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**Datasheet for the decision
of 28 July 2017**

Case Number: T 0646/13 - 3.2.05

Application Number: 06775680.9

Publication Number: 1937492

IPC: B44F9/04, B44C5/04, B44F5/00

Language of the proceedings: EN

Title of invention:
Synthetic stone of high translucence, method of its production
and use

Patent Proprietor:
Poljakov, Michal

Opponent:
E.I. du Pont de Nemours and Company

Headword:

Relevant legal provisions:
EPC R. 76(2) (c)
EPC 1973 Art. 100(b), 54(1), 54(2), 56, 111(1), 112(1) (a)
RPBA Art. 13(1)

Keyword:

Admissibility of opposition - opposition substantiated (yes)
Late-filed evidence - admitted (yes)
Sufficiency of disclosure - enabling disclosure (yes) -
relationship between Article 83 and Article 84
Referral to the Enlarged Board of Appeal - uniform application
of law (rejected)
Novelty - main request (yes)
Remittal to the department of first instance (no)
Inventive step - main request (yes)

Decisions cited:

G 0003/08, T 0464/05, T 1811/13

Catchword:



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Case Number: T 0646/13 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 28 July 2017

Appellant: Michal Poljakov
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 4 January 2013
revoking European patent No. 1937492 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman M. Poock
Members: P. Lanz
M.-B. Tardo-Dino

Summary of Facts and Submissions

- I. The appeal by the patent proprietor is against the decision of the opposition division to revoke European patent EP-B-1 937 492.
- II. During the opposition proceedings, the opponent raised the grounds for opposition according to Articles 100(a) (lack of novelty and lack of inventive step) and 100(b) EPC 1973.
- III. Oral proceedings were held before the board of appeal on 28 July 2017.
- IV. The appellant (patent proprietor) requested that the decision under appeal be set aside, that the opposition be rejected as inadmissible or at least unfounded, or that the patent be maintained on the basis of one of the sets of claims of auxiliary requests 1 and 3 to 7 filed with the statement of the grounds of appeal, or of auxiliary request 2 filed with the letter of 28 June 2017.
- V. The respondent (opponent) requested that the appeal be dismissed, that the case be remitted to the opposition division if the board came to the conclusion that the subject-matter of any request was sufficiently disclosed and novel, and that the questions filed during the oral proceedings be referred to the Enlarged Board.
- VI. The following documents were among those referred to during the appeal proceedings:

D6: US 3,847,865;

D7: Flick, Ernest W., "Plastics Additives, An Industrial Guide"; Noyes Publications, 1993; pages 293 to 296;

D8: US 4,085,246;

D9: US 6,056,904;

D10: Almatix, "Onyx Classica"; Almatix Global Product Data, 2003;

D11: Tax invoice of a translucent product called Corian Ice White;

D12: Affidavit by Mr Michael Arthur Banks dated 22 December 2010;

D15: Global Product Data; Almatix Hydral[®] Series Aluminum Trihydroxides, 2003;

D20: Definition of "Equivalent diameter" by Umweltprobenbank des Bundes;

D21: Brochure "SediGraph 5100", no publication date mentioned;

D22: Affidavit by the patent proprietor dated 10 April 2014;

D23: "Hydral[®] Precipitated and Hymod[®] Surface-Treated Alumina Trihydrate (ATH)", brochure by J.M. Huber Corporation, published in 2013;

D24: "HN-100 Alumina Trihydrate", data sheet by J.M. Huber Corporation, published in 2011;

D25: "Hydral[®] Series Alumina Trihydroxides", data sheet by J.M. Huber Corporation, published in 2011;

A1: English translation of the appeal decision of the Appellate Body of the Czech Industrial Property Office;

A2: US 5,237,004, cited in document A1 as document D7.

VII. Claim 1 as granted (main request) reads as follows:

"Synthetic stone with high translucence based on two main constituents - binder and filler, namely a binder based on low-viscosity, reactive, transparent resin, in particular, methylmetacrylate or neopentylglycolic - polyester type, and a filler based on alumina trihydrate, and/or its substitute, and synthetic stone as above, possibly containing coloured components and chips, characterized in that it is created from a hardened mixture, which contains

- 5 to 60 % by weight of binder formed from polymerised, colourless or low-colour resin with a viscosity lower than 1300 mPas, with a refractive index of light of the polymer which is the same as the refractive index of light of alumina trihydrate, or differs from it by less than $\pm 12\%$;

- 20 to 90 % by weight of filler formed from globular and/or spherical alumina trihydrate $\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$ containing less than 90 % by weight less regular particles - aggregates, agglomerates, crushed particles and crystals, and containing 0 to 100 % by weight of a transparent to translucent substitute of alumina trihydrate;

- 0 to 20 % by weight of pre-prepared particulate, filled, hardened, coloured resin, known as chips which are larger than 200 μm in size, and/or mineral particles; whereas

- the synthetic stone also contains less than 2 % by weight of luminophor."

VIII. The appellant's submissions may be summarised as follows:

Admissibility of the opposition

The opposition was to be rejected as inadmissible for lack of substantiation. In particular, the opponent's allegations of insufficient disclosure were in fact clarity objections, as confirmed in the impugned decision. Moreover, the opponent did not show that the claim features, including the crucial elements of viscosity and particle shape, were either known from one single document or rendered obvious by the cited prior art, although lack of novelty and lack of inventive step were alleged. Even if the objection of the opposition being inadmissible was filed only at the appeal stage, it had to be admitted. This issue formed part of the contested decision and it had to be considered by the board *ex officio*.

Admissibility of documents D22 to D25 and A2

Document D22 contained the results of comparative tests, which were submitted in reaction to the respondent's allegation that the shape of the filler particles had no technical effect on light transmission. Documents D23 to D25 were filed in reaction to the respondent's doubts regarding the fillers used in the tests of document D22 in order to provide more information on this issue. Documents D23 to D25 were post-published. However, as far as the appellant was aware, the fillers mentioned therein had not changed since the relevant date of the patent. In

view of the above, documents D22 to D25 should be admitted into the proceedings.

Document A2 was filed by the respondent during the written appeal proceedings for better understanding of decision A1 of the Appellate Body of the Czech Industrial Property Office. The inventive step attack on the basis of documents D6 and A2 was introduced only during the oral proceedings before the board. Moreover, it had not been explained why a combination of documents D6 and A2 would render the claimed subject-matter obvious. Document A2 should therefore not be admitted as prior art.

Sufficiency of disclosure

In general, the burden of proof regarding possible insufficient disclosure was upon the opponent. However, in the present case the respondent had not substantiated its allegations with verifiable evidence. The composition for the claimed synthetic stone could be prepared by simply weighing the commercially available components listed in the claim as had been done for the tests of document D22. The fillers used were sold as having globular particles, which, from a realistic point of view, meant that the particles were mainly globular as indicated in document D22. Finally, Figure 2 of the patent was two-dimensional and did not allow any conclusion on whether the depicted particles were globular or flat.

Referral to the Enlarged Board of Appeal

The wording of the questions proposed by the respondent was not clear since the term "only" was missing in question 1.

Novelty

Regarding document D6, it was not possible to draw any conclusions from the disclosure of a diameter of the filler particles on their shape being globular or spherical. For example, a coin had a diameter but was not spherical. Document D6 only disclosed that a certain amount of Hydral[®] 710 was present. Moreover, datasheet D15 mentioned a particle size of Hydral[®] 710. However, it had to be noted that the apparatus used (SediGraph 5100) measured the mass of the particles irrespective of their shape in order to calculate a hypothetical "equivalent spherical diameter". Thus, documents D6 and D15 did not allow any conclusion to be drawn as to the actual particle shape. This was confirmed by document D21, where an "equivalent spherical diameter" was indicated for non-globular talc and mica platelets. In view of the above, document D6 did not disclose a globular or spherical particle shape. The subject-matter of claim 1 was therefore novel. This view was in line with the findings in the parallel proceedings before the Appellate Body of the Czech Industrial Property Office (cf. decision A1), where the present document D6 is referred to as document D2 (cf. middle of page 16 to middle of page 18).

Also, documents D7, D8, D9 and the alleged prior use according to documents D11 and D12 failed to disclose a globular and/or spherical shape of the alumina trihydrate filler particles.

Remittal to the opposition division

There was no reason to remit the case to the department of first instance.

Inventive step

The technical effect of the globular and/or spherical shape of the alumina trihydrate filler particles was to increase translucence. There was no evidence on file for assuming that this effect was not achieved. Since none of the cited documents disclosed a filler formed from globular and/or spherical alumina trihydrate or contained the teaching that replacing the filler having irregular particles, at least in part, with a filler having regular particles would increase the translucence of a synthetic stone. Thus, the subject-matter of claim 1 was not obvious for the person skilled in the art.

IX. The respondent argued essentially as follows:

Admissibility of the opposition

The opposition met the requirements set out in Rule 76(2)(c) EPC. Moreover, a possible inadmissibility of the opposition was never raised during the first-instance proceedings. It was brought up only at the appeal stage, and the corresponding request by the appellant therefore had to be considered late-filed.

Admissibility of documents D22 to D25 and A2

Document D22 was apparently filed in view of the discussions of the technical effects of the subject-

matter claimed. However, this issue had been raised earlier, and so document D22 was late-filed. As to its substance, the test results submitted as document D22 were not persuasive since it was not clear to which examples of the opposed patent they related and because it was not possible to reproduce them. Moreover, in document D22 Aluprem 100 was used as globular alumina trihydrate, whereas HN100 was said to be non-globular. However, from the particle size it appeared that in the second example of document D22 HN100 was, in fact, a globular filler while the Hydral[®] 710 powder represented the "less than 90% by weight less regular particles", and so this example would be in accordance with the patent in suit. This confusion showed that the patent could not be carried out and that the appellant's conclusions on the technical effects of the claimed subject-matter were not convincing. Document D22 should thus not be admitted. With respect to the late-filed documents D23 to D25, it was observed that all of these documents were published after the priority date of the patent. Since they did not form part of the state of the art they should not be admitted.

Document A2 was cited in the parallel Czech proceedings and hence known to the appellant. It could, in combination with document D6, render the claimed subject-matter obvious and should therefore be admitted.

Sufficiency of disclosure

The disclosure of the invention was not sufficient. In view of the vague terms "high translucence", "low-colour resin", "viscosity lower than 1300mPas", "refractive index", "globular and/or spherical", "less regular particles" in claim 1, the exact scope of the

claims was not clearly defined and the skilled person was left in doubt whether he was working in the forbidden area or not. Moreover, the examples given in the patent left open how the skilled person would determine the proportion of globular and flat particles in the alumina trihydrate. Also, the particles shown in Figure 2 could be flat. Further problems arose from the fact that the substitute of alumina trihydrate was not defined and that no temperature was indicated regarding the claimed viscosity value although the viscosity was a temperature-dependent parameter.

Referral to the Enlarged Board of Appeal

Before finally deciding on the ground of insufficiency of disclosure, the following questions should be referred to the Enlarged Board of Appeal in order to clarify the diverging case law of the boards on this issue:

"In view of the contradicting positions taken in decision [*sic*] T 1811/13 and T 464/05 (and the decisions referred to) the following questions are referred to the EBoA

1. If one or several features of a claim are so ill-defined that a skilled person does not know when he is working within the forbidden area of the claims, is this an issue to be addressed under clarity - Article 84, or under sufficiency of disclosure - Article 83, i.e. whether the claimed invention was not disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art?
2. If the answer 1 [*sic*] cannot be decided as such, what are the criteria for deciding whether such an issue is to be addressed under Article 84 or Article 83?"

Novelty

The contested patent did not contain any definition of the term "*globular*". Equally, the appellant neither provided any definition of the feature in question nor indicated a corresponding measurement technique. It had also to be noted that claim 1 allowed the globular and/or spherical alumina hydrate to contain up to 90% by weight of less regular particles. For these reasons, the feature "*of the globular and/or spherical alumina trihydrate $Al_2O_3 \cdot 3H_2O$ containing less than 90% by weight of less regular particles*" could not be considered as limiting the claim. Moreover, document D6 disclosed a diameter for the particles and it could hence be concluded that the alumina trihydrate particles used in that document were globular. Additionally, reference was made to documents D7, D8 and D9 as well as to the prior use according to documents D11 and D12, which were also detrimental for the issue of novelty.

Remittal to the opposition division

In view of the fact that the contested decision remained silent on the alleged lack of inventive step, the case should be remitted to the opposition division in order to allow the respondent to carry out further experiments.

Inventive step

The appellant did not submit any convincing evidence that the alleged technical effect of increasing the translucence was achieved, in particular in view of the fact that up to 90% of the alumina trihydrate could be

non-globular. Document D22 was also not sufficiently clear in that respect. In the absence of a technical effect, the problem was to provide an alternative synthetic stone. Since the skilled person was always looking for alternatives to existing solutions, the claimed subject-matter was obvious.

Reasons for the Decision

1. Admissibility of the opposition

1.1 In the statement setting out the grounds of appeal, the appellant requests for the first time that the opposition underlying the present appeal case be rejected as inadmissible due to lack of substantiation in view of Rule 76(2)(c) EPC. The respondent considers this request to be late-filed.

1.2 The board observes that the question of the admissibility of the opposition was indeed not an issue during the opposition proceedings. However, according to established case law (cf. Case Law of the Boards of Appeal of the European Patent Office, 8th edition 2016, IV.E.3.2.1a)), the admissibility of the opposition, being an indispensable procedural requirement for any substantive examination of the opposition submissions, must be checked *ex officio* in every phase, including any ensuing appeal proceedings. Consequently, the board has to examine whether the objection raised by the appellant as to a possible inadmissibility of the opposition due to lack of substantiation in the notice of opposition is well-founded.

1.3 Regarding the required level of substantiation of an opposition, reference is made to the case law of the boards of appeal, according to which the terminology

"indication of facts and evidence" in Rule 76(2)(c) EPC has to be construed in the sense that the patent proprietor and the opposition division are put in a position to understand clearly the nature of the objection submitted as well as the evidence and arguments in its support. This requires the elaboration of the relevant circumstances of the case to such an extent that the patent proprietor and the opposition division are able to form a definitive opinion on at least one ground for opposition raised, without the need to undertake further investigations. The fact that a patent proprietor must be able to understand, without undue burden, the case made against its patent in the notice of opposition does not, however, exclude the possibility that it may have to undertake a certain amount of interpretation. Moreover, sufficiency of substantiation in the notice of opposition has to be distinguished from the merits of the opponent's case, i.e. whether the indication of facts, evidence and arguments is persuasive or not (cf. Case Law of the Boards of Appeal of the European Patent Office, 8th edition 2016, IV.D.2.2.8).

- 1.4 Applying these principles to the case at hand, the appellant essentially argues that the opponent did not substantiate the ground for opposition under Article 100(b) EPC 1973, that it only advanced that the skilled person would be in doubt as to the scope of the claim and that this objection actually pertained to Article 84 EPC 1973. The board observes that the appellant's arguments in fact touch upon the merits of the opponent's case. Furthermore, there are no indications apparent that the patent proprietor or the opposition division was unable to form a definitive opinion on the grounds for opposition raised, nor has this been argued.

In view of the above, the opposition underlying the present appeal proceedings meets the admissibility requirements set out in Rule 76(2)(c) EPC.

2. *Admissibility of documents D22 to D25 and A2*

2.1 The admissibility of submissions filed at the appeal stage is governed by the Rules of Procedure of the Boards of Appeal (RPBA). These provisions distinguish between, on the one hand, submissions filed for the first time at the outset of the appeal proceedings in the statement of grounds of appeal and the respondent's reply to the appeal (cf. Article 12(1), (2) and (4) RPBA) and, on the other hand, amendments to a party's appeal case filed at a later stage (cf. Article 13(1) and (3) RPBA).

2.2 The appellant filed document D22 after the respondent's reply and it therefore constitutes an amendment to the appellant's case, the admissibility of which has to be judged on the basis of Article 13(1) RPBA. Following these provisions, the admission of an amendment to a party's case is generally at the board's discretion. In the case at hand, the comparative tests of document D22 were filed in reply to the respondent's submission that the technical effect allegedly achieved by the globular particles had not been proven by the appellant. Document D22 can therefore be considered a reaction to an argument raised in the respondent's reply to the appeal. Moreover, the filing of document D22 has no substantial impact on procedural economy.

Based on these considerations, document D22 is admitted into the proceedings under Article 13(1) RPBA.

2.3 Documents D23 to D25 were filed by the appellant during the oral proceedings before the board of appeal in order to provide more information on the fillers used in the tests of document D22. However, documents D23 to D25 were published between 2011 and 2013, which is more than seven years after the priority date of the patent in suit. They therefore do not belong to the state of the art as defined in Article 54(2) EPC 1973. Since they cannot, as such, be taken into account for assessing the disputed issues of novelty and inventive step, there is no reason to admit them into the proceedings under Article 13(1) RPBA.

2.4 Document A2 was filed by the respondent with letter dated 3 November 2016 for better understanding of decision A1 of the Appellate Body of the Czech Industrial Property Office. The letter contains no indication that the respondent intends to refer to document A2 in challenging inventive step in the present proceedings. It was only during the oral proceedings before the board that the respondent for the first time relied on a combination of documents D6 and A2 as allegedly rendering the subject-matter of claim 1 obvious, without however providing any plausible explanation for its late presentation or for the skilled person's motivation to combine these two documents. In view of its filing at a very late stage of the proceedings and since it does not, *prima facie*, influence the outcome of the present appeal procedure, the board exercises its discretion pursuant to Article 13(1) RPBA by not admitting document A2 into the proceedings as prior art.

3. *Sufficiency of disclosure*

3.1 To establish insufficiency of disclosure, it is necessary to prove that the patent (application) does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. If it is argued that insufficiency arises from a lack of clarity, it is generally not sufficient to establish a lack of clarity of the claims in order to establish lack of compliance with Article 83 EPC 1973. Rather, it is necessary to show that the the patent as a whole (i.e. not only the claims) does not enable the skilled person - who can avail himself of the description and his common general knowledge - to carry out the invention (cf. T 1811/13, Reasons 5.1).

3.2 In relation to the question of burden of proof, it is settled case law that an insufficiency objection presupposes that there are serious doubts, substantiated by verifiable facts. Otherwise it is unlikely to succeed. In order to establish insufficiency, the burden of proof is upon the opponent to establish on the balance of probabilities that the skilled person of the patent, using his common general knowledge, would be unable to carry out the invention (cf. Case Law of the Boards of Appeal of the European Patent Office, 8th edition 2016, II.C.8).

3.3 In the present appeal case, the respondent objects to the vagueness of the terms "high translucence", "low-colour resin", "viscosity lower than 1300mPas", "refractive index", "globular and/or spherical", "less regular particles" in claim 1. Moreover, questions are raised on how to determine the proportion of globular

and flat particles in the alumina trihydrate, on the nature of the substitute of alumina trihydrate and on the temperature at which the claimed viscosity is to be measured. However, verifiable facts are not provided for any of these issues. In particular, it has not been proven that they would hinder the skilled person from carrying out the invention as defined in claim 1. The same applies to claims 2 to 11. In these circumstances and in view of the explanations given in the patent specification (cf. paragraphs [0007] to [0017] and examples 1 to 8), the board has no reason to depart from the presumption that the disclosure in the patent as a whole is sufficient to carry out the invention, Article 100(b) EPC 1973.

4. *Request for referral of questions to the Enlarged Board of Appeal*

4.1 The respondent requests that two questions relating to allegedly diverging jurisprudence by the boards of appeal on the issues of clarity of the claims and sufficiency of disclosure be referred to the Enlarged Board of Appeal (cf. point IX. above).

4.2 Article 112(1)(a) EPC 1973 requires the board of appeal during proceedings on a case, and in order to ensure uniform application of the law or if an important point of law arises, to refer any question to the Enlarged Board of Appeal, either of its own motion or following a request from a party to the appeal, if it considers that a decision is required for the above purposes.

4.3 In the present case, the request for a referral hinges on an alleged contradiction between decisions T 464/05 and T 1811/13.

- 4.3.1 In the case underlying decision T 464/05 dated 14 May 2007, an independent claim comprised the parameter of a *"weighted average mass vapour transmission rate of at least 3500g/m²/24 hr"*, for which no details of the test method to be applied were indicated in the patent specification, such that the boundaries of the claimed subject-matter were not well-defined. The board held that this aspect pertained to Article 84 EPC 1973 (cf. Reasons 3.3.1). Moreover, on the basis of the information available from the patent in suit and the common general knowledge, the test method would provide significantly different results, which was confirmed by the experimental data on file. The skilled person would not be able to determine whether at least some of the tested samples were according to the invention or not (i.e. fall within the forbidden area of the claim), such that the claim could not be reproduced over the whole range claimed (cf. Reasons 3.4.3).
- 4.3.2 In decision T 1811/13 of 8 November 2016 (cf. Reasons 5.1), the present board in a different composition reviewed the boards' jurisprudence (including decision T 464/05) on the question of whether or not the impossibility for the skilled person to know whether he was working within the forbidden area entailed the impossibility of carrying out the invention. It concluded that *"today there is agreement or at least a clearly predominant opinion among the boards that the definition of the "forbidden area" of a claim should not be considered as a matter related to Article 83 EPC."* The board added that: *"This is not to say that a lack of clarity cannot result in an insufficient disclosure of the invention. However, in such a case it is not sufficient to establish that a claim lacks clarity, but it is necessary to establish that the*

application or patent, as the case may be, does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. In other words, it is not sufficient to establish a lack of clarity of the claims for establishing lack of compliance with Article 83 EPC 1973; it is necessary to show that the lack of clarity affects the patent as a whole (i.e. not only the claims) and that it is such that the skilled person - who can avail himself of the description and his common general knowledge - is hindered from carrying out the invention".

4.3.3 In view of the above, the board observes that decisions T 464/05 and T 1811/13 concur in that an unclear definition of the boundaries of the claim pertains to Article 84 EPC 1973. It is further noted that, in contrast with the proceedings underlying decision T 464/05, in the present case no (experimental) evidence was filed for the allegation that, on the basis of the information available from the patent-in-suit and the common general knowledge, the vagueness of some of the claimed terms and the supposedly missing information on how to determine the proportion of globular and flat particles and the claimed viscosity would lead to significantly different products, for which it was impossible to establish whether they were according to the invention or not. In these circumstances, application of the principles set out in decisions T 464/05 and T 1811/13 would not lead to different results. Consequently, the requested referral is not required by the board in order to come to a decision in the present case.

4.3.4 Finally and more importantly, as explained in decision T 1811/13, decision T 464/05 forms part of a line of

jurisprudence established between 2004 and 2007, which has not been generally followed since then. As today there is a clearly predominant opinion among the boards that the definition of the "forbidden area" of a claim should not be considered as a matter related to Articles 83 and 100(b) EPC (1973), the alleged contradiction between decisions T 464/05 and T 1811/13 does not exist. Rather than being in conflict, these decisions illustrate a development of the case law on a particular question over an extended period of time. In that respect, the Enlarged Board of Appeal has held that for a referral to be admissible it has to be considered whether apparently divergent decisions might not be part of a constant development, possibly still ongoing, in jurisprudence on patent law issues, in the course of which older decisions have lost their significance and so can no longer be considered in connection with newer decisions. The Enlarged Board concludes that such putative differences do not justify a referral, legal development being one of the principal duties of the boards (cf. decision G 3/08, OJ EPO 2011, 10, Reasons 7.3.8).

4.3.5 For these reasons, the request for a referral to the Enlarged Board of Appeal pursuant to Article 112(1) (a) EPC 1973 is to be rejected.

5. *Novelty*

5.1 Regarding the question of how the term "*globular*" has to be understood, the opposition division held that it had to be interpreted as a shape which was not necessarily perfectly spherical, but a shape which was convex and which approached the form of a sphere (cf. impugned decision, Reasons 3.1.2). No other interpretation has been proposed by the parties during

the present appeal proceedings. Contrary to the respondent's argument, the aspect of "*globular and/or spherical*" particles qualifies the alumina trihydrate filler and limits the subject-matter claimed. It can therefore not be ignored when examining the patentability of claim 1. For these reasons, the opposition division's understanding forms the basis for the following assessment of novelty and inventive step by the board.

- 5.2 The novelty of the subject-matter of claim 1 with regard to document D6 hinges on the question of whether the filler particles in document D6 can be considered "*globular and/or spherical*" as defined in claim 1. In that respect, the passage from column 4, line 72, to column 5, line 9, of document D6 is of particular relevance:

"The form of the additive is generally particulate, and it should have a relatively small particle size. Aluminum trihydrate is sold by designation related to particle size, but the particles within a given grade or designation have a distribution of sizes. The size of the particles used as filler will affect the ability of the resin to wet the particles and the ease with which the mixture is cast or extruded. For these reasons, the particles used should preferably have a diameter ranging from about 0.1 to about 70.0 microns. Examples of alumina trihydrate grades (listed in order of decreasing size) with particles which fall substantially within this range are those sold under the designation C-33, C-30BF, and Hydral[®] 710 by the Alcoa Company."

Although the cited passage mentions a diameter ranging from about 0.1 to about 70.0 microns, it does not, as

such, allow any definitive conclusions to be drawn on a possibly two- or three-dimensional shape of the particles. The commercially available alumina trihydrate grades C-33 and Hydral[®] 710 that are mentioned are also referred to in document D7 (cf. pages 293 and 296), though without any clear indication of their particle shape. Furthermore, it is observed that data sheet D15 mentions an "Equivalent Spherical Diameter" of Hydral[®] 710 (cf. diagram on page 1). However, the notion of an equivalent (spherical) diameter is generally used for irregularly shaped objects and indicates a diameter of a sphere of equivalent dimension (cf. also document D20). In view of that, the indication of an (equivalent spherical) diameter does not imply that the Hydral[®] 710 particles are of a generally spherical shape. Consequently, an explicit or implicit but direct and unambiguous disclosure of a globular and/or spherical shape of the filler used in document D6 is not established.

- 5.3 This conclusion also applies to the further novelty objections based on documents D7, D8, D9 and the alleged prior use according to documents D11 and D12, which all fail to clearly disclose a globular and/or spherical shape of the alumina trihydrate filler particles.
- 5.4 For the sake of completeness, the board adds that according to the claim wording the feature "*globular and/or spherical alumina trihydrate $Al_2O_3 \cdot 3H_2O$ containing less than 90% by weight of less regular particles*" is not mandatory. Rather, this filler can be (partly or fully) replaced by a transparent to translucent substitute of undefined shape. However, the respondent's submissions do not specifically refer to a

possible disclosure of such a variant of the claimed artificial stone in the prior art.

Consequently, the subject-matter of claim 1 according to the main request is novel over the available state of the art (Article 54(1) and (2) EPC 1973).

6. *Remittal to the opposition division*

6.1 In view of the fact that the contested decision is silent on the alleged lack of inventive step, the respondent requests that the case be remitted to the opposition division in order to deal with this issue. A remittal would allow the respondent to carry out experiments in this regard.

6.2 Under Article 111(1) EPC 1973 the board of appeal may either decide on the appeal or remit the case to the department which was responsible for the decision appealed. The appropriateness of remittal to the department of first instance is decided by the board on the merits of the particular case. Even if there is no absolute right to have every issue decided upon by two instances, it is the primary function of an appeal to give the losing party the possibility of having the correctness of the first-instance decision judicially reviewed. Further criteria which can also be taken into account when deciding on a remittal include the parties' requests, the general interest that proceedings are brought to a close within an appropriate period of time and whether or not there has been a comprehensive assessment of the undecided issues during the appeal proceedings.

6.3 In that respect, the board notes that the objection of a lack of inventive step in the subject-matter of claim

1 as granted in view of documents D6 to D9, D11 and D12 was already put forward in the respondent's notice of opposition. It is therefore not apparent that, at least in that respect, the parties would now be confronted with a fresh case created by introducing new requests, facts or evidence during the appeal proceedings, which could possibly justify the need for providing further experimental evidence. Moreover, during the appeal proceedings the remaining issue of inventive step has been comprehensively dealt with by both parties and the board, such that the board is in a position to take an informed final decision on the main request. Finally, it is also taken into account that a remittal of the case would entail a further prolongation of the proceedings.

Based on these considerations, the request for remittal of the case to the department of first instance is refused in accordance with Article 111(1) EPC 1973.

7. *Inventive step*

7.1 Closest prior art

Document D6 is directed to a simulated marble article comprising a methylmetacrylate binder and alumina trihydrate as filler. It is therefore directed to the same subject-matter as claim 1 and can be considered a reasonable starting point for assessing its inventive merits.

As established above, the subject-matter of claim 1 of the main request differs from the content of document D6 in that the filler is formed from globular and/or spherical alumina trihydrate containing less than 90% by weight of less regular particles.

- 7.2 Technical effect and objective technical problem
- 7.2.1 According to the patent-in-suit (cf. column 4, lines 1 and 2), this differing feature has the technical effect of increased translucence.
- 7.2.2 While the appellant cites the comparative tests of document D22 in support of this technical effect being achieved, the respondent submits that the appellant has not convincingly proved that the differing feature could indeed solve the problem of achieving high translucence. These doubts are in particular reasoned with the fact that up to 90% of the alumina trihydrate could be non-globular. Hence, in the present case the issue of inventive step primarily depends on whether it is the patent proprietor or the opponent which carries the burden of proving that the asserted technical effects are achieved or not.
- 7.2.3 From a general point of view and according to the case law of the boards of appeal, a technical problem set out in a patent is considered to be credibly solved by a claimed invention if there are no reasons to assume the contrary. In such circumstances, the burden is normally on the opponent to prove the opposite or at least provide evidence casting doubt on the alleged solution of the problem. If the opponent succeeds, the burden of proof shifts to the patent proprietor, which must then prove its assertions. Where, however, the opponent succeeds in casting serious doubt on the persuasiveness of the patentee's evidence, this allegation may well render the patentee's evidence inappropriate but does not necessarily justify the conclusion that the invention fails to solve the existing technical problem. Such an allegation does not

necessarily discharge the opponent from the burden of submitting convincing counter-evidence that the claimed subject-matter cannot solve the technical problem (cf. Case Law of the Boards of Appeal of the European Patent Office, 8th edition 2016, III.G.5.1.1).

- 7.2.4 Applying these principles to the case at hand, the explanation given in the contested patent for the claimed technical effect appears plausible (cf. paragraph [0014]):

"The advantage of synthetic stone according to the invention is that the filler is made of globular to spherical particles, possibly with a portion of less regular particles, where appropriate with a pearl-like substitute of alumina trihydrate, it does not contain innumerable polygonal micro-surfaces and micro-areas which cause a worsened wettability, poly-directional reflection, refraction, and dispersion of light in the synthetic stone. Thus originates a product with a high translucency."

- 7.2.5 In these circumstances and according to the cited case law, it would be up to the opponent to prove the opposite or at least provide evidence casting doubt on the alleged solution of the problem. Although the respondent expresses doubts regarding the technical effect, it does not submit any objective evidence in that respect, for example in the form of comparative tests showing that the feature *"globular and/or spherical alumina trihydrate $Al_2O_3 \cdot 3H_2O$ containing less than 90% by weight of less regular particles"* (or the alternative with the filler substitute) is without (unexpected) technical effect. Since the respondent does not provide any proof to support its allegations,

they are not sufficient to rebut the asserted technical effect of increased translucence.

7.2.6 For these reasons, the board's assessment of inventive step is based on the objective technical problem of creating a synthetic stone with high translucency (cf. patent-in-suit, column 2, lines 30 to 32).

7.3 Obviousness of the claimed solution

The documents on file do not disclose either a filler formed from globular and/or spherical alumina trihydrate or a general teaching that, in order to increase the translucence of a synthetic stone, the filler having irregular particles is, at least in part, replaced with a filler having regular particles. Moreover, even if, for the sake of argument, the technical problem of providing an alternative synthetic stone, as proposed by the respondent, were accepted, there is no objective reason apparent why the skilled person should consider replacing the common filler having irregular particles with a filler having regular particles.

In view of that, the evidence available to the board is not sufficient to render obvious the claimed solution, which is, hence, based on an inventive step (Article 56 EPC 1973).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is maintained as granted.
3. The request for referral to the Enlarged Board is rejected.

The Registrar:

The Chairman:



D. Hampe

M. Poock

Decision electronically authenticated