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Datasheet for the decision of 3 June 2022

Case Number: T 2754/19 - 3.3.06

Application Number: 11174751.5

Publication Number: 2397320

IPC: B32B5/24, B32B5/26, B32B27/12

Language of the proceedings: EN

Title of invention:
Thermoplastic non-woven textile elements

Patent Proprietor:
NIKE Innovate C.V.

Opponent:
ADIDAS AG

Headword:
Thermoplastic non-woven/NIKE

Relevant legal provisions:
EPC Art. 123(2), 56

Keyword:
Amendments (main reqeust and 1. to 8. auxiliary requests) - allowable (no)
Inventive step (9. to 14. auxiliary requests) - obvious solutions to two partial problems

Decisions cited:

Catchword:

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Beschwerdekammern

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Case Number: T 2754/19 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 3 June 2022

Patent Proprietor: (Appellant 1)	NIKE Innovate C.V. One Bowerman Drive Beaverton, OR 97005-6453 (US)
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Representative:	Haupt, Christian Bardehle Pagenberg Partnerschaft mbB Patentanwälte, Rechtsanwälte Prinzregentenplatz 7 81675 München (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 26 July 2019 concerning maintenance of the European Patent No. 2397320 in amended form.**

Composition of the Board:

Chairman	J.-M. Schwaller
Members:	P. Ammendola
	R. Cramer

Summary of Facts and Submissions

I. The appeals by the patent proprietor and the opponent are from the interlocutory decision of the opposition division maintaining European patent No. 2 397 320 in amended form according to auxiliary request 9 filed during the oral proceedings of 4 July 2019.

II. Claim 1 of the main request that the opposition division found to contravene Article 123(2) EPC, reads as follows:

"*1. A method of manufacturing a composite element, the method comprising:*
locating two layers of non-woven textile (100) on opposite sides of a component (120), wherein the component includes a first thermoplastic polymer material, wherein the component includes a polymer foam material and each of the two layers being formed from a plurality of filaments (103) that include a second thermoplastic polymer material; and
heating and compressing the component and the two layers of non-woven textile so as to melt both the first thermoplastic polymer material of the component and the second thermoplastic polymer material of the filaments in each of the two layers so as to heatbond the component to each of the two layers of non-woven textile with the thermoplastic polymer material, and wherein the thermoplastic polymer materials of the two layers and the component intermingle with each other to form the heatbond; and
heatbonding the two layers of non-woven textile (100) to each other around a perimeter of the component (120)."

The feature "*heatbonding the two layers ... the component (120)*" defined in the final passage of this claim is hereinafter referred to as **L/L heatbonding**.

Each version of claim 1 according to the 1st to 8th auxiliary requests, also found to contravene Article 123(2) EPC, comprises the passage defining the L/L heatbonding. None of these versions of claim 1 specify that the "*component*" is in the form of a layer.

Claim 2 according to the **9th auxiliary request** (i.e. maintained claim 2) reads:

"2. *A composite element comprising:*
two layers of a non-woven textile (100) formed from a plurality of filaments (103) that include a first thermoplastic polymer material, each of the non-woven textiles having a first surface (101) and an opposite second surface (102); and
a component (120) located between the two layers of non-woven textile, the component being a foam layer (150) formed from a foamed polymer material that is a second thermoplastic polymer material;
wherein the component is heatbonded to the second surface of each of the two layers with the thermoplastic polymer material by melting both the first thermoplastic polymer material of the filaments in each of the two layers of non-woven textile and the second thermoplastic polymer material in the component, wherein the thermoplastic polymer material and the thermoplastic polymer foam material intermingle to secure the component to the second surface; and
wherein the two layers of non-woven textile (100) are heatbonded to each other around a perimeter of the component (120)."

III. With its statement of grounds of appeal the proprietor filed twelve sets of claims labelled as **main request** and **1st to 11th auxiliary requests**, whereby the main and 1st to 9th auxiliary requests correspond to the requests with the same numbering decided upon in the decision under appeal.

Claim 2 according to the **10th auxiliary request** differs from the maintained claim 2 by the following amendment (made apparent):

"*... the component being a foam layer (150) formed from a foamed polymer material that is a second thermoplastic polymer material;*
wherein stitching is absent from an area extending through the non-woven textile (100) and the component (120);
wherein the component is heatbonded ..."

Claim 2 of the **11th auxiliary request** differs from claim 2 of the 10th auxiliary request by the appended wording:

"*...; and*
wherein an adhesive is absent from an area between the second surface of each of the two layers on non-woven textile (100) and the component (120)".

IV. With its statement of grounds of appeal the opponent argued that the opposition division incorrectly exercised its discretion by allowing late-filed auxiliary request 9 into the proceedings, that the claims of this request did not comply with Article 56 EPC, in particular because the subject-matter of claim 2 was obvious in view of the combination of

D15 (JP H0776052, and its English translation **D15b**) with **D24** (WO 98/27908 A1).

V. With their reply to the other party's appeal:
- the proprietor disputed the objections to the 9th auxiliary request,
- the opponent raised, *inter alia*, objections under Articles 123(2) and 56 EPC against each of the main and of the 1st to 8th and 10th and 11th auxiliary requests, and it challenged the admittance of the 10th and 11th auxiliary requests because they were "apparently not a response to the impugned decision as acknowledged by proprietor".

VI. With letter of 6 May 2022 the proprietor filed three sets of claims labelled **12th to 14th auxiliary requests**, with claim 1 being identical to claim 2 of the 9th to 11th auxiliary requests respectively.

VII. With letter of 30 May 2022 the opponent objected to the admittance into the appeal proceedings of the 12th to 14th auxiliary requests.

VIII. At the oral proceedings held on 3 June 2022 the parties final requests were established to be as follows:

The **proprietor** requested that the decision under appeal be set aside and that the patent be maintained on the basis of the claims of the **main request** or of one of the **1st to 8th auxiliary requests**, all filed with the statement of grounds of appeal, or that the appeal of the opponent be dismissed (**9th auxiliary request**), or that the patent be maintained on the basis of the claims of the **10th or 11th auxiliary request** filed with the statement of grounds of appeal, or on the basis of

the claims of one of the **12th to 14th auxiliary requests** filed with letter of 6 May 2022.

The **opponent** requested that the decision under appeal be set aside and the patent be revoked.

Reasons for the Decision

1. Admittance

The opponent requested the board to overrule the decision of the opposition division to admit the 9th auxiliary request filed at the oral proceedings and objected to the admittance into the appeal proceedings of each of the 10th to 14th auxiliary requests.

1.1 As regards the 9th auxiliary request, the board finds that in view of the reasons given in point 13.1, the opposition division's decision to admit this request was not taken according to wrong principles, or without taking into account the right principles, or in an unreasonable way. Furthermore, where a request has been admitted by the opposition division, and the decision under appeal has been based on this request, it can normally not be excluded from the appeal proceedings (see e.g. T 467/15, reasons Nr. 3.1). Hence, the board decided not to overrule the admittance of this request.

1.2 The 10th and 11th auxiliary requests, which have been filed with the statement of grounds of appeal of the proprietor and after the opponent had filed its notice of appeal, are based on combinations of amendments already present in the claims of requests decided upon in the decision under appeal. As there is no provisions in the RPBA 2007 stating that requests are only to be admitted in appeal if they are a response to the

impugned decision, the board saw no reason to disregard them under the provisions of Article 12(4) RPBA 2007.

1.3 The versions of claim 1 in each of auxiliary request 12 to 14 correspond to the versions of claim 2 of the 9th to 11th auxiliary requests, respectively. Hence, the board's conclusions reached during the oral proceedings that claim 2 of the 9th to 11th auxiliary requests lacked an inventive step (Article 56 EPC), rendered immediately apparent that the same conclusions would also necessarily render not allowable any of the 12th to 14th auxiliary requests. Thus, there was no need for the board to take a decision on the disputed admittance into the proceedings of these auxiliary requests.

2. Main request - Article 123(2) EPC

The opposition division found that the original description of the patent application on which the opposed patent is based, only disclosed L/L heatbonding in connection with the feature that the "*component*" must be a "*foam layer formed from a thermoplastic polymer*". As claim 1 of the main request described the L/L heatbonding but did not express the latter feature, the opposition division concluded that this claim contravened Article 123(2) EPC.

2.1 The proprietor disputed this finding submitting in essence that L/L heatbonding is originally disclosed to also occur when the "*component*" includes a polymer foam material or a thermoplastic polymer material and, thus, did not need to necessarily be in the form of a "*layer*". It referred to the manufacturing method as originally described with reference to Figures 12A-C in the 3rd paragraph on page 25 of the application as

filed which, in its opinion, was to be read in the context given by the other original disclosure referring to Figures 12A-C in the section "*V - Composite Elements*" on pages 19 to 22 of the description as filed. The proprietor pointed in particular to the "first example" and the "third example" originally described from page 21, 2nd paragraph to page 22, last paragraph. It additionally stressed that clause 79 on page 59 of the application as filed described, also with reference to the preceding clause 75, that the L/L heatbonding of the manufacturing method of the invention did not require the "*intermediate element*" (which manifestly corresponded to the "*component*" in claim 1 under consideration) to have any specific form. Finally, it submitted that the wording of claim 1 at stake necessarily implied that the "*component*" to be used in the claimed method had to be in the form of a "*layer*", as this would be the sole technically conceivable form that allowed to heatbond the two layers of non-woven textile to the opposite sides of the component sandwiched in-between, as also required in claim 1.

2.2 The board notes that the 3rd paragraph on original page 25 of the application (whose sole passage describing the L/L heatbonding reads: "*[a]dditionally, the two layers of non-woven textile 100 may be heatbonded to each other around the perimeter of foam layer 150. That is, heatbonds may also be utilized to join the two layers of non-woven textile 100 to each other*") only discloses the L/L heatbonding in connection with a manufacturing method in which the used component is described as "*foam layer 150*". This is undisputed.

It is also true that the same paragraph starts with the wording: "*A process similar to the process discussed above relative to Figures 12A-12C may be utilized to form the heatbonds between the two layer of non-woven textile 100 and foam layer 150.*"

2.2.1 Hence the board finds, as correctly pointed out by the proprietor, that a skilled person would also take into consideration the remaining disclosure relating to the process of Figures 12A-C, i.e. the disclosure of preceding section "*V-Composite Elements*" on pages 19 to 22 of the description as filed, in which a single non-woven textile 100 is heatbonded to the "*component 120*" .

The board notes however that, while in Figures 12A-C the component "*120*" has the elongated form that can be described as layer (or sheet, or plate, etc.), in this whole section "*V*" there is no teaching describing the form of the "*component*" and, in particular, the specific passages therein referred to by the proprietor only disclose alternatives as to the chemical constituents of the "*component*".

Accordingly, even if the passages describing the "*first example*" and the "*third example*" in the last paragraph on page 20 and in the 1st paragraph on page 21, are combined with the description of the L/L heatbonding on page 25, this combination would at most justify the conclusion that the "*component*" described as a "*foam layer 105*" in the 3rd paragraph on page 25 would also be originally disclosed as possibly being at least partially formed from a thermoplastic polymer material or as possibly being a polymer foam material. Hence, also such combination would not teach the possibility for the "*foam layer 150*" described in the 3rd paragraph

on page 25 to have other forms, possibly also substantially different from that of a "*layer*".

2.2.2 The board additionally finds of no relevance for the present issue the proprietor's further argument that the original disclosure of the L/L heatbonding provided by clause 79 and by clause 75 (to which clause 79 refers) would relate to a manufacturing method that did not impose any restriction as to the form of the "*intermediate element*" used therein. In fact, even assuming in favour of the proprietor that this "*intermediate element*" would appear to the skilled person to be the same as the "*component*" used in the manufacturing method defined in claim 1 under consideration or in the 3rd paragraph on page 25 of the original description, still such original disclosure relates to a manufacturing method in which the intermediate element is only required to comprise a thermoplastic polymer material and in which the L/L heatbonding is specified (in the clause 79) to occur "*in the step of heating and compressing*" (emphasis added), i.e. a wording that can only plausibly be referring to the step already described in the preceding clause 75 in which heatbonding is formed between the opposite sides of the intermediate element/component and the two layers of non-woven textile (hereinafter the **L/C/L heatbonding**).

Hence the disclosure provided by the combination of clauses 79 and 75 appears to be not directly related to the manufacturing method originally disclosed in the 3rd paragraph on page 25 (in which the component is instead a "*foam layer*") and thus, cannot be considered to directly and unambiguously disclose the possibility that also in the manufacturing method on page 25 the intermediate element/component might possess any form.

Nor can clauses 79 and 75 provide *per se* a basis for the manufacturing method of claim 1 of the main request, as in this claim the "*component*" is also required to comprise a "*polymer foam material*" and there is no indication as to the step in which L/L heatbonding must occur.

2.2.3 The board finally observes that, contrary to the proprietor's submissions, claim 1 of the main request does not necessarily imply that the "*component*" is (in the form of) a "*layer*".

In the board's view the fact that the claimed method, as stressed by the proprietor, requires to heatbond the two layers of non-woven textiles on opposite sites of the "*component*" sandwiched in-between, only implies the mandatory presence in the "*component*" of a pair of "*opposite sides*" onto which two layers of non-woven textiles may be located and then subjected to heating and compressing, thereby leaving completely open any other aspect of the form of the "*component*". In fact, even objects having forms completely different from that of a layer may show in a part of them a pair of opposite sides.

Hence, this claim encompasses embodiments where the component has not the form of a layer, but e.g. a pronounced three-dimensional shape, as also stressed by the opposition division in the 5th paragraph on page 10 of the decision under appeal.

2.3 The board concludes therefore that claim 1 of the main request finds no basis in the referred passages of the original application, at least for the reason that the former fails to recite that the "*component*" to be used

in the claimed manufacturing method must be in the form of a "*layer*".

Thus, the main request is found to contravene Article 123(2) EPC, and must be refused.

3. 1st to 8th auxiliary requests - Article 123(2) EPC

The board notes that each claim 1 of these requests comprises the same definition of the L/L heatbonding as provided in claim 1 of the main request. Moreover, it is apparent that none of these versions of claim 1 specifies that the "*component*" is a "*layer*".

As none of the submissions submitted in writing by the proprietor as to the compliance of these versions of claim 1 with Article 123(2) EPC address specifically the omitted indication that the "*component*" must be in the form of a "*layer*", the same reasons given above for the finding that claim 1 of the main request contravenes the requirements of Article 123(2) EPC, also necessarily apply to each version of claim 1 according to any of the 1st to 8th auxiliary requests. Thus, also these auxiliary requests must be refused.

4. 9th auxiliary request - Inventive step of maintained claim 2 (Article 56 EPC)

4.1 The closest prior art

It is common ground between the parties that the closest prior art is represented by the laminated structure described in D15 (Figure 1 in combination with the abstract, claim 1 or claim 9) and, in particular, by the element according to Embodiment 1 described in paragraphs [0019] to [0021]. This

laminated structure element is prepared by locating on both surfaces of a polystyrene foam board two non-woven fabric sheet-like materials comprising short polyester fibers, some of which also have a sheath of polystyrene. This assembly is then subjected to heat and pressure for 30 seconds in a heat press machine in which the temperature of the surface of the iron plate is 105°C, so as to "fuse" the layers (presumably also "to" or "onto" the surface of the polystyrene foam board, see the wording used in the abstract and in claim 9 of D15).

The proprietor stressed that the temperature used to form this prior art element would be just above the "Tg" of polystyrene and thus, would be sufficient to only soften, but not to melt, the polystyrene present in the foam board and in the short fibers.

4.1.1 The board agrees with this analysis and thus also finds that the subject-matter of claim 2 under consideration differs from the prior art of departure in the following two features:

a) the L/C/L heatbonding has been obtained by melting the thermoplastic polymers present in the different layers (whereas in the prior art of departure it can only plausibly be presumed that the polystyrene in the short fibers and in the foam board is softened), and

b) the two layers of non-woven textile have also been directly heatbonded to each other around the perimeter of the foam layer.

4.1.2 The proprietor argued that the claimed composite element would also additionally differ from the prior art because the L/C/L heatbonding obtained by melting

the thermoplastic polymer materials at the interfaces would allow these materials to "*intermingle*" (see claim 2 under consideration). Instead, in the prior art of departure the described heatbonding by heating and pressing would not ensure that the softened polystyrene polymer materials intermingle.

The board preliminarily notes that the term "*intermingle*" is intrinsically vague, all the more when, as in the present case, it is used to qualitatively describe the mixing possibly occurring when two possibly very viscous polymer materials in a fluid state are shortly pressed one against the other. Hence, the proprietor's attempt to consider this vague term as representing a distinguishing feature of the composite element of claim 2 amounts to a mere allegation, not supported by any evidence. Moreover such allegation is manifestly at odds with the repeated teachings in the patent in suit that elements can be intermingly heatbonded (when thermoplastic polymer materials are present in both elements to be joined) by "*softening or melting*" the thermoplastic materials (see e.g. the whole content of paragraph [0041] of the opposed patent).

Hence, the board concludes that the heat pressing (at a temperature at which the polystyrene in the short fibers and in the foam board is softened) occurring in the prior art of departure would also inevitably allow these polystyrenes to "*intermingle*" to some extent, in the sense in which this vague term is also used in claim 2 at stake.

4.1.3 Accordingly, the claimed composite element is only found to differ from the prior art of departure in the two features a) and b) identified above.

4.2 The technical problem solved and its solution

4.2.1 The proprietor stressed that paragraph [0004] of the patent states that the invention would enable decreasing waste while increasing manufacturing efficiency and recyclability by decreasing the number of elements and materials utilised in a product. Furthermore, the different layers of the composite element of claim 2 of the 9th auxiliary request would be connected by the strong intermingling heatbond by melting which renders additional fixation means (e.g. stitching, adhesive, etc.) unnecessary. On the contrary, in the prior art of departure the L/C/L heatbonding was only achieved by softening the polystyrene materials and thus was less durable. Finally, the heatbonding of the two layers of non-woven textile around the perimeter of the "*component*" would enable a smooth transition between areas with and without the component and thus, to further increase the overall product quality.

In view of the above, the proprietor identified the technical problem solved by the subject-matter of claim 2 under consideration in making available a composite element of high quality that comprised a durable layer connection and that could be manufactured in a simplified process that decreases waste.

4.2.2 It is however apparent to the board that the laminated structure of the prior art of departure already undisputedly requires no adhesive or stitches to join its different parts and results from a single heating and compressing method, thus its manufacturing process does not appear to necessarily be more complex or to produce more waste than the method by which the claimed composite element is manufactured.

Moreover, the proprietor's further argument that the L/C/L heatbonding obtained by melting that is present in the claimed composite element would be more durable than the heatbonding possibly present in the prior art as a consequence of the heating and pressing at a temperature sufficient to only soften the polystyrene present therein also amounts to an unsupported allegation, by the way disputed by opponent. Moreover, it appears unconvincing in view of the fact that the wording of claim 2 does not impose any direct or indirect limitation as to the kind of thermoplastic polymer materials to be used, the minimum extent to which these materials must be compressed or melted or must "intermingle", nor comprises any other limiting feature rendering plausible that the durability of the L/C/L heatbonding must across the whole scope of claim 2 be plausibly superior to that of the hot pressed laminate structure of Embodiment 1 of D15.

Finally, the board stresses that the claimed composite element is not required to be suitable for a specific application. Rather to the contrary, it is apparent from paragraph [0001] of the patent in suit that the technical field to which the patent belongs covers the most diverse products including, among others, articles of apparel, containers, upholstery of furniture, automotive and aerospace applications or industrial apparels that protect or insulate against heat and radiation.

Thus, the fields of applicability of the composite element of claim 2 at stake also overlap with those described for the structured laminate element in D15, for which diverse products are mentioned including automobile ceiling materials, room interior materials,

furniture items or even bags (see paragraph [0044] of D15).

In conclusion, it is not apparent which advantageous properties should be plausibly displayed by the composite element of claim 2 at issue that would not already be present in the structured laminate disclosed in Embodiment 1 of D15.

Therefore, it is not plausible that the claimed composite element solves the technical problem suggested by the proprietor vis-à-vis the prior art.

4.2.3 The board finds instead convincing the opponent's line of reasoning that starts from the observation that the features a) and b) identified above as characterising the subject-matter of claim 2 under consideration vis-à-vis the prior art are not disclosed in the patent in suit to contribute any specific technical advantage, let alone to synergistically contribute to the same technical advantage.

Hence, the technical problem solved may be identified by the following two partial technical problems, separately solved by the two distinguishing features:

A) the first problem of providing an alternative to the prior art of departure, solved by the characterising feature a) of claim 2 under consideration (i.e. that the L/C/L heatbonding has been obtained by melting the thermoplastic polymers);

B) the second problem of preventing that the foam layer sandwiched in a multilayer composite element (such as the polystyrene foam board sandwiched in the layered structure of Embodiment 1 of D15) is exposed at the

edge of the latter, solved by the characterising feature b) of claim 2 under consideration (i.e. by the heatbonding of the two layers of non-woven textile to each other around the perimeter of the foam).

4.3 Obviousness of the solution

4.3.1 The board notes that a skilled person starting from Embodiment 1 of D15 and searching for an alternative to the prior art of departure (i.e. addressing the partial technical problem A) identified above) would be aware of the possibility to use other sorts of thermoplastic polymer materials, different from polystyrene (which is an amorphous thermoplastic polymer material). The existence of such common general knowledge is undisputed.

Nevertheless, the board considers it appropriate to also stress that its existence appears to be also implicitly confirmed by the argument of the proprietor (raised in the discussion of the objection based on Article 83 EPC) that the claimed invention would be sufficiently disclosed in the opposed patent, in spite of the indisputable absence therein of any information as to how to set the appropriate heating and compressing conditions required for heatbonding any of the substantially different thermoplastic polymer materials encompassed by the broad list recited in paragraph [0012] of the opposed patent (see in particular the passage therein reading: "*examples of some suitable thermoplastic polymer materials include thermoplastic polyurethane, polyamide, polyester, polypropylene, and polyolefin*").

In the board's view, the skilled person would also consider it self-evident that the heatbonding required

for generating layered structure elements similar to those of departure but based on other thermoplastic polymer materials, necessarily requires heating the regions to be joined at a temperature which depends on whether the polymer material is amorphous or semicrystalline:

- when the layers and foam board to be joined are made of amorphous polymers, their interfaces must be brought to a temperature above the relevant Tg, i.e. the temperature at which the amorphous polymer materials soften,
- when the layers and foam board to be joined are made of semicrystalline polymers, their interfaces must be brought to a temperature above the relevant Tm, i.e. the melting temperature of the semicrystalline polymers.

The board stresses that the existence of this common general knowledge is not only apparent from D14 (see section 1.4 on page 4) but also implied by the repeated teaching in the granted patent that the intermingling heatbonding involves to melt or to soften the thermoplastic polymer material at the interface of the two parts to be joined (see e.g. paragraph [0041] of the opposed patent already cited above).

It would therefore be immediately apparent to the skilled person starting from D15 that substantially the same heatbonding that exists in Embodiment 1 of D15 between the non-woven layers comprising short fibers with a sheath of polystyrene, and the polystyrene foam board, can also be obtained between similar non-woven layers and foam boards made of thermoplastic semi-crystalline polymer materials: it is sufficient to ensure that the thermoplastic semicrystalline polymer materials at their interfaces are melted.

Hence, the common general knowledge reflected in D14 (also implied in the opposed patent) renders it obvious to solve the partial technical problem A) by simply replacing the polystyrene (present in the short fibers and in the foam board of the prior art of departure) with any thermoplastic semicrystalline polymer material. In making such obvious modification to the prior art, the skilled person would already know that the desired heatbonding of the different layers requires to melt the thermoplastic semi-crystalline polymer material at their interfaces, thereby necessarily arriving at feature a) of claim 2 under consideration.

4.3.2 The board notes further that a skilled person starting from Embodiment 1 of D15 and aiming at preventing that the foam layer sandwiched in this layered structure element remains exposed at the edge of the latter (i.e. addressing the partial technical problem B) identified above) would search for a solution to this problem in any prior art element in which a foam element sandwiched between two non-woven textile layers has been protected from being exposed laterally. Thus, the skilled person would also search for a solution to the posed partial problem in the field of sanitary disposal, thereby finding e.g. in D24 the teaching to heatbond the two layers of non-woven textile to each other around the perimeter of the foam.

The proprietor disputed this reasoning by arguing that a skilled person would not combine the teachings in D15, which would relate to rigid layered structures, with those relating to flexible sanitary products described in D24.

However, this argument is unconvincing since the teachings of D15 are not limited to hard and rigid products but also embrace possibly flexible products such as furniture items or bags (see again paragraph [0044] of D15).

As claim 2 under consideration does not impose any restriction as to the use of the claimed composite element, the board finds also the proprietor's final argument unconvincing that the subject-matter of claim 2 would in particular relate to products such as garments or shoes (and thus imply a particular level of durability of the L/L heatbonding around the perimeter of the foam layer, not present in the corresponding L/L heatbonding around the perimeter of the foam layer described in D24).

Hence, the combination of D15 with D24 renders it obvious to the skilled reader to solve the partial technical problem B) by directly heatbonding to each other the two non-woven textile layers around the perimeter of the foam board, i.e. renders obvious the modification of the prior art of departure leading to feature b) of claim 2 under consideration.

4.4 Therefore the modifications of the prior art disclosed in D15 required to arrive at the claimed composite element are found to represent a solution to the two partial technical problems identified above that is obvious in view of the combination of the disclosure in document D15 with respectively the common general knowledge reflected in D14 and the disclosure in D24.

4.5 Accordingly, the subject-matter of maintained claim 2 is found not to involve an inventive step. Thus, the

9th auxiliary request is found to contravene Article 56 EPC, and must be refused.

10th to 14th auxiliary requests

5. Inventive step of claim 2 of auxiliary requests 10 and 11

The board notes that each of these versions of claim 2 only additionally specify (in comparison to maintained claim 2) the absence of stitching or the absence of stitching and of an adhesive.

As the prior art of departure (i.e. Embodiment 1 of D15) undisputedly already requires neither stitching nor an adhesive in the layered structure elements, the same reasons given above for the finding that claim 2 of the 9th auxiliary request contravenes the requirements of Article 56 EPC also necessarily apply to each version of claim 2 according to the 10th and 11th auxiliary requests. Thus, also these auxiliary requests must be refused under Article 56 EPC.

6. Inventive step of claim 1 of auxiliary requests 12 to 14

The versions of claim 1 of these requests are identical to claim 2 of the 9th to 11th auxiliary requests, respectively.

Hence it is immediately apparent and undisputed that the same reasons given above for the finding that claim 2 of the 9th to 11th auxiliary requests contravene the requirements of Article 56 EPC, also necessarily apply to each version of claim 1 according to the 12th to

14th auxiliary requests (independently of their admissibility, see also 1.3 above).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

A. Pinna J.-M. Schwaller

Decision electronically authenticated