

Internal distribution code:

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

D E C I S I O N
of 12 December 2001

Case Number: T 0939/97 - 3.3.5

Application Number: 90308170.1

Publication Number: 0410733

IPC: B01D 39/14

Language of the proceedings: EN

Title of invention:
Dust collecting filter cloth

Patentee:
ICHIKAWA CO., LTD.

Opponent:
BWF Textil GmbH & Co. KG

Headword:
Filter cloth/ICHIKAWA

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (yes, after amendment) - non-obvious
modification"

Decisions cited:
-

Catchword:
-



Case Number: T 0939/97 - 3.3.5

D E C I S I O N
of the Technical Board of Appeal 3.3.5
of 12 December 2001

Appellant: ICHIKAWA CO., LTD
(Proprietor of the patent) 14-15, Hongo 2-chome
Bunkyo-ku
Tokyo (JP)

Representative: Meddle, Alan Leonard
FORRESTER & BOEHMERT
Pettenkoferstrasse 20-22
D-80336 München (DE)

Respondent: BWF Textil GmbH & Co. KG
(Opponent) Bahnhofstr. 20
D-89362 Offingen (DE)

Representative: Schirdewahn, Jürgen
Jung Schirdewahn Lemke
Clemensstrasse 30
D-80803 München (DE)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 4 July 1997
revoking European patent No. 0 410 733 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: R. K. Spangenberg
Members: B. P. Czech
J. H. Van Moer

Summary of Facts and Submissions

I. The appeal is from a decision of the opposition division revoking the patent upon opposition against the patent on the grounds of Articles 100(a), (b) and (c) EPC.

Claim 1 of the patent as granted reads as follows:

1. A dust collecting filter cloth comprising a needle felt layer (4) having a weight of from 150 g/m² to 900 g/m², a longitudinal tensile strength of at least 20 Kgf/5cm, a transverse tensile strength of at least 20 Kgf/5 cm, and a bursting strength of at least 10 Kgf/cm², which needle felt layer (4) is laminated with a nonwoven fabric sheet (5) made of ultra-fine fibres having a mean fineness of 0.022tex (0.2 denier) or less.

During the opposition proceedings the present appellant (patent proprietor) filed amended claims as an auxiliary request. In comparison to claim 1 as granted, claim 1 according to this request additionally comprises the following features:

"the non-woven fabric sheet (5) having a weight of from 20 g/m² to 100g/m² and a porosity from 50 percent to 75 percent".

Twelve prior art documents were filed during the opposition proceedings. In the contested decision, the opposition division considered the following two:

A2 = Löffler F., "Staubabscheidung mit Schlauchfiltern und Taschenfiltern",

Braunschweig-Wiesbaden, Vieweg, 1984,
pages 62,99,104,105,107,108,119, Table 2.6, and

A12 = Lünenschloß J. et al., "Vliesstoffe", Stuttgart-
New York, Thieme, 1982, pages 311 to 317

In the present decision, reference will also be made to
documents

A8 = US-A-3 937 860 and

A10 = US-A-3 755 527

The opposition division came to the conclusion that the
subject-matter of claim 1 as granted and of claim 1
according to the auxiliary request did not involve an
inventive step in view of A12, taken as starting point,
in combination with A2.

II. With his statement of grounds of appeal, the appellant
(patent proprietor) submitted two sets of claims as
first and second auxiliary requests. The first set is
identical with the claims set filed as auxiliary
request before the opposition division.

Claim 1 according to the second auxiliary request reads
as follows:

1. A dust collecting filter cloth comprising a needle
felt layer (4) having a weight of from 150 g/m² to 900
g/m², a longitudinal tensile strength of at least 20
Kgf/5cm, a transverse tensile strength of at least 20
Kgf/5 cm, and a bursting strength of at least 10
Kgf/cm², which needle felt layer (4) is laminated with
a nonwoven fabric sheet (5) made of melt blown

ultra-fine fibres having a mean fineness of 0.022tex or less, the non-woven fabric sheet (5) having a weight of from 20 g/m² to 100g/m² and a porosity of from 50 percent to 75 percent, the lamination of the needle felt layer (4) and the non-woven fabric sheet (5) being effected by thermoplastic or thermosetting adhesive, or by melting the surface of said needle felt layer (4) without using adhesive.

III. With his reply to the notice of appeal, the respondent (opponent) raised objections with respect to the text of the description, which allegedly contained contradictory passages concerning the field of the invention. It also argued that claims not referring to melt-blown fibres and thermal or chemical lamination would "go beyond the teaching of the description". It also filed the following documents:

- A12.1 = pages 1 to 3 of A12
- A12.2 = pages 45 and 46 of A12
- A12.3 = pages 276 and 277 of A12
- A13 = Meyers Lexikon der Technik und Naturwissenschaften, 2. Band F-N, page 1592, and 3. Band O-Z, page 2259, Bibliographisches Institut Mannheim, 1970
- A14 = DIN 61210, Jan 1982
- A15 = Bergmann L., "Trends, state-of-the-art of non-wovens for filtration" in FILTECH Conference, Karlsruhe 1989 , Volume 2, published by The Filtration Society, Oadby,

allegedly distributed during the conference
which took place 12-14 September 1989

and

A16 = A copy of pamphlet comprising three
drawings, and a fax of Mr. Wehrman dated
13 May 1998.

IV. With its letter dated 12 November 2001, the appellant
presented seven further sets of amended claims as third
to tenth auxiliary requests.

V. Oral proceedings took place on 12 December 2001. During
the oral proceedings, the implications of the sentence
on page 2, lines 54 to 57 concerning the meaning of the
term "lamination" were discussed. In particular, the
question arose whether "needling" was to be considered
as a lamination method in the sense of claim 1.

VI. The respondent's submissions, as presented essentially
during the oral proceedings, can be summarised as
follows:

A14 was novelty destroying for the claimed subject-
matter in view of items 1.2.2.1, 1.2.2.2, 2.1.2.1 and
3.1.1. The claimed subject-matter lacked the required
inventive step in view of A12, or at least in view of a
combination of A12 with A12.1 to A12.3, or A14, the
latter illustrating the general knowledge concerning
composite non-wovens, melt-blown fibre webs, needle
felts and lamination techniques. According to another
line of argument, it considered the composite non-woven
materials as referred to in A16 and in the contested
patent, page 2, lines 46 to 47 as the closest prior art
for the purpose of assessing inventive step. Confronted

with the problem of insufficient form retention, strength and resistance to shaking, a skilled person would consider the replacement of the spun-bond substrate layer by known strong needle felts as an obvious measure. The selections of appropriate values for the properties addressed in the claims were near at hand to the skilled person. Direct deposition of a layer of melt-blown fibres onto a non-woven substrate was to be considered as a lamination technique encompassed by the claims. Concerning this technique, it also referred to A15, pages 309 and 310. A product obtained accordingly would better solve the technical problem stated in the patent than the claimed products, since the porosity of the layer of ultrafine fibres was not affected by this kind of lamination.

VII. The appellant's oral and written submissions can be summarised as follows:

A14 was not novelty-destroying since the specific combinations of features as claimed were not disclosed in this document. Needle felts having the appropriate strengths for being used as filter, as referred to in the contested patent on page 2, lines 14 to 29, were to be considered as the closest prior art. Ultra-fine fibre sheets with the properties referred to in the claims were known, what was claimed was the combination of specific needle felts with such sheets. The examples showed undisputedly that improvements could be obtained by laminating a sheet of ultrafine fibres as defined in claim 1 to such needle-felts. The documents relied upon by the respondent did not suggest the preparation of the specific combined materials as claimed, let alone for the purpose of improving certain properties of the known filter bag materials. It submitted that in view

of the description, it was clear that products laminated by means of needle-punching were not supposed to be encompassed by the claims.

VIII. The appellant requested that the decision under appeal be set aside and that the patent be maintained as granted or, in the alternative, on the basis of the first to tenth auxiliary requests filed respectively with letters of 31 October 1997 and 12 November 2001.

The respondent requested that the appeal be dismissed.

Reasons for the Decision

1. *No objections under Articles 100(c) und 100(b) EPC*

1.1 During the appeal procedure, the respondent did not pursue the objections under Articles 100(b) and (c) it had raised initially in his notice of opposition. The board concurs with the opposition division in that the claims according to the main and the first auxiliary request comply with the requirements of Articles 123 (2) and (3) EPC, and in that the invention as claimed according to these requests is disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

1.2 Claim 1 according to the second auxiliary request corresponds to a combination of claims 1, 2, 4 and 6 of the application as originally filed (claims 1, 2 and 4 as granted). The further restricting feature "melt blown" is repeatedly mentioned in the application as filed, see eg page 4, lines 11 to 16, and Examples 1 to 4 (page 3, lines 8 to 10 and Examples 1 to 4 of the

granted patent). Hence, the claims according to the second auxiliary request also comply with the requirements of Articles 123(2) and (3) EPC.

1.3 The board is also convinced that the invention as claimed according to the second auxiliary request is disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. This not being in dispute, no reasons for this finding need to be given.

2. *Formal objections raised during the appeal proceedings*

2.1 During the oral proceedings, the respondent did not re-iterate its objections raised in writing in reply to the notice of appeal concerning the alleged contradictions within the description and the alleged discrepancies between the claims and the description.

2.2 Since lack of clarity and/or support by the description are not grounds of opposition, and since the objections were based on the text and claims of the patent as granted, these objections were not considered by the board. Moreover, as will appear from the following, they have no impact on the decision taken by the board (see inter alia item 6.3 here below).

3. *Novelty (main, first and second auxiliary requests)*

3.1 Document A14 is a German industrial standard defining the meaning of terms in the field of non-woven textile materials. Various types of non-woven materials are listed, together with general indications concerning their composition, structure and/or preparation, and with their common names. The passages 1.2.2.1, 1.2.2.2,

- 2.1.2.1 and 3.1.1 referred to by the respondent relate to melt-blown, spun-bonded, needled, and multi-layered composite non-woven materials, respectively.
- 3.2 However, A14 is silent about the physical properties of the materials referred to. In particular no basis weight values, strength values or fibre diameters are explicitly mentioned. A14 does not specifically refer to non-woven materials for dust filtering purposes. In the passage of A14 referring to composite materials, see item 3.1.1, middle and right-hand columns, a combination of a needle felt layer with a non-woven layer of ultra-fine fibres is not specifically mentioned, let alone a composite material wherein the two layers have the physical properties required according to claim 1 of the main request.
- 3.3 Generally, needle felts falling under the definition given in A14, item 2.1.2.1 do not necessarily have the properties required by claim 1 according to the main request. More particularly, their basis weight and strength values may lay outside the given ranges, see eg some of the lower values indicated in table 2.6 of A2, columns labelled "Reißkraft" and "Berstdruck". Moreover, melt-blown fibres as addressed in item 1.2.2.1 of A14, or in A15, need not necessarily be ultrafine in the sense of claim 1 ("0.022tex or less" undisputedly corresponding to a fibre diameter of roughly up to 5,6 μm , depending on the density of the fibre material), see eg A10, column 1, lines 27 to 30, and A15, page 310, last sentence of the first paragraph.
- 3.4 In order to gather from A14 the claimed composite materials of claim 1 as granted, the skilled person,

starting from item 3.1.1 referring to laminated multi-layered products would have to select a needled felt as one layer ("vorgefertigtes, gegebenenfalls vorverfestigtes Vlies") and ultrafine, eg melt-blown fibres as a material for the second layer. Moreover, it would have to make further selections concerning the physical properties of the needle-felt layer. Hence the board holds that the generic disclosure of needle felts, melt-blown fibres and laminated multi-layered materials in A14 cannot be detrimental to the novelty of the specific materials according to claim 1 of the main request. The same is true for the respective claims 1 according to the first and second auxiliary requests, which refer to the same combination of a needle felt and an ultrafine fibre layer as claim 1 of the main request.

3.5 Concerning the other documents cited during the opposition proceedings, the board has no reason to question the finding of the opposition division as to novelty, which has not been challenged by the respondent. The respondent did not challenge the novelty of the claimed subject-matter on the basis of any of the further documents cited during the appeal proceedings. The board is also convinced that none of the latter discloses the subject-matter of the claims according to any of the main, first auxiliary or second auxiliary requests. The differences between the disclosures of the documents referred to during the appeal proceedings and the claimed subject-matter will become apparent from the following discussion of inventive step. The subject-matter of the claims according to all of these three requests is thus novel.

4. *Inventive step - Main request*

4.1 The meaning of the term "laminated"

The passage on page 2, line 54 to 58 of the contested patent, which was already pointed out in the respondent's notice of opposition, was discussed during the oral proceedings. The board holds that it clearly emanates from the wording of this passage ("to laminate to ... by means of needle punching") that the appellant himself considers the needling together of two layers as a lamination technique, in the sense of a joining of two pre-formed layers. Hence the board considers that claim 1 covers products obtained by needling together the needle felt layer and the ultra-fine fibre layer.

4.2 Closest prior art

As suggested by the appellant, the closest prior art can be seen in the needle felt cloths for bag filters which were known at the priority date of the contested patent. Document A2 relates to dust collecting filter bags and discloses suitable materials and the required properties thereof, see pages 104, 105 and 107. An example of such a needle felt is given on pages 107 to 108, the material having a basis weight of 550g/m², a bursting strength of 18 bar, longitudinal and transverse tensile strengths of 180 daN and 140 daN (measured on a 200x50mm specimen), respectively, all of these values falling within the ranges given in claim 1. Hence the board holds that A2 represents the closest prior art for the purpose of assessing inventive step.

4.3 Technical problem

4.3.1 Starting from the known needle felt bag filter cloths, the technical problem to be solved according to the contested patent consisted in providing a filter cloth having strength and form retention properties making it suitable for being used as bag filter material, while reducing the clogging of the filter cloth and maintaining a low pressure drop, see page 3, lines 11 to 13.

4.3.2 It can be derived from the contested patent that the lamination, by needle-punching, of a non-woven fabric of ultrafine fibres obtainable by melt-blowing to the surface of a needle felt layer will enlarge the minute pores in the sheet of ultrafine fibres, "rendering the attempt rather meaningless". In other words, the problem of reducing the clogging will not be solved in a satisfactory manner. Since the board considers the term "laminating" to include the joining of the two layers by means of needle punching, the technical problem stated in the patent is not solved by a composite, multi-layered non-woven material obtainable by this technique. During the oral proceedings the appellant accepted that in view of the interpretation of "laminated" as adopted by the board, the technical problem has to be reformulated in less ambitious terms as the provision of a **further** dust collecting filter cloth, not necessarily having improved dust separation properties, suitable for being used as bag filter material and comprising a needle felt layer with the indicated properties.

4.4 Obviousness of the solution

4.4.1 The use of needle felt with the properties as required by claim 1 as bag filter material is known from A2.

Moreover, as acknowledged by the appellant during the oral proceedings, the preparation of non-woven sheets of ultrafine fibres (0.022 tex or less) was generally known at the priority date of the contested patent. This is confirmed by A12.2, page 46, left-hand column, paragraph relating to Figure 1.54 (fibre diameters of 0.5 to 3 μm). The joining of two non-woven layers to form a composite non-woven material was also generally known at the priority date, needling the two layers together being one known method of joining two non-woven/textile sheets. A14, which is considered to represent the common general knowledge, refers to the preparation of multi-layered materials comprising the joining, eg by needling, of at least one pre-prepared and pre-consolidated non-woven sheet ("aus mindestens einem vorgefertigten, gegebenenfalls vorverfestigten ... Vlies") with at least one further non-woven layer ("Vlies"), eg by needling ("Vernadeln"), see item 3.1.1. In item 2.1.2.1, needling is mentioned as one of the generally known consolidation techniques. Document A8, relating to non-woven hot gas filtering materials, exemplifies such a multi-step needling technique, see column 1, lines 46 to 49 and column 2, lines 43 to 48, as well as the generally known concept of providing multi-layered filtering materials. The latter is also addressed in the contested patent itself, see page 2, lines 44 to 47.

- 4.4.2 Starting from the needle felts disclosed in A2 as closest prior art, the joining thereto of a further non-woven layer of microfine fibres - known as such - by means of the well known needle-punching method is a convenient possibility of modifying the needle-felt material of A2 which a skilled person would inevitably have considered as being suitable for providing a

further material for use as filter bag. It could be expected by the skilled person that such a non-woven composite material would have a similar dust filtering effect. Hence, the subject-matter of claim 1, which encompasses such obvious materials, is not based on an inventive step.

5. *Inventive step - First auxiliary request*

5.1 The product according to claim 1 of this request is further limited by the indication of basis weight and porosity ranges for the layer of ultra-fine fibres. During the oral proceedings, the appellant explicitly confirmed that sheets of melt-blown fibres having these properties were known at the time of making the claimed invention, and had been "selected, not invented".

5.2 Considering the interpretation by the board of the term lamination and the consequences of this interpretation, the technical problem as formulated with respect to claim 1 according to the main request remains unchanged. As was conceded by the respondent, the findings under 4.4.1 here above are not affected by the choice of a material with the indicated basis weight and porosity values.

5.3 Hence, for the same reasons as given under 4.4.2 here above, the subject-matter of claim 1 according to the first auxiliary request is not considered to be based on an inventive step.

6. *Inventive step - Second auxiliary request*

6.1 In comparison to claim 1 of the first auxiliary request, claim 1 according to the second auxiliary

request additionally specifies that the ultrafine fibres are of the melt-blown type, and that the lamination technique used is selected from using specific adhesives or melting the surface of the needle felt layer. Hence, materials wherein the ultrafine fibre sheet is laminated to the needle felt layer by means of needling are no longer encompassed.

6.2 It can be gathered from the examples that filter cloths as defined in claim 1 have certain advantages in comparison to filter cloths consisting of needle-felt as such, needle felt covered with porous resin, needle felt as such or needle felt laminated to a sheet of ultrafine fibre not meeting the requirements of claim 1 in terms of basis weight, fibre fineness or porosity. See the examples, the comparative examples, Tables 1 and 2 and Figures 3 to 5. The advantages are summarised on page 8, lines 14 to 35 of the contested patent. The respondent did not challenge the results of the experiments as reported in the contested patent.

6.3 Accordingly, the board accepts the formulation of the technical problem as given in the contested patent (see item 4.3.1 here above). Even though bag filtering is not referred to in claim 1, the properties of the needle felt as specified in the latter implicitly make the claimed cloth suitable for bag filtering applications.

6.4 The board maintains that the disclosure of A2 also represents the closest prior art with respect to claim 1 according to the present request, even more so since this document also addresses the problems associated with conventional needle felt bag filter materials, and also refers to the various alternative solutions

mentioned in the contested patent, such as coated needle felts and needle felts laminated with a porous membrane. See in particular A2, page 119, last paragraph, and the contested patent, page 2, lines 30 to 43.

6.5 Non-obviousness of the solution

In view of the experimental evidence given in the contested patent, the board also accepts that the stated technical problem is solved by the subject-matter of claim 1. Hence it remains to be considered whether this solution is obvious in the light of the prior art cited by the respondent.

6.6 A2 itself confirms what is stated in the introductory part of the contested patent. The various solutions to this problem envisaged by the people active in the field of bag filter materials before the priority date went in other directions and did not encompass a lamination, by specific bonding techniques, of a further non-woven fibre sheet having very specific properties to the known needle felt filter cloth. The board notes that this appears to be further confirmed by the contents of A15, a paper distributed during a conference held in September 1989, thus after the priority date of the patent in suit. Hence document A15 as such does not belong to the state of the art. Assuming, in view of its title ("trends, state-of-the art non-wovens for filtration") and for the sake of argument, that the contents of this document represented the knowledge of a person skilled in the art of filtration materials before the priority date, it nevertheless appears that, like A2 and the contested patent itself, A15 also merely refers to foam coatings

and chemical treatments insofar as it relates to needle felt filters, see page 312, second and third paragraph. The passage on page 310, first paragraph, last sentence only refers in general terms to combinations of "meltblown products in combination with other fabrics".

6.7 Document A12

6.7.1 On pages 314 to 317 of A12, considered by the opposition division and dealing with solid/gas separations, a distinction is made between filtering media for use with high mass concentrations and media for low mass concentrations, see page 314, right-hand column to page 315, left-hand column, and page 315, right-hand column to page 317, left-hand column, respectively. Concerning the first type of filtering media, mention is made of needle felts having weights of 200 to 600 g/m² and appropriate strengths (page 315, left-hand column, second and third paragraph), which may be used as bag filters for dust separation. In the board's view, Figure 4.12 of A12 relates to another type of media, labelled filtering mats ("Filtermatten") and having a thickness of up to 25 mm.

6.7.2 Concerning the strength of the latter, it is only said that the material should be form-stable upon flow-through of the gas to be cleaned, see page 315, right-hand column, second paragraph. The use of microfibrres (" $<5 \mu\text{m}$ ") is considered for the separation of very fine dust, see page 315, left-hand column, last paragraph and right-hand column, third and fourth paragraphs. The particular product shown in Figure 4.12 of A12 comprises an inner non-woven layer of ultra-fine fibres sandwiched between a highly porous non-woven layer and a further supporting non-woven layer. In the

corresponding part of the text, the method used for the preparation of such composite products is not indicated in detail. It is merely mentioned that microfibres having a diameter of down to 1 to 2 μm are laid down as an even structure ("in gleichmäßig formierter Struktur abzulegen"), and that combined non-wovens ("kombinierte Vliesstoffe") may open further fields of application. Moreover, none of the two outer non-woven layers is explicitly stated or shown to consist of a needle felt. The method used for joining the three layers shown in Figure 4.12 can neither be gathered from the figure itself, nor from the corresponding parts of the text.

- 6.7.3 In the board's view, when assessing the disclosure of A12, a skilled person would not combine the information given by Figure 4.12 and the corresponding text passages, concerning the "filter mat" type media incorporating microfibres, with the information given in a separate text passage (page 315, left-hand column) concerning needle felt materials for bag filters, since these two materials have different fields of application (low versus high mass concentrations) and require different physical/structural properties. Hence, a product comprising a needle felt layer having properties as required according to claim 1, and being laminated to a sheet of microfibre fibres is not suggested by Figure 4.12 and the corresponding text passages, let alone a product wherein the lamination is carried out by means of adhesives or surface melting of the needle felt.

6.7.4 Moreover, document A12 does not even suggest any kind of surface modification of the known needle-felts for dust filtration, see page 315, left-hand column. The applications mentioned in connection with filtering mats comprising melt-blown fibres do not comprise their use in form of filter bags, see page 316 to page 317, left-hand column, first paragraph. Nor does A12 suggest any particular basis weights or porosity values for the layer of ultrafine fibres.

6.7.5 The further passages of A12 (labelled "A12.1", "A12.2" and "A12.3") cited by the respondent merely illustrate, without reference to filtration applications, that the preparation of sheets of melt-blown ultrafine fibres was generally known at the priority date, as were various techniques for consolidation and lamination of non-woven webs, see page 3, Figure 0.1, page 46, left-hand column, second paragraph and Figure 1.55, and pages 276 to 277, item 2.6 "Kaschieren".

6.8 Document A14

The passages of A14 cited by the respondent do not address the use of the materials referred to for making bag filters. Although the possibility of joining various types of non-woven layers by means of various types of techniques is generally addressed, see the analysis of the disclosure of A14 carried out under 3.1 to 3.4 here above, the skilled person could not gather from this document that known needle felts for use in bag filters could be improved by laminating onto them a specific non-woven layer as defined in claim 1 thereto.

6.9 Document A16 (Fax and pamphlet)

Even assuming in the respondent's favour that the pamphlet of the company Reifenhäuser was available to the public before the priority date of the contested patent, the technical information contained therein cannot render the claimed subject-matter obvious. The pamphlet at most shows that melt-blown fibres of unspecified fineness may be formed into a sheet and laminated to one or more further sheets, eg spun-bonded sheets. This document does not relate to filtration, let alone to needle felts for use as bag filter materials, and to the problems associated therewith, and thus cannot suggest any kind of solution to the stated technical problem. The accompanying fax, referring to the pamphlet, comprises no additional technical information whatsoever, but merely links it with the company Reifenhäuser.

6.10 The respondent's line of argument, according to which the composite products referred to on page 2, lines 44 to 49 of the contested patent, and in A16, ie comprising a spun-bonded layer joined to a melt-blown microfibre layer, would represent the closest prior art cannot be accepted since they are used in different applications not requiring the same strengths as the needle felt materials used for bag filters.

Even assuming for the sake of argument that such products had to be considered as the closest prior art, and that the skilled person would consider replacing the spun-bonded substrate by a strong needle felt cloth, the prior art relied upon still does not - without hindsight considerations - suggest the solution claimed, ie the lamination, onto that substrate, of an

ultrafine fibre layer with all the properties recited in claim 1. As emanates from the experimental results cited in the contested patent, the desired results are only obtained upon a careful selection of fibre fineness, basis weight and porosity which has to be considered as inventive.

- 6.11 The board is convinced, and this was not disputed, that the further documents cited by the respondent during the opposition proceedings do not come closer to the invention and do not contain any more relevant information.
- 6.12 Summarising, since none of the documents cited by the respondent, taken alone or in combination, suggests the preparation of a product according to claim 1, to thereby achieve certain improvements in comparison to the known needle felts for bag filters, the subject-matter of this claim is based on an inventive step.
- 6.13 The dependent claim 2 is narrower in scope than claim 1 and concerns a specific embodiment of the invention. Its subject-matter is thus novel and inventive as well.
7. During the oral proceedings, the appellant has submitted a description adapted to the wording of claim 1 according to the second auxiliary request. The board is satisfied that the amendments carried out in the description to bring it into conformity with the claims according to the second auxiliary request meet the requirements of Articles 123(2)(3) and 84 EPC. This was not disputed by the respondent, who refrained from commenting on the adapted description.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The case is remitted to the first instance with the order to maintain the patent with the following documents:

- claims 1 and 2 according to the second auxiliary request
- pages 3 and 4 of the description filed at the oral proceedings
- pages 2, 5 to 8 of the description as granted
- figures as granted.

The Registrar:

The Chairman:

P. Martorana

R. Spangenberg