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D E C I S I O N
of 10 March 1997

Case Number: T 0978/95 - 3.2.3

Application Number: 91906029.3

**International
Publication Number:** WO 91/14503

IPC: B03C 3/28

Language of the proceedings: EN

Title of invention:
Filter

Applicant:
Interfilta Limited

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 111(1), 123(2)
EPC R. 67

Keyword:
"Amendments - added subject-matter (yes)"
"Decision re appeals - remittal (yes)"
"Reimbursement of appeal fee (no)"

Decisions cited:
-

Catchword:
-



Case Number: T 0978/95 - 3.2.3

D E C I S I O N
of the Technical Board of Appeal 3.2.3
of 10 March 1997

Appellant: Interfilta Limited
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Decision under appeal: Decision of the Examining Division 2.3.13.113 of
the European Patent Office dated 3 April 1995,
posted on 26 July 1995, refusing European patent
application No. 91 906 029.3 pursuant to
Article 97(1) EPC.

Composition of the Board:

Chairman: C. T. Wilson
Members: F. Brösamle
L. C. Mancini

Summary of Facts and Submissions

- I. The Appellant (Applicant) lodged an appeal on 16 August 1995 - paying the appeal fee on 25 September 1995 - against the decision of the Examining Division of 3 April 1995, posted on 26 July 1995, to refuse European application No. 91 906 029.3. The Statement of Grounds of Appeal was received by fax on 24 November 1995, confirmed on 28 November 1995.
- II. The Examining Division had expressed the view that the main request underlying the impugned decision was not allowable in the light of
- (D1) GB-A-2 048 110
 - (D2) VLIESTOFFE, Georg Thieme Verlag, Stuttgart 1982, J. LÜNENSCHLOSS et al, pages 311 to 317, and
 - (D3) GB-A-2 190 689,
- since Claim 1 thereof lacked inventive step.
- II. Together with the confirmation of the Statement of Grounds of Appeal the Appellant filed two sets of claims, namely "Set A" and "Set B" and requested that the impugned decision be set aside and that the application be remitted to the Examining Division in order to grant a patent on the basis of "Set A" or "Set B", subsequently main and auxiliary request. The Appellant sought moreover reimbursement of the appeal fee.

IV. Claims 1 and 7 of the main request read as follows:

"1. A filter for filtration of submicron and lower micron particle dust from dust-containing atmosphere, the filter comprising a layer of material having electrostatic charge and a layer of filter medium without electrostatic charge located upstream of the air flow **characterised in that** the layer of filter medium is lofted to entrap a significant number of particles and isolate them from the layer of material having electrostatic charge whereby the electrostatic effect of the layer remains substantially constant and the efficiency of the filter is prolonged; wherein the filter material having electrostatic charge comprises one or more of the following blends: clean polyolefine fibres and clean fibres of an addition of polymer comprising one or more halogen-substituted hydrocarbons; polypropylene and cellulose diacetate; polypropylene and stainless steel; polypropylene and cotton; polypropylene and silk; and polypropylene and wool; Nylon and polypropylene; and polypropylene and polyethylene."

and

"7. A method of filtering submicron and lower micron size dust from a dust containing atmosphere, the method comprising passing the atmosphere through a filter comprising a filter material having electrostatic charge and a filter medium without electrostatic charge, the filter material having electrostatic charge comprising one or more of the following blends: clean polyolefine fibres and clean fibres of an addition of polymer comprising one or more halogen-substituted hydrocarbons;

polypropylene and cellulose diacetate; polypropylene and stainless steel; polypropylene and cotton; polypropylene and silk; and polypropylene and wool; Nylon and polypropylene; and polypropylene and polyethylene, the medium being located upstream of the filter material and being lofted to entrap a significant number of particles and isolate them from the layer of material having electrostatic charge whereby the electrostatic effect of the layer remains substantially constant and the efficiency of the filter is prolonged."

Claims 1 and 6 of the auxiliary request read as follows:

- "1. A filter for filtration of submicron and lower micron particle dust from dust-containing atmosphere, the filter comprising a layer of material having electrostatic charge and a layer of filter medium without electrostatic charge located upstream of the air flow **characterised in that** the layer of filter medium is lofted by the bonding of bi-component fibres making up the filter medium to entrap a significant number of particles and isolate them from the layer of material having electrostatic charge whereby the electrostatic effect of the layer remains substantially constant and the efficiency of the filter is prolonged, and wherein the filter material having electrostatic charge comprises one or more of the following blends: clean polyolefine fibres and clean fibres of an addition of polymer comprising one or more halogen-substituted hydrocarbons; polypropylene and cellulose diacetate; polypropylene and

stainless steel; polypropylene and cotton; polypropylene and silk; and polypropylene and wool; Nylon and polypropylene; and polypropylene and polyethylene."

and

- "6. A method of filtering submicron and lower micron size dust from a dust containing atmosphere, the method comprising passing the atmosphere through a filter comprising a filter material having electrostatic charge and a filter medium without electrostatic charge, the filter material having electrostatic charge comprising one or more of the following blends: clean polyolefine fibres and clean fibres of an addition of polymer comprising one or more halogen-substituted hydrocarbons; polypropylene and cellulose diacetate; polypropylene and stainless steel; polypropylene and cotton; polypropylene and silk; and polypropylene and wool; Nylon and polypropylene; and polypropylene and polyethylene, the medium being located upstream of the filter material and being lofted by the bonding of bicomponent fibres making up the filter medium to entrap a significant number of particles and isolate them from the layer of material having electrostatic charge whereby the electrostatic effect of the layer remains substantially constant and the efficiency of the filter is prolonged."

V. Appellant's arguments can be summarized essentially as follows:

- when a significant number of dust particles can be isolated from the electrostatic filter material the electrostatic effect will remain substantially constant;

- nearest prior art is (D1) which was not correctly interpreted by the Examining Division since in this prior art particles in excess of 0,3 mm particle size should be filtered out;
- apart from the particle sizes Claim 1 of the main request differs from (D1) in that the layer of filter medium without electrostatic charge is lofted and in that the filter material having electrostatic charge consists of specific substances; the word "lofted" refers in this context to an assembly of fibres with a high degree of openness and resilience or a large volume for a given mass so that the layer of (D1) cannot fall under this definition;
- the filter of (D1) has different properties from the filter of the present invention since its efficiency does **not** increase during or throughout its life;
- it is not accepted that it was obvious to combine an electrostatic filter material and a lofted filter medium in order to maintain the overall efficiency over time i.e. full compensation effect; it is moreover held that the compensation effect was originally disclosed;
- (D2) does not teach to combine with any other layer whatsoever;
- the auxiliary request differs from the main request by the bonding of bi-component fibres making up the filter medium to loft the filter medium;

- since this feature was not searched by the EPO it is requested that the Examining Division carries out whatever work may be necessary in this respect;
- since the Examining Division "misdirected itself about the significance of D1, and the combination with D2 and failed to carry out the examining work for the Auxiliary Request" the Appellant seeks reimbursement of the appeal fee.

Reasons for the Decision

1. The appeal is admissible.
2. *Amendments*
 - 2.1 Claim-set "A" contains two independent claims, namely product claim (Claim 1) and a method claim (Claim 7).
 - 2.2 The above claims contain the terms "substantially constant" in combination with the electrostatic effect of the layer.
 - 2.3 In the documents as filed, see page 2, paragraph 2 ("The upstream filter medium...any eventual reduction...will be...compensated by the increase in the mechanical collection efficiency...") or see WO-A-91/14503 page 2, paragraph 2, it is clearly set out that the electrostatic properties are **not constant**, since otherwise a compensation in order to keep the **overall efficiency** of the filter constant, would not be envisaged, see also claim 2 of WO-A-91/14503.

2.4 The present independent claims of the main request therefore contain subject-matter which extends beyond the content of the documents as originally filed, Article 123(2) EPC, so that the claim set "A" cannot serve as a basis to grant a patent.

2.5 With the Board's Communication of 20 September 1996 the Appellant was informed of the Board's provisional opinion with respect to the requirements of Article 123(2) EPC.

3. *Novelty*

3.1 Since the functional term in the characterising clause of Claim 1 "to entrap a significant number... is prolonged" could be seen as a result to be achieved rather than as a clear technical teaching, and since it is intended to remit the case to the first instance for further prosecution, the Board considers it appropriate to decide on the patentability of the subject-matter of Claims 1 and 7 ignoring this functional term, containing as it does the added subject-matter.

3.2 Of the cited documents, (D1) to (D3), document (D1) has to be seen as disclosing nearest prior art. Claim 1 is correctly delimited in the two-part form over (D1). Not known from (D1) therefore are the following features of Claim 1:

(a) that the layer of filter medium without electrostatic charge is lofted and

(b) that the filter material having electrostatic charge comprises one or more of the blends detailed at the end of Claim 1.

3.3 Novelty needs no further argument since it was not contested in the impugned decision and since the Board shares these findings.

4. *Inventive step*

4.1 Under these circumstances the crucial question is therefore inventive step which has to be assessed by the application of the "problem-solution-approach".

4.2 The disadvantage of the filter according to (D1) can be seen in a substantial pressure drop of the upstream layer (filter medium) and in the danger of clogging, see (D1) page 1, lines 47 to 49 and lines 56 to 60, whereby (D1) is silent about materials to be used for a layer having electrostatic charge.

4.3 The objectively remaining technical problem is therefore to overcome the above disadvantages and shortcomings of (D1).

4.4 The solution of this objectively remaining problem is laid down in Claims 1 (filter) and 7 (method of filtering...).

4.5 The use of a lofted filter medium instead of a known, non-lofted filter medium according to above feature (a) has to be seen as a simple substitution of material, see "Guidelines" CIV 9.8 in particular Example (iii) and (iv), making use of a **known property**, namely small pressure drop of a lofted layer of filter medium, see (D2) page 313, right column, lines 17 to 23 ("Durchlässigkeit...spezifisch eingestellt und somit

auch optimiert werden.") and page 315, left column at the end of paragraph 3 ("hinsichtlich...Druckverlust überlegene Eigenschaften aufweisen.") as well as right column, lines 13 to 15 ("100 bis ca. 500 g/m²") and page 313, right column, lines 24 and 25.

The technical effect of a **lofted** layer was therefore known in a filter i.e. the technical field as claimed.

- 4.6 The above feature (b) of Claim 1 can be seen from (D3) so that a skilled person was well aware of the materials useable in filters, (see for example page 1, lines 28 to 33, where blends of clean polyolefine fibres and clean fibres of a halogen-substituted addition polymer are disclosed).
- 4.7 Since the aspects of pressure loss/drop according to above feature (a) and of material combinations according to above feature (b) constitute an **aggregation of features** without any additional combinatory effect, it is allowable to combine (D1) and (D2) for feature (a) and (D1) and (D3) for feature (b) for the assessment of inventive step of these individual features.
- 4.8 As a result of the above considerations Claim 1 does not define a non obvious filter for filtration within the meaning of Article 56 EPC so that the **main request** is not allowable since it has to be seen **as a whole**.
- 4.9 The above considerations are also applicable to Claim 7 though this claim refers to a method since the crucial features are as in claim 1, i.e. lofted filter material and material combinations for the electrostatic material.

Auxiliary request

5. *General remarks*

5.1 The feature "lofting by the bonding of bi-component fibres", see originally filed page 5, lines 1 to 4, **was not** searched, see impugned decision page 7, last paragraph.

5.2 As opposed to claim-set "A", in which this feature forms part of only **dependent** claims, in claim-set "B" this feature is contained in **independent** claims, namely Claim 1 and Claim 6 and must therefore be searched to enable the Examining Division (or the Board) to decide on the issues of novelty and inventive step.

5.3 As can be seen from the impugned decision only the **main** request was dealt with by the Examining Division, but not the auxiliary request involving in its Claim 1 the feature under discussion.

5.4 Following Appellant's request for remittal of the case to the Examining Division as far as the auxiliary request is concerned the Board makes use of its discretion under Article 111(1) EPC to remit the case to the Examining Division for further prosecution.

5.5 It must however be pointed out that Claims 1 and 6 of the auxiliary request also contain the feature "substantially constant" dealt with under above remark 2.2 to 2.4 in combination with the main request, Article 123(2) EPC.

6. *Reimbursement of appeal fee*

6.1 Appellant's request for refunding the appeal fee has to be rejected.

- 6.2 From the minutes of the oral proceedings held on 3 April 1995 before the Examining Division, (see paragraph 9), it can be seen that only the **main** request was to be decided on by the Examining Division. Appellant's attention is also drawn to the impugned decision, (see remark 6, Facts and Submissions, in this respect).
- 6.3 The Board can therefore not see a substantial procedural violation since the Examining Division only followed the Appellant's request, Article 104(1) EPC.
- 6.4 Moreover, if the Examining Division were wrong in its findings in respect of the significance and combination of (D1) and (D2), this cannot be seen as a substantial **procedural** violation within the meaning of Article 104(1) EPC. According to the established jurisprudence of the Boards of Appeal, an error of judgment by a department of first instance, e.g. a wrong assessment of prior art and/or the claimed invention, has to be regarded as a substantive error, not a procedural violation.
- 6.5 Under these circumstances Appellant's request for refunding the appeal fee has to be rejected.

Final remarks

7. The Board has dealt in detail with the **main** request but has refrained from a final judgement in respect of the **auxiliary** request, beyond pointing out that the "substantially constant" feature (see paragraphs 2.2 to 2.4) is unallowable.

Appellant's detailed arguments as summarized in the above "Summary of Facts and Submissions" in so far as they relate to the **auxiliary** request have not therefore to be discussed in full in the present decision, but must be considered by the Examining Division.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The main request is rejected.
3. The case is remitted to the first instance for further prosecution.
4. The request for refunding the appeal fee is rejected.

The Registrar:



N. Maslin

The Chairman:



C. T. Wilson