an inventive step in the sense of Article 56 EPC.

Third auxiliary request

5. *Inventive step*

5.1 According to claim 1 of this request one of the two differing parameters is parameter (c), i.e. the position of the fiberising rotor, or at least one of the fiberising rotors, on a spinner with respect to the position of the feed of the melt to that spinner.

5.2 According to page 11, lines 23 to 31 of D1 the whole spinner is mounted for pivoting about a longitudinal horizontal axis not coinciding with the axis of any of the rotors which necessarily means that the position of the first fiberising rotor is variable with respect to the melt feed position. Since the Board has already indicated above that the skilled person would vary the parameters between spinners and parameter (c) is one of the disclosed variable parameters the choice of this particular parameter cannot involve an inventive step.

5.3 Therefore, the subject-matter of claim 1 of the third auxiliary request does not involve an inventive step in the sense of Article 56 EPC.

Fourth auxiliary request

6. *Inventive step*

6.1 According to claim 1 of this request the differing parameters are intended to obtain a web having uniform properties across its width.

6.2 As already explained with respect to the second auxiliary request when there are more than two spinners, as is envisaged in D1, then there arises a clear asymmetry between the outlying spinners and the central spinner or spinners concerning the respective airflows. This asymmetry would lead the skilled person to vary the parameters between at least the central and the outlying spinners. As also already explained with respect to the main request if one parameter is varied it often has a side effect(s) so that a further parameter or parameters will have to be adapted to eliminate any such undesired side effects.

There existed a desire to obtain a web of uniform thickness as evidenced by D2 (page 5, lines 23 to 26 and page 6, lines 9 to 18), D3 (page 11, lines 7 to 9) and D4 (page 5, lines 2 to 7). In wishing to obtain this uniform thickness from spinners subjected to differing peripheral conditions the skilled person would adjust one, two or more parameters on the differing spinners as appropriate in the circumstances. The provision of the extra feature of claim 1 of this request is therefore obvious.

6.3 Therefore, the subject-matter of claim 1 of the fourth auxiliary request does not involve an inventive step in the sense of Article 56 EPC.

Fifth auxiliary request

7. *Inventive step*

7.1 Claim 1 of this request is directed to the apparatus for forming the fibre web and in particular to a gutter arrangement which allows three spinners to receive melt in a manner in which the rate of flow to each spinner can be individually controlled.

7.2 The appellant did not dispute the novelty of the subject-matter of claim 1 of this request.

7.3 The appellant considered, however, that the subject-matter of this claim was rendered obvious by a combination of the teaching of D4 and D5.

D4 discloses (see figure 4) three spinners which are supplied with melt via a common gutter. There is no indication that this gutter is in any way adapted to vary the distribution of melt between the three spinners.

Therefore the problem to be solved is how to supply these three spinners with melt such that the melt supply to the individual spinner may be independently varied. The appellant considered that D5 shows the solution to this problem since it shows a gutter arrangement which has an opening at each end of the gutter for supplying a respective spinner wherein the gutter may be tilted to direct more or less melt to one or the other spinner. The machine includes a further gutter and the appellant considered the skilled person would apply this feature of feeding via a gutter to the arrangement with three spinners of D4 and in doing so

would modify the second gutter provided in the machine of D5 in the manner set out in claim 1.

- 7.4 The Board cannot agree with the appellant regarding how the skilled person might apply the teaching of D5 to an arrangement including three spinners. D5 discloses a straight tiltable gutter 91 which is open at its opposite ends for supplying two spinners whereby melt is poured into the centre of the gutter and its angle relative to the horizontal determines how the melt supply is divided between the two open ends and hence the two spinners (see column 3, lines 37 to 50). There is a second gutter 136 which is not connected to the first gutter and which only comes into play when the spinners, together with the tiltable gutter, are moved backwards, i.e. out of an operable position. The second gutter then collects any melt that continues to arrive from the melt supply system and channels it away to an accumulation area (see column 5, lines 43 to 47). The function of the second gutter is thus very different to that of the other gutter.

If the skilled person wished to extend the melt supply of D5 to a further spinner as in D4 he would be faced with the problem of how to arrange that the melt supply to each of these spinners can be varied. In D4 there is a single straight gutter with three outlets in its base, one for each spinner, which even if it were tiltable would not be able to alter the supply to one spinner independently of the others.

According to claim 1 of this request the third gutter extends forwardly whereas the other gutters extend transversely. This gives an extra degree of movement

freedom which, when combined with the capability of tilting about the forward and the transverse horizontal axes, means that the melt supply to the individual spinners can be controlled independently.

D5 gives no hint to such an arrangement since it only deals with the melt supply to two spinners. There is nothing in D5 which indicates how its arrangement of melt supply could be extended to three spinners other than by adopting the arrangement already disclosed in D5 and arranging that the gutter is tiltable. In such an arrangement, however, it is not possible to vary the melt supply between two adjacent spinners without varying the supply to the third spinner.

The skilled person thus finds no solution in D5 to the problem and in particular does not find the solution set out in claim 1 of this request.

- 7.5 Therefore, the subject-matter of claim 1 of the fifth auxiliary request involves an inventive step in the sense of Article 56 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to maintain the patent in the following version:

description pages 2 - 12 as filed during the oral proceedings

claims 1 and 2 as filed as fifth auxiliary request with letter of 13 July 2009

figures 1 - 4 of the patent as granted.

The Registrar:

The Chairman:

G. Nachtigall

H. Meinders