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DECISION of 12 December 2002

Case Number:	т 0957/99 - 3.2.6
Application Number:	91915290.0
Publication Number:	0546001
IPC:	D04H 18/00

Language of the proceedings: EN

Title of invention:

Production of shaped filamentary structures

Patentee:

AEROSPACE PREFORMS LIMITED

Opponents:

Dunlop Limited SOCIETE NATIONALE D'ETUDE ET DE CONSTRUCTION DE MOTEURS D'AVIATION Goodrich Corporation

Headword:

Relevant legal provisions:

EPC Art. 108, 123(2), 84, 56 EPC R. 76(1)

Keyword:

"Form of appeal - admissible (yes)" "Amendments - allowable (yes)" "Clarity (yes)" "Inventive step - (yes) after amendment" "Request for inclusion of a declaration in the minutes rejected"

Decisions cited:

Catchword:



Europäisches Patentamt European Patent Office Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Case Number: T 0957/99 - 3.2.6

D E C I S I O N of the Technical Board of Appeal 3.2.6 of 12 December 2002

Appellant: (Proprietor of the patent)	AEROSPACE PREFORMS LIMITED Units 6 & 7 Station Industrial Park Luddenden Foot Halifax West Yorkshire HX2 6AD (GB)
Representative:	Sherrard-Smith, Hugh Appleyard, Lees & Co. 15 Clare Road Halifax West Yorkshire HX1 2HY (GB)
Respondent I: (Opponent I)	Dunlop Limited Silvertown House Vincent Square London SW1P 2PL (GB)
Representative:	Shaw, Laurence Laurence Shaw & Associates 5th Floor Metropolitan House 1 Hagley Road Edgbaston Birmingham B16 8TG (GB)
Respondent II: (Opponent II)	SOCIETE NATIONALE D'ETUDE ET DE CONSTRUCTION DE MOTEURS D'AVIATION 2, Boulevard du Général Martial Valin FR-75015 Paris (FR)
Representative:	Joly, Jean-Jacques Cabinet Beau de Loménie 158, rue de l'Université F-75340 Paris Cédex 07 (FR)

Respondent III: (Opponent III)	Goodrich Corporation Four Coliseum Center 2730 West Tyvola Road Charlotte, NC 28217 (US)
Representative:	Hilleringmann, Jochen, DiplIng. Patentanwälte von Kreisler-Selting-Werner Postfach 10 22 41 D-50462 Köln (DE)

Decision under appeal:	Decision of the Opposition Division of the
	European Patent Office posted 22 July 1999
r	revoking European patent No. 0 546 001 pursuant
	to Article 102(1) EPC.

Composition of the Board:

P.	Alting van Geusau	
G.	Pricolo	
Μ.	J. Vogel	
	P. G. M.	

Summary of Facts and Submissions

I. The appeal is from the decision of the Opposition Division posted on 22 July 1999 to revoke European patent No. 0 546 001, granted in respect of European patent application No. 91 915 290.0.

> In the decision under appeal the Opposition Division considered that claim 1, as amended with letter dated 6 July 1998, met the requirements of Article 123(2) and (3) EPC, and that its subject-matter was novel. However, the subject-matter of claim 1 did not involve an inventive step because it was obvious in the light of the teaching of documents

D2: EP-A-0 232 059, and

D3: US-A-3 772 115;

or in view of the disclosure of documents

D1: FR-A-2 626 294, and

D7: GB-A-2 177 345.

- II. The appellant (patentee) lodged an appeal against this decision, received at the EPO on 13 September 1999, and simultaneously paid the appeal fee. The statement setting out the grounds of appeal was received at the EPO on 1 November 1999.
- III. In a communication dated 19 February 2002, the Board expressed its preliminary opinion that it would appear that in particular the disclosure of documents D1 and D7 was detrimental to the subject-matter of claim 1 as

amended in the opposition proceedings.

IV. Oral proceedings took place on 12 December 2002.

The appellant (patentee) requested that the decision under appeal be set aside and that the patent be maintained with the claims 1, 2 and the description columns 1, 2, 17 and 18 filed during the oral proceedings, together with the description columns 3 to 16 and the Figures 1 to 15 as granted.

Respondent I (opponent I), although duly summoned, did not attend the oral proceedings. The proceedings were continued without him (Rule 71(2) EPC). During the written proceedings the respondent I did not file any submissions in respect of the appeal.

Respondents II and III (opponents II and III) requested that the appeal be dismissed. Respondent III further filed in writing the following request:

"Opponent III requests to mention in the Official Minutes that the Patentee declared that at least the embodiment disclosed in Figure 15 of European Patent Specification EP 0 546 001 B1 and the accompanying text does not fall under the scope of protection of the claims as amended".

V. Claim 1 reads as follows:

"A method of manufacturing an annular multilayer filamentary structure comprising the steps of: laying at least three filamentary layers which layers comprise continuous filamentary material one on top of another and needle punching the assembly of layers by reciprocating a needling head equipped with needles in a manner such that the assembly of filamentary layers is cross-linked by filaments displaced from the filamentary layers and increasing the distance between the bottom of the stack and the bottom of the needle (28) stroke as the stack is being built up with succeeding layers having continuous filamentary material such that the needle head is reciprocated without needling completely through the assembly of layers with the layers in an upper region of the stack being subjected to a greater degree of needling than at least some of the other layers in the stack characterised in that an upper layer comprising only staple fibres is added to and needled into the stack with the layers having continuos filamentary material in an upper region of the stack being subjected to a greater degree of needling than at least some of the other layers in the stack, causing a greater number of fibres in the final layer to extend into the adjacent layer than the correspondingly extending fibres of at least some other layers".

VI. In support of its requests the appellant relied essentially on the following submissions:

The appeal was admissible because the sketches referred to in the written statement setting out the grounds of appeal, but filed with the EPO only after expiry of the four-months period of Article 108 EPC, were not essential for understanding the grounds of appeal. Furthermore, it was even possible to reproduce the sketches on the basis of the submissions in said written statement.

As regards inventive step, document D2 represented the

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- 3 -

closest prior art. When the upper layers of the structure according to D2 were subjected to needling, interconnecting fibers were carried down away from the upper layers. Thus, these upper layers were starved of fibers. Moreover, the top layer did not benefit from any connecting fibers from other layers. In order to compensate for the resulting weakness of the upper layers, the usual solution was to add filamentary material in all the layers, thus also in the lower layers which were consequently over-engineered. In contrast thereto, the claimed invention provided a top layer having only staple fibers which was needled into the stack, thereby increasing the strength of the upper layers and at the same time avoiding over-engineering of the lower layers, since the layer of staple fibers had more fibers available as interconnecting fibers than the other layers comprising continuous fibers. Document D3 related to a method of a different kind, wherein needling was carried out only after building up of a stack of layers having on top a layer of staple fibres. Document D7 taught away from the claimed invention because it specifically disclosed to reduce the number of finishing strokes rather than subjecting the layers in an upper region to a greater degree of needling. Neither were there any suggestions in D1 leading to the claimed invention, because D1 disclosed to use only layers of staple fibers. Furthermore, D1 taught to homogenise the density of needling by means of a denser needling of the last lap, thereby carrying connecting fibers deep down into the stack to starve the upper layers of interconnecting fibers. D1 specifically taught to improve the prior art of D7 by providing only layers of staple fibres. Thus, using layers comprising also continuous filaments was against the specific teaching of D1. Finally, document

- 4 -

- 5 -

D4: GB-A-1 549 687,

referred to by respondent III, did not disclose the provision of staple fibers in the top layer.

VII. The respondent II essentially argued as follows.

It was not clear what was intended in the patent in suit with the definition that the layers were subjected to a greater degree of needling. It was also not clear what other degree of needling was to be taken as reference for comparison to decide on such greater degree of needling. The description of the patent in suit disclosed that after adding the final layer comprising only staple fibers the machine was operated through two needling steps without lowering the stack. This did not necessarily result in a greater degree of needling. Furthermore, in claim 3 of the application as filed it was disclosed that the layers in the upper region of the stack were subjected to a greater degree of needling by continuing the needling during a final step after the final layer of material was added to the stack without varying the distance between the bottom of the stack and the bottom of the needle stroke. Since this was the only disclosure of how to obtain a greater degree of needling, these features should be included in claim 1 in order to meet the requirements of Article 123(2) EPC. Furthermore, there was no support in the application as filed for the definition of claim 1 that the greater degree of needling caused a greater number of fibers in the final layer to extend into the adjacent layer than the correspondingly extending fibres of at least some other layers. Claim 17 of the application as filed, referred to by the Board, defined that more fibres were drawn from the

top layer than from the other layers. The text of the claim, however, did not imply that a greater number of fibers in the final layer extended into the adjacent layer than the correspondingly extending fibers of at least some other layers. Neither did it imply that such greater number of fibers extending into the adjacent layer was caused by the greater degree of needling. Furthermore, claim 17 referred to the fibres of the final layer 254 of the embodiment shown in Fig. 15, which final layer was on top of other layers of staple fibres, and not on top of layers comprising continuous filamentary material as in claim 1 of the patent in suit.

In any case, the claimed subject-matter did not involve an inventive step. A greater degree of needling of the upper layers was present in D2 where needling was carried out in an uniform manner, because, as explained in D7, the needles were increasingly effective during the finishing needling strokes. Thus, the subjectmatter of claim 1 was distinguished from D2 only in that the top layer comprised only staple fibers. The provision of this distinguishing feature in the method of D2 was obvious in view of the teaching of document D3 which, contrary to the appellant's interpretation, disclosed to needle together a plurality of filamentary layers to form a fiber shape, and then to add and needle thereon a layer comprising staple fibers, in order to provide interlaminar reinforcement and avoid disruption of the fibers which occurred in the normal needling process. In D2, moreover, the problem of starvation of fibers in the upper layers did not arise. Clearly, less fibers were present in the top layer because some were driven into the stack by the needles. Anyway, the top layer disappeared when the annular

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filamentary structure was machined to its final dimensions.

The starvation problem could not arise in the method of D1, in which only staple fibers layers were used. As in the patent in suit, in D1 the top layer was subjected to a greater degree of needling and, as a consequence, the majority of the fibers of the top layer were carried into the stack. Starting from the prior art of D1, and considering that it made no difference whether in the top layer of the stack only staple fibres were used or rather staple fibres and continuous fibres, since also in the patent in suit as granted such duplex layers could be used, the subject-matter of claim 1 was obvious in view of the teaching of D7 to select the layers according to the requirements of use, in particular to provide layers comprising continuous and discontinuous fibers to improve the mechanical strength of the structure.

VIII. Respondent III concurred with the argumentation of respondent II. The additional submissions of respondent III can be summarized as follows.

> In the written statement setting out the grounds of appeal, reference was made to two sheets of sketches which were filed with the EPO only after expiry of the four-months period of Article 108 EPC. Since the grounds of appeal could only be understood with the help of these sketches that were filed late, the appeal was inadmissible.

> The description of the application as filed disclosed that, by operating the machine to operate through two needling steps without lowering the stack, the majority

of fibers of the final layer was carried into the needled stack. Yet, there was no disclosure of a greater degree of needling in the upper layers. Furthermore, if the definition of claim 1 was based on the description, then it was not allowable under Article 123(2) EPC to extract only some features of the embodiment disclosed, but all the features described in combination should be included in the claim. In particular, the description disclosed that the stack was built up with succeeding annular segments, not with layers as defined in claim 1.

It was not clear whether the upper region of the stack was subjected to a greater degree of needling after or before the upper layer comprising only staple fibers was added to the stack.

In respect of the combination of documents D1 and D7, the specific hint to provide a top layer comprising only staple fibers was found in D4. Thus, the subjectmatter of claim 1 was obvious in view of the combination of the disclosure of documents D1, D7 and D4.

The written request filed during oral proceedings was made to have a record of the appellant's declaration that at least the embodiment disclosed in Figure 15 of European Patent Specification EP 0 546 001 B1 and the accompanying text did not fall under the scope of protection of the claims as amended, in order to provide legal certainty in particular having regard to possible infringement proceedings.

Reasons for the Decision

1. Admissibility

1.1 Respondent III submitted that the grounds of appeal could only be understood with the help of sketches that were filed late, after expiry of the four-months period of Article 108 EPC, and that for this reason the appeal was inadmissible.

> Although the sketches (diagrams 1 to 9) have indeed been filed only on 24 January 2000, ie after expiry of the time limit referred to in Article 108 EPC, in the Board's view these sketches are not necessary for understanding the grounds of appeal. The written statement setting out the grounds of appeal makes it clear that the missing sketches are intended to be schematic representations of stacked layers. Furthermore, the stacked layers of diagrams 1, 2, 3, 8 and 9 are explained in such detail that they can be reproduced, on the basis of the written statement only, as schematic diagrams conveying the same technical information of the diagrams subsequently filed by the appellant. Since it is only these diagrams that are necessary to understand the appellant's grounds of appeal (diagrams 4 to 7 merely showing intermediate structures obtainable by adding each time a further layer), the Board comes to the conclusion that the appeal is sufficiently substantiated.

- 1.2 Since also the further formal requirements are fulfilled, the appeal is admissible.
- 2. Amendments (Article 123 EPC)
- 2.1 Claim 1 is based upon claim 17 of the application as filed which relates to a method of manufacturing a

- 10 -

multilayer filamentary structure comprising the steps of: laying filamentary layers one on top of another and causing a greater number of fibres in the final layer to extend into the adjacent layer than the correspondingly extending fibres of at least some other layers.

The application as filed discloses that the method of the invention is generally intended for the manufacture of an annular assembly (see page 1, lines 8 and 9).

It is clear from the application as filed (see eg page 26, lines 20 ff.) that the building up of the stack of layers and the step, referred to in claim 17, of causing fibres from one layer to extend into an adjacent layer, is carried out as generally specified in claim 3, namely by needle punching the assembly of layers by reciprocating a needling head equipped with needles in a manner such that the assembly of filamentary layers is cross-linked by filaments displaced from the filamentary layers and increasing the distance between the bottom of the stack and the bottom of the needle stroke as the stack is being built up such that the needle head is reciprocated without needling completely through the assembly of layers, with the layers in an upper region of the stack being subjected to a greater degree of needling than at least some of the other layers in the stack.

The application as filed discloses that the succeeding layers have continuous filamentary material (see page 13, lines 26 to 32).

Finally, on page 27, lines 6 to 13, of the description of the application as filed there is disclosed that an

- 11 -

upper layer comprising only staple fibres is added to and needled into the stack with the layers having continuous filamentary material, and that the majority of the fibres in said upper layer are carried into the needled stack by operating the needling machine through two complete revolutions but with the elevation motor switched off so that there is no lowering of the stack of the needled layers. Considering that claim 3 of the application as filed discloses that a greater degree of needling is obtained by continuing the needling during a final step after the final layer of material is added to the stack without varying the distance between the bottom of the stack and the bottom of the needle stroke, the step disclosed in the above-mentioned passage of the description of the application as filed of operating the needling machine through two complete revolutions with the elevation motor switched off, corresponds to the provision of a greater degree of needling in the layers of an upper region. The effect thereby obtained, as disclosed in the above-mentioned passage of the description of the application as filed, is to cause a majority of the fibres in the upper layer to be carried into the needled stack. Therefore, the definition of claim 1 of the patent in suit according to which the greater degree of needling causes a greater number of fibres in the final layer to extend into the adjacent layer than the correspondingly extending fibres of at least some other layers, is supported by the disclosure of the application as filed.

It follows that the combination of features of claim 1 of the patent in suit is supported by the disclosure of the application as filed.

2.2 The respondents submitted that the disclosure in the application as filed according to which after adding the final layer comprising only staple fibres the machine was operated through two needling steps without lowering the stack did not necessarily result in a greater degree of needling. However, the application as filed discloses that such operation of the machine is different from the preceding operation in which the stack descends in stepwise fashion once every revolution of the receptacle (see page 26, lines 20 to 26). Thus, the operation of the machine through two needling steps without lowering the stack corresponds to the step of continuing the needling during a final step without varying the distance between the bottom of the stack and the bottom of the needle stroke, which, as disclosed in claim 3 of the application as filed, results in a greater degree of needling.

> Respondent II further submitted that the features of claim 3 of the application as filed should be included in claim 1, because they were the only disclosure of how to obtain a greater degree of needling. However, independent claim 2 of the application as filed refers to a greater degree of needling but is not limited to the specific manner of obtaining it defined in claim 3.

> Moreover, respondent II argued that the text of claim 17 of the application as filed neither implied that a greater number of fibres in the final layer extended into the adjacent layer than the correspondingly extending fibres of at least some other layers, nor that the greater number of fibres extending into the adjacent layer was caused by the greater degree of needling. However, it is clear from the disclosure of the application as filed, in particular

- 13 -

claim 17 and claim 3 in combination with the disclosure from page 26, line 20 to page 27, line 13, of the description, that a greater degree of needling in an upper region corresponds to a higher number of punching strokes in said upper region with respect to the underlying region of the needled stack, which has as a result that the majority of staple fibres in the final layer are carried into the needled stack and in particular into the adjacent layer (see page 27, lines 11 to 13 of the application as filed), ie that a greater number of fibres in the final layer extends into the adjacent layer than the correspondingly extending fibres of at least some other layers (in particular the lowest layers). Furthermore, the latter definition is explicitly mentioned in claim 17 of the application as filed.

As regards the objection of respondent II that claim 17 referred to the fibres of the final layer 254 of the embodiment shown in Figure 15, which final layer was on top of other layers of staple fibres, and not on top of layers comprising continuous filamentary material as in claim 1 of the patent in suit, the Board observes that there is no doubt for a skilled person that the technical effect referred to in claim 17, causing a greater number of fibres in the final layer to extend into the adjacent layer than the correspondingly extending fibres of at least some other layers, is obtained whenever a final layer is subject to a greater degree of needling, and thus is obtained also in respect of the layer 250 when it forms the final layer of the stack (see page 27, lines 5 to 13).

Respondent III also submitted that the description disclosed that the stack was being built up with

succeeding annular segments, not layers as defined in claim 1 of the patent in suit. However, independent claim 17 explicitly refers to layers, and the description explicitly refers to layers of segments (see eg page 27, lines 5 to 8).

- 2.3 Dependent claim 2 defines the additional features of claim 8 of the application as filed.
- 2.4 The description is amended to be in conformity with the new claims.
- 2.5 It follows that all the amendments made are allowable under Article 123(2) EPC.
- 2.6 Claim 1 has been restricted, with respect to granted claim 1, by the addition of further features, in particular by the inclusion of the features of dependent claim 3 as granted.

Therefore, the amendments do not result in an extension of the protection conferred (Article 123(3) EPC).

- 3. Clarity (Article 84 EPC)
- 3.1 In the Board's view, the claims are clear, concise and supported by the description. Therefore, they meet the requirements of Article 84 EPC.
- 3.2 Respondent II submitted that it was not clear what was meant by greater degree of needling and what other degree of needling was to be taken as reference for comparison to decide on such greater degree of needling.

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- 15 -

In the Board's view the skilled person reading claim 1 of the patent in suit would consider that the degree of needling is related to the needling action of the needle head, since the latter is explicitly mentioned in claim 1. Thus, the skilled person would come to the conclusion that the greater degree of needling implies an increased needling action of the needle head, ie a greater number of strokes of the needle head. Furthermore, this interpretation is clearly supported by the description of the patent in suit, which discloses (see column 16, lines 43 to 51) that after an upper layer comprising only staple fibres is added to the stack of layers, the needling machine is operated through two needling steps without lowering the stack, thereby providing a number of needling strokes in said upper layer which is greater than the number of needling strokes in at least some underlying layers. Furthermore, the definition of claim 1 is clear in respect of what other degree of needling is to be taken as reference for comparison to conclude on a greater degree of needling in the final layer, since claim 1 specifies that such degree is greater than that of at least some of the other layers in the stack.

Respondent III argued that it was not clear whether the upper region of the stack was subjected to a greater degree of needling after or before the upper layer comprising only staple fibres was added to and needled into the stack. However, it is clear from the text of claim 1 that the step of needling an upper layer comprising only staple fibres is carried out in a manner such that the layers having continuous filamentary material in an upper region of the stack are subjected to a greater degree of needling, ie that the upper region of the stack is subjected to a greater

degree of needling when the upper layer comprising only staple fibres is needled into the stack. Also this interpretation is supported by the description of the patent in suit (see the passage on column 16, lines 43 to 51 referred to above).

4. Novelty

Novelty of the claimed subject-matter follows from the fact that none of the cited documents discloses a method of manufacturing an annular multilayer filamentary structure comprising needle punching at least three filamentary layers comprising continuous filamentary material stacked one on top of another and further needling into the stack an upper layer comprising only staple fibres with the layers having continuous filamentary material in an upper region of the stack being subjected to a greater degree of needling than at least some of the other layers in the stack.

Novelty was in fact not in dispute.

5. Inventive step

5.1 The technical problem underlying the patent in suit consists in providing a method of manufacturing an annular multilayer filamentary structure having layers comprising continuous filamentary material which has high fibre density and good resistance to inter laminar weaknesses (see column 1, line 50 to column 2, line 15 of the patent in suit).

5.2 Document D2 represents the closest prior art because it discloses a method which aims at the same objective of improving the resistance to inter laminar weaknesses of filamentary structures comprising continuous filamentary material (see D2, page 2, second paragraph).

> Using the wording of claim 1, D2 discloses a method of manufacturing an annular multilayer filamentary structure (see page 1, line 7) comprising the steps of: laying at least three filamentary layers which layers comprise continuous filamentary material one on top of another and needle punching the assembly of layers by reciprocating a needling head equipped with needles in a manner such that the assembly of filamentary layers is cross-linked by filaments displaced from the filamentary layers (see claim 9) and increasing the distance between the bottom of the stack and the bottom of the needle stroke as the stack is being built up with succeeding layers having continuous filamentary material such that the needle head is reciprocated without needling completely through the assembly of layers (see claim 10) with the layers in an upper region of the stack being subjected to a greater degree of needling than at least some of the other layers in the stack (see page 26, lines 17 to 24: the described mode of operation necessarily results in that the lowest layer is subjected to less needling strokes than the upper layers).

5.3 The above mentioned technical problem is solved, in accordance with the definition of claim 1, by adding and needling into the stack an upper layer comprising only staple fibres with the layers having continuous filamentary material in an upper region of the stack

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- 17 -

being subjected to a greater degree of needling than at least some of the other layers in the stack, causing a greater number of fibres in the final layer to extend into the adjacent layer than the correspondingly extending fibres of at least some other layers.

5.4 Document D3 discloses (see claim 1) a method for producing a laminated reinforced article comprising the steps of: forming a fibre shape of a plurality of woven cloth layers of carbon fibres; providing, over the surface of the fibre shape, a layer of chopped fibres (ie staple fibres, see column 3, lines 47 to 49); and needling the layers. In the Board's view, it is not clear from the text of D3 whether needling is carried out before or after the layer of chopped fibres is added. The description (see column 2, lines 47 to 54) discloses that the layer of chopped fibres is provided over the surface of the fibre shape and that needling is carried out, but fails to specify whether the fibre shape was already needled before. Claim 3 of D3 states that the fibre shape is needled a first time and additional layers of fibres are added and needled thereto. However, the expression "fibre shape" indicates the assembly of the layers both without (see claim 1, step 1) as well as with the chopped fibres (see claim 1, step 4: the fibre shape is impregnated with a carbonizable binder only when it is completed with the layer of chopped fibres). Thus, in view of the absence of a clear teaching of the step of needling a layer of staple fibres into a - previously - needled stack of woven cloth layers, it must be concluded that document D3 could not give a clear indication to the skilled person to modify the method known from document D2 by way of providing an additional upper layer comprising only staple fibres and then further needling

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- 18 -

- 19 -

the thus obtained stack.

Furthermore, the disclosure of D3 would rather teach away from the step of needling the fibre shape of woven cloth layers before adding the layer of chopped fibres. D3 teaches that the chopped fibres are deposited within the fibre shape to provide interlaminar reinforcement, whereby the needle barbs, being loaded with chopped fibres, cannot engage the fibres of the shape and thus disruption of the fibre system is avoided (see column 2, lines 52 to 56). On the basis of this disclosure, the skilled person would consider that, if the fibre shape were needled before depositing the chopped fibres, disruption of the fibre system would occur, which could not be remedied by the subsequent needling of the chopped fibres.

Moreover, D3 does not give any information about the amount of needling strokes for each layer and therefore does not disclose that the layers in an upper region of the stack are subjected to a greater degree of needling than at least some of the other layers in the stack

Document D1 relates to a method of manufacturing an annular multilayer filamentary structure comprising needle punching at least three carded fibre layers (see page 3, lines 24 to 33). Document D7 discloses a process of manufacturing filamentary structures formed by superposing flat layers of fibrous material bonded together by needling. D7 teaches that the layers may be supplied in different forms, particularly depending on the proposed application. For example, the fibrous material may be at least partly constituted by a layer of discontinuous fibres obtained by carding or by a layer of continuous fibres (page 3, lines 8 to 17).

However, there are no indications either in D1 or in D7 that would suggest to the skilled person that any technical effects might be obtained by needling an upper layer comprising only staple fibres onto the stack of layers of D1 having continuous filamentary material, with the layers having continuous filamentary material in an upper region of the stack being subjected to a greater degree of needling than at least some of the other layers in the stack.

Neither is such modification of the method known from D1 suggested by the remaining available prior art.

5.5 The respondents submitted that the combination of D1 and D7, possibly having regard also to the disclosure of D4, would lead in an obvious manner to the subjectmatter of claim 1 of the patent in suit.

> As explained above, document D1 relates to a method of manufacturing an annular multilayer filamentary structure comprising needle punching at least three carded fibre layers (see page 3, lines 24 to 33). D1 generally discloses to form a stack by laying several identical layers one on top of another. D7 teaches to select the fibrous material depending on the proposed application. For example, the fibrous material may be at least partly constituted by a layer of discontinuous fibres obtained by carding or by a layer of continuous fibres (page 3, lines 11 to 18). However, there is no indication in D7 to specifically select, for the layered structure of D1, an upper layer comprising staple fibres on top of a stack of layers comprising continuous filamentary material.

D4 discloses to distribute on the surfaces of woven

layers loose staple fibres to be punched into the stack during the needle-punching operation (see page 2, lines 88 to 92). However, in contrast to the definition of claim 1 of the patent in suit, it does not disclose to provide the staple fibres on a stack of needled layers comprising continuous filamentary material.

- 5.6 It follows that the subject-matter of claim 1 is found to involve an inventive step.
- 6. Therefore, independent claim 1 together with dependent claim 2 and the description as amended during the oral proceedings of 12 December 2002, and the figures as granted, form a suitable basis for maintenance of the patent in amended form.
- 7. The written request of respondent III
- 7.1 Respondent III requested that the minutes of oral proceedings before the Board of Appeal mention the declaration of the appellant that at least the embodiment disclosed in Figure 15 of the patent in suit does not fall under the scope of protection of the claims.

According to Rule 76 EPC minutes of oral proceedings shall be drawn up containing the essentials of the oral proceedings and the relevant statements of the parties.

During the oral proceedings before the Board the respondent admitted that certain embodiments disclosed in the patent in suit did not fall within the scope of the claims and accordingly filed amended documents for maintenance of the patent in amended form. In these amended documents it is clearly stated that the embodiment of Figure 15 does not fall under the scope of protection of the claims. Thus, the admission of the appellant was in respect of a version of the patent in suit which no longer corresponds to the actual request for which it has become superfluous in view of the amendments made, and therefore cannot constitute a relevant statement in the sense of Rule 76(1) EPC.

- 7.2 The Board observes that it is not the task of any of the departments of the EPO to include statements in the minutes of oral proceedings with the sole purpose of providing information concerning the extent of protection conferred by the patent in suit in respect of possible infringement proceedings. This issue is the exclusive jurisdiction of the national courts pursuant to Article 138(1)(d) EPC in conjunction with Article 69 EPC and the Protocol on the interpretation of Article 69 EPC.
- 7.3 It follows that the Board does not see any requirement or necessity to incorporate the requested statement in the minutes of the oral proceedings held before the Board.

Order

For these reasons it is decided that:

- 1. The decision under appeal is set aside.
- 2. The request of respondent III concerning the text of the minutes is rejected.
- 3. The case is remitted to the first instance with the order to maintain the patent on the basis of the following documents:
 - claims: 1 and 2, filed during oral proceedings;

description: columns 1, 2, 17 and 18, filed during
oral proceedings;
columns 3 to 16, as granted;

drawings: Figures 1 to 15, as granted.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau