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**Datasheet for the decision
of 22 August 2007**

Case Number: T 1660/06 - 3.2.07

Application Number: 01972501.9

Publication Number: 1359095

IPC: B65D 65/02

Language of the proceedings: EN

Title of invention:

Filter material take-up product for air filter

Applicant:

HOKUETSU PAPER MILLS, LTD.

Headword:

-

Relevant legal provisions:

EPC Art. 56

Keyword:

"Inventive step - no"

Decisions cited:

-

Catchword:

-



Case Number: T 1660/06 - 3.2.07

D E C I S I O N
of the Technical Board of Appeal 3.2.07
of 22 August 2007

Appellant: HOKUETSU PAPER MILLS, LTD.
(Applicant) 5-1, Nishizaoh 3-chome
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Niigata-ken 940-0027 (JP)

Representative: Bunke, Holger
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 17 May 2006
refusing European application No. 01972501.9
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: H. Meinders
Members: P. O'Reilly
E. Dufrasne

Summary of Facts and Submissions

I. European application No. 01 972 501 was refused by the examining division for lack of inventive step.

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

III. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of claims 1 to 5 filed on 22 August 2007 at the oral proceedings before the Board (main request).

IV. The independent claim of the application according to main request reads as follows:

"1. A filter material take-up product for an air filter, comprising a filter material, a winding core and a plastic film wrapping material, characterized in that said winding core and plastic film wrapping material have a total amount of the outgas generation, when treated by a dynamic head-space method comprising heating a sample in an inert He gas flow at 80°C for one hour, of 100 ng/g or less of phenolic compounds, carboxylate esters, phosphate esters, each having a molecular weight of 150 or more, and cyclic siloxanes having 10 or less silicon atoms, respectively."

V. The document cited in the present decision is the following:

D1: JP-A-11-253715 (Patent Abstract in English language)

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

(i) The essence of the invention is that the inventors have realised that it is important to achieve a maximum value for each specific outgas at the centre of the take-up product of 1 to 0.1 ng/g or less (see description paragraph bridging pages 11 and 12). If this maximum value is kept then there are no practical problems with contamination of the clean room for which the filter is used. In order to achieve this maximum value the amount of outgas from the film wrapping material and winding core must be kept below 100 ng/g for each specific outgas. It is moreover sufficient to limit just the particular outgas compounds specified in claim 1. The other outgas compounds do not have to be considered.

(ii) If necessary the appellant is willing to limit claim 1 by combining it with claim 5.

Reasons for the Decision

1. *Inventive step*

1.1 The closest prior art document is D1. According to D1 materials which do not emit gaseous organic substances are used for an air filter and its packaging. Furthermore, D1 specifically mentions cyclic siloxanes, organic carboxylate esters, organic phosphate esters and phenol compounds as outgas compounds to which attention should be paid.

- 1.2 According to claim 1 of the application in suit the maximum amount of these compounds should be 100 ng/g in the winding core and plastic film wrapping.

In the paragraph bridging pages 11 and 12 of the application as originally filed it is explained that the ratio between the outgas level of the film wrapping material and winding core and the adsorption of these gases on the take-up product, i.e. the filter material, is between 1000 and 100 to 1. It is also explained that there is not a problem if the adsorption on the filter material is controlled to be of the order of 1 to 0.1 ng/g. This explanation is given for a product stored for 3 months.

The problem to be solved by the distinguishing features of claim 1 is to provide a take-up product for an air filter for use in a clean room, which is not contaminated so that the filter itself does not introduce contamination into the clean room (see application as originally filed, page 1, third paragraph).

- 1.3 The feature of claim 1 that the maximum amount of these compounds should be 100 ng/g in the winding core and plastic film wrapping is based on the desire to limit the absorption by the filter material to be of the order of 1 to 0.1 ng/g and the fact that there is a ratio between the outgas level of the film wrapping material and winding core and the adsorption of these gases on the filter material.

However, the application does not give any reason for the selection of the particular value to which the adsorption is to be limited and hence no reasons for the maximum value for specified outgas compounds. The claimed feature that the maximum amount of these compounds should be 100 ng/g in the winding core and plastic film therefore has not been shown to have any significance. This is the more the case since the basis for arriving at the maximum amount is a time period for storage of three months. The actual time period of storage may differ considerably from this so that the significance of the limit also for this reason has not been shown.

The value given for the maximum outgas amount is specified in terms of ng/g, i.e. nanograms per gram of the winding core and plastic film wrapping. However, there is no indication in the application of the weight of the winding core and plastic film wrapping so that the total amounts of outgas from these are not specified. The application contains no indication as to why it is the outgas amount per gram of the winding core and plastic film wrapping which is relevant rather than the total outgas amount from these. Therefore also for this reason the significance of the specified maximum amount is in doubt.

Given the teaching in D1 that attention must be paid to the compound classes specified in claim 1, the outgas maximum amount specified in claim 1 cannot be considered to be an inventive selection in the absence of evidence to this effect.

1.4 The appellant has also argued that part of the invention was the recognition that only the four compound classes specified in claim 1 needed to be controlled, whereas the prior art arrangement controlled more compounds. The Board cannot accept this argument since there is no corresponding feature in the claim. Although the claim specifies maximum values for four compound classes it is not excluded that the other compound classes are also controlled.

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

2. *Amendment offered during oral proceedings*

In the oral proceedings before the Board the appellant offered to amend claim 1 so as to include the contents of claim 5. The Board considered this offer. However, claim 5 merely indicates that the filter material should be glass fibre which is a material well-known for this purpose. The Board therefore concludes that even if the offered amendment had been filed as a formal request it still would not have changed the outcome of the proceedings.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

G. Nachtigall

H. Meinders