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Datasheet for the decision of 15 May 2025

Case Number: T 2495/22 - 3.3.06

Application Number: 14875728.9

Publication Number: 3086875

IPC: B01J20/14

Language of the proceedings: EN

Title of invention:
CO-AGGLOMERATED COMPOSITE MATERIALS AND METHODS FOR MAKING CO-AGGLOMERATED COMPOSITE MATERIALS

Patent Proprietor:
Imerys Filtration Minerals, Inc.

Opponent:
OMYA International AG

Headword:
Imerys/Composite

Relevant legal provisions:
EPC Art. 84, 123(2)
RPBA Art. 12(2)

Keyword:
Claims - clarity - main request (yes) - lack of clarity no ground for opposition
Amendments - extension beyond the content of the application as filed (no)

Decisions cited:
G 0003/14

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 2495/22 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 15 May 2025

Appellant: (Patent Proprietor)	Imerys Filtration Minerals, Inc. 1732 North First Street Suite 450 San Jose, CA 95112 (US)
Representative:	Haseltine Lake Kempner LLP One Portwall Square Portwall Lane Bristol BS1 6BH (GB)
Respondent: (Opponent)	OMYA International AG Baslerstrasse 42 4665 Oftringen (CH)
Representative:	Maiwald GmbH Elisenhof Elisenstraße 3 80335 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 22 September 2022 revoking European patent No. 3086875 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	J.-M. Schwaller
Members:	S. Arrojo
	J. Hoppe

Summary of Facts and Submissions

I. The appeal was filed by the proprietor against the decision of the opposition division to revoke European patent No. 3 086 875 for non-compliance with the requirements of Articles 123(2) and 84 EPC.

II. With the statement of grounds of appeal, the appellant contested the decision and submitted several amended sets of claims as auxiliary requests 1 to 20. Documents D9 to D14 were submitted as an annex.

III. In the reply, the opponent and respondent requested that the appeal be dismissed and that documents D9 to D14 as well as auxiliary requests 2 to 20 should not be admitted into the appeal proceedings.

IV. In its preliminary opinion, the board indicated that the claims as granted extended beyond the content of the application as filed, that the claims according to auxiliary request 1 were unclear and that auxiliary request 2 appeared to meet the requirements of Article 123(2) and 84 EPC.

V. At the oral proceedings, held on 15 May 2025, the appellant withdrew the main and first auxiliary requests, and requested that the decision under appeal be set aside and the case be remitted to the first instance for further prosecution on the basis of the claims of auxiliary request 2 as the new main request, or as an auxiliary measure, on the basis of one of auxiliary requests 3 to 20 filed on 2 February 2023 with the statement of grounds of appeal.

The respondent requested that the appeal be dismissed.

VI. Claim 1 according to the new main request (filed and labelled as auxiliary request 2) reads as follows:

"1. A composite filter aid comprising:
a first mineral selected from diatomaceous earth and natural glass and wherein the natural glass comprises perlite;
a second mineral having an aspect ratio greater than 2:1 and wherein the aspect ratio is determined using electron microscopy and is the diameter of the circle of area equivalent to that of a face of the particle divided by the mean thickness of that particle;
and a binder,
wherein the filter aid has a permeability ranging from 1.97 x 10^{-13} to 1.97 x 10^{-11} m^2 (0.2 to 20 darcys) and the permeability is determined by the permeability of a porous bed 1 cm high and with a 1 cm^2 section through which flows a fluid which is water with a viscosity of 1 mPa•s with a flow rate of 1 cm^3/sec under an applied pressure differential of 1 atmosphere, wherein the permeability is measured using a specially constructed device designed to form a filter cake on a septum from a suspension of filtration media in water; and the time required for a specified volume of water to flow through a measured thickness of filter cake of known cross-sectional area is measured."

Reasons for the Decision

1. Main request - Admittance

1.1 For the respondent, this request should not be admitted into the appeal proceedings because diverging with the previous ones.

1.2 However, as already set out in the preliminary opinion, the present main request corresponds to auxiliary request 5a admitted by the opposition division.

1.3 As it is neither apparent, nor has it been submitted that the opposition division exercised its discretion in an unreasonable manner or on the basis of incorrect principles, the request is thus part of the appealed decision under Article 12(2) RPBA, as there is no legal basis for disregarding it.

2. Main request - Articles 84 and 123(2) EPC

2.1 Claim 1 at issue corresponds to claim 1 as filed with the following amendments (highlighted by the board):

"1. A composite filter aid comprising:
a first mineral selected from diatomaceous earth and natural glass and wherein the natural glass comprises perlite;
a second mineral having an aspect ratio greater than 2:1 and wherein the aspect ratio is determined using electron microscopy and is the diameter of the circle of area equivalent to that of a face of the particle divided by the mean thickness of that particle;
and a binder,
wherein the filter aid has a permeability ranging from 1.97 x 10^{-13} to 1.97 x 10^{-11} m^2 (0.2 to 20 darcys) and the permeability is determined by the permeability of a porous bed 1 cm high and with a 1 cm^2 section through which flows a fluid which is water with a viscosity of 1 mPa•s with a flow rate of 1 cm^3/sec under an applied pressure differential of 1 atmosphere, wherein the permeability is measured using a specially constructed device designed to form a filter cake on a septum from a suspension of filtration media in water; and the time

required for a specified volume of water to flow through a measured thickness of filter cake of known cross-sectional area is measured."

2.2 The opposition division argued that it was not clear from the wording of claim 1 at issue what the connection between the features "filter cake on a septum" and "porous bed" was, and whether these features referred to the same or to different concepts. Furthermore, it was not clear how to interpret the concept of "specially constructed device". The requirements of Article 84 EPC were thus not met.

2.3 The board disagrees with these objections, because claim 1 at issue was reworded and restructured with respect to the former main request and auxiliary request 1 (which have now been withdrawn) to more closely reflect the content of par. [0085] as filed. In this redrafted version, the concepts of "porous bed" and "filter cake" are no longer confused or prone to misinterpretations. In particular, it is now clear from the wording of the claim that the permeability should be determined in a porous bed using Darcy units and the Darcy's law, with the permeability being measured with the specific method described in the last sentence of par. [0085] as filed (i.e. forming a cake on a septum, etc).

The board has also concluded that the feature "a specially constructed device" in claim 1 is clear, because the skilled person would readily understand this as a broad indication that the measuring method is to be carried out using a suitable device, i.e. one comprising a septum on which the filter cake is to be formed.

2.4 The ensuing discussion is based on the following parts of claim 1 at issue, now referred (i) and (ii):

(i) *"wherein the filter aid has a permeability ranging from 1.97 x 10^{-13} to 1.97 x 10^{-11} m^2 (0.2 to 20 darcys) and the permeability is determined by the permeability of a porous bed 1 cm high and with a 1 cm^2 section through which flows a fluid which is water with a viscosity of 1 mPa•s with a flow rate of 1 cm^3/sec under an applied pressure differential of 1 atmosphere"*

(ii) *"wherein the permeability is measured using a specially constructed device designed to form a filter cake on a septum from a suspension of filtration media in water; and the time required for a specified volume of water to flow through a measured thickness of filter cake of known cross-sectional area is measured"*

2.5 The appellant argued that passage (i) was supported by the first part of paragraph [0085] in the description as filed, which indicated that:"*Permeability is generally measured in darcy units or darcy, as determined by the permeability of a porous bed 1 cm high and with 1 cm^2 section through which flows a fluid with a viscosity of 1 mPa•s with a flow rate of 1 cm^3/ sec under applied pressure differential of 1 atmosphere*".

2.6 Both the respondent and the opposition division interpreted paragraph [0085] of the application as filed as disclosing two separate and independent methods for measuring permeability. According to the first method, permeability was determined in a porous bed of defined dimensions and under specified conditions, the fluid being characterised only by its dynamic viscosity. The paragraph then set out a second

measuring method as an exemplary embodiment in which water was used as the fluid. On the basis of this interpretation, the subject-matter of claim 1 at issue was regarded as an attempt to combine into a single definition two independent measuring methods, thereby giving rise to issues of clarity under Article 84 EPC and/or to a lack of support in the application as filed under Article 123(2) EPC.

2.7 As set out in the preliminary opinion, the board does not share the respondent's interpretation of paragraph [0085] as filed, and in particular it does not consider that the passage in question defines two distinct methods for measuring permeability.

Contrary to the assumptions made by the opposition division and the respondent, this text (as well as the corresponding passage (i) in claim 1 at issue) does not describe a specific method for measuring permeability, but rather the unit used to measure it, namely the Darcy unit. More precisely, while the passage generally indicates that permeability can be determined by circulating a liquid through a porous bed and expressed using Darcy's law/units, the disclosed dimensions and conditions are not intended to restrict the measuring method. In fact, if the permeability were to be measured under the specific conditions mentioned therein — i.e. in a porous bed of 1 cm height and 1 cm^2 cross-section, with a fluid of 1 mPa·s viscosity, a flow rate of 1 cm^3/s, and a pressure of 1 atm — all the parameters in Darcy's equation (bed dimensions, viscosity, flow, and pressure) would be predetermined, and the resulting permeability would invariably be a constant of 1 Darcy, which is technically absurd. Rather, these conditions and dimensions are intended to define the unit of measurement "Darcy" according to

Darcy's law, which is literally described (see D7, page 118) as the permeability of a filter material allowing a flow of 1 cm^3/s of a fluid with a dynamic viscosity of 1 mPa·s under a pressure gradient of 1 atm/cm through a bed of the material with a cross-section of 1 cm^2.

2.8 At the oral proceedings, the respondent maintained its objections under Articles 84 and 123(2) EPC, arguing that even if the board's preliminary view was followed, there would still be a problem of clarity under Article 84 EPC and/or an extension beyond the content of the application as filed under Article 123(2) EPC.

Firstly, irrespective of how the first part of paragraph [0085] was interpreted, if the claim was clear *per se*, it had to be interpreted in terms of its wording alone (i.e. without consulting the description). There was however no indication in the wording of claim 1 that the features in passage (i) were to be associated with the concept of Darcy units. Unlike paragraph [0085] as filed, the claim omitted the statement that "permeability is generally measured in Darcy units or Darcy" and instead was introduced with the expression "the permeability is determined by ...", which clearly suggested that the subsequent features were intended to define a measuring method. The skilled person would thus interpret passage (i) as defining a measuring method that had no basis in the application as filed (i.e. in paragraph [0085] as filed). Accordingly, the objections under Article 123(2) EPC still applied.

If, on the other hand, the wording of the claim was considered to leave the reader in doubt as to whether the term "water" in passage (i) related to the

definition of the unit Darcy or to the measuring method, this in itself would represent a problem of clarity under Article 84 EPC. Such clarity objection would be justified despite the fact that passage (i) was already defined in claim 1 as granted, because the ambiguity would be caused by the newly added features, namely those of passage (ii).

Furthermore, even if the description was consulted to resolve the ambiguity, there would still be no basis for the feature "water" as part of the definition of the unit "Darcy", so the requirements of Article 123(2) EPC would still not be met.

2.9 The board disagrees with the respondent for the following reasons:

As concluded above, the interpretation of passage (i) as defining a measuring method would be discarded as technically absurd, since this would invariably lead to a result of 1 Darcy and could thus not be used to provide any meaningful result. Moreover, since the skilled person is aware that passage (i) literally corresponds to the definition of the unit Darcy (see D7, page 118), the only technically meaningful interpretation of this passage is that it represents the definition of Darcy units within the framework of Darcy's law. Therefore, irrespective of whether the claim is interpreted in view of its wording alone (in view of common general knowledge) or in light of the description (in view of paragraph [0085]), the skilled person would interpret passage (i) as defining a Darcy unit.

Although paragraph [0085] of the application as filed does not explicitly define the Darcy units using water

as fluid, the incorporation of this term into claim 1 does not create any ambiguity nor does it add any undisclosed information for the following reasons:

The objection under Article 84 EPC fails from the outset, as the term water was defined in claim 1 as granted and is therefore not open to clarity objections under the principles set out in G 3/14. In this respect, the board does not see how the incorporation of passage (ii) would have any effect on the definition of a Darcy unit using water as fluid in passage (i). In any case, a skilled person reading claim 1 would clearly recognise that water is simply intended to exemplify the most commonly used fluid with a dynamic viscosity of 1 mPa·s.

It should further be noted that the concept of a Darcy unit is independent of the specific fluid being employed, provided it has a viscosity of 1 mPa·s. In other words, a permeability of 1 Darcy determined using water with a dynamic viscosity of 1 mPa·s (as defined in claim 1 at issue) is identical to 1 Darcy determined using any other fluid having the same dynamic viscosity. Accordingly, the only feature that can plausibly restrict the scope of this definition is the dynamic viscosity of 1 mPa·s. Therefore, the reference to "water" in the definition of the unit "Darcy" in passage (i) does not impose any practical limitation on the scope of protection of the claim.

The board thus concludes that the claim is clear and does not contain subject-matter extending beyond the content of the application as filed.

2.10 The new main request (labelled auxiliary request 2) therefore meets the requirements of Articles 84 and 123(2) EPC.

3. Further observations

3.1 Since the decision to revoke the patent was based solely on objections under Articles 84 and 123 EPC, there is no decision on questions of patentability that could be reviewed, so that the board exercised its discretion to remit the case to the opposition division for further prosecution.

3.2 Since documents D9 to D14 had no bearing on the above conclusions, there was no need to decide on their admittance.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division for further prosecution.

The Registrar: The Chairman:

A. Wille J.-M. Schwaller

Decision electronically authenticated