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Datasheet for the decision of 7 June 2017

Case Number: T 1089/16 - 3.3.03

Application Number: 09174089.4

Publication Number: 2141204

IPC: C08L95/00, C09D195/00, E01C19/10

Language of the proceedings: EN

Title of invention:
Method for producing bituminous compositions

Patent Proprietor:
Ingevity South Carolina, LLC

Opponents:
AKZO NOBEL CHEMICALS INTERNATIONAL B.V.
Asociación Técnica de Emulsiones Bituminosas (ATEB)

Headword:

Relevant legal provisions:
EPC Art. 76(1)

This datasheet is not part of the Decision.
It can be changed at any time and without notice.

Keyword:
Divisional application - subject-matter extends beyond content of earlier application (yes)

Decisions cited:
G 0001/06, G 0002/10

Catchword:

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Case Number: T 1089/16 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 7 June 2017

Appellant: (Patent Proprietor)	Ingevity South Carolina, LLC 5255 Virginia Avenue North Charleston, SC 29406 (US)
Representative:	Coulson, Elizabeth Eve Coulson & Rule 13 Whitehall Road Rugby, Warwickshire CV21 3AE (GB)
Respondent: (Opponent 1)	AKZO NOBEL CHEMICALS INTERNATIONAL B.V. Velperweg 76 6824 BM Arnhem (NL)
Representative:	Alferink, Petrus J.T. Akzo Nobel N.V. Dept. Legal & IP Velperweg 76 6824 BM Arnhem (NL)
Respondent: (Opponent 2)	Asociación Técnica de Emulsiones Bituminosas (ATEB) Parque Empresarial Barajas Park C/ San Severo, 18 28042 Madrid (ES)
Representative:	Serravalle, Marco Serravalle SAS Via G. Matteotti, 21/23 26854 Cornegliano Laudense (LO) (IT)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 3 March 2016 revoking European patent No. 2141204 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	D. Semino
Members:	O. Dury
	C. Brandt

Summary of Facts and Submissions

I. The appeal by the patent proprietor lies against the decision of the opposition division of the European Patent Office posted on 3 March 2016 revoking European patent No. 2 141 204.

II. The patent is based on European patent application 09 174 089.4 which was filed as a divisional application of European patent application 05 712 377.0 (parent application). The latter is acknowledged as D0 in the present decision.

III. Two notices of opposition to the patent were filed, requesting revocation of the patent in its entirety on the grounds of Article 100(a) EPC (lack of novelty and lack of inventive step), Article 100(b) EPC and Article 100(c) EPC.

IV. The decision under appeal was based on a main request (amended set of claims filed with letter of 13 January 2014) and a single auxiliary request (amended set of claims filed with letter of 18 January 2016).

Claim 1 of the main request was identical to claim 1 of the auxiliary request and read as follows (additions as compared to claim 1 of D0 are indicated in **bold**, deletions in ~~strikethrough~~):

"1. A method for producing a bituminous composition comprising bitumen emulsion and aggregate by the steps of:

(A) preparing a solvent-free bitumen emulsion comprising:

(1) bitumen, in an amount from about 50.0% to about 75.0% by total weight of the bitumen emulsion,

(2) an emulsifier in an amount from about 0.05% to about 2.0% active by total weight of the bitumen emulsion, and

(3) water in an amount to complete the bitumen emulsion, and

(B) producing the bituminous composition having a temperature from about 50°C to about 140°C by mixing:

(1) the bitumen emulsion of step (A), having a temperature from about 25°C to about 95°C, in an amount from about 2.0% to about 10.0% by total weight of the bituminous composition, and

(2) aggregate, having a temperature from about 60°C to about 140°C, in an amount from about 90.0% to about ~~99.0%~~ **98.0%** by total weight of the bituminous composition,

wherein said bitumen in said emulsion is an 80/100 or harder bitumen and wets the surface of said aggregate".

V. In the contested decision the opposition division *inter alia* considered that the feature "wherein said bitumen in said emulsion is an 80/100 or harder bitumen" of above claim 1 violated the requirements of Article 76(1) EPC.

The following documents were in particular cited:

D3: Koenders, B.G. et al. "Innovative Process in

Asphalt Production and Application to Obtain Lower Operating Temperatures", Proceedings from 2nd Euroasphalt & Eurobitume Congress Barcelona 2000

D8: www.eecongress.org/2000/pdfbook3/slideshow CVs /PRESBrule.pdf

D9: AEMA "Recommended performance guidelines", Second Edition 1992

D11: BP Technical Datasheet "BP Performance Grade: PG Asphalt Binders Unmodified"

D12: BP Technical Datasheet "BP Performance Grade: PG Asphalt Binders Type A"

VI. The patent proprietor (appellant) lodged an appeal against that decision.

VII. Issues to be discussed at the oral proceedings were specified by the Board in a communication. Regarding Article 76(1) EPC it was in particular indicated that it appeared questionable that the range "80/100 or harder" could be held to be directly and unambiguously derivable from the isolated values disclosed in D0 and that the amendment "wherein said bitumen in said emulsion is an 80/100 or harder bitumen" seemed to amount to the presentation of new technical information which was not directly and unambiguously disclosed in D0 (section 5.5.2: paragraphs 3-5).

VIII. Oral proceedings were held on 7 June 2017 in the absence of opponent 2 (respondent 2).

IX. The appellant's arguments, as far as relevant for the decision, may be summarised as follows:

Article 76(1) EPC - Main request and auxiliary request

(a) Several passages of D0 were related to "paved roads" and "paving applications" and thus disclosed the significance of bitumen hardness.

(b) It was further derivable from the hardness values and PG grades of the bitumen used in examples 1-17 of D0 and from D8, D11 and D12 that all the examples of D0 were carried out using bitumen of hardness 80/100 (example 17) or harder. In that respect there was no evidence on file refuting the appellant's argument based on D8, D11 and D12 according to which PG grades and bitumen hardness were correlated.

(c) The consistent improvement in compression strength shown in examples 1-12 of D0 would be associated by the skilled person with hard bitumen and would be understood as being independent of the nature of the emulsifier or any other component used in those examples. Also, all the examples of D0 were carried out using a method according to original claim 1 and various kinds of bitumen and led to the same beneficial effects. Therefore, the hardness value could be extracted from the examples independently of the other features thereof and the amendment "80/100 or harder bitumen" merely excluded the use of soft bitumen in the method of claim 1 without changing the teaching of D0. In that respect, the bitumen mentioned in original claim 1 were implicitly characterised by having any kind of hardness and the amendment "80/100 or harder bitumen" was a mere limitation of said implicit range of hardness.

(d) For those reasons the feature of operative claim 1 "wherein said bitumen in said emulsion is an 80/100 or harder bitumen" was directly and unambiguously derivable from D0 and its addition in claim 1 of D0 did not infringe the requirements of Article 76(1) EPC.

X. The arguments of opponent 1 (respondent 1), as far as relevant for the decision, may be summarised as follows:

Article 76(1) EPC - Main request and auxiliary request

(a) It was not derivable from D0 as a whole that the bitumen hardness was of any relevance and that an "80/100 or harder bitumen" was to be used. Considering that it was well known in the art, as indicated e.g. in D3 and D9, that the type of bitumen to be used depended on the climate and other conditions where the pavement was laid, the mere reference to "paved roads" and "paving applications" could not be related to any specific hardness requirement. Hard bitumen were e.g. not desired in colder climates.

(b) Although a 80/100 bitumen was used in example 17 of D0, no indication was given that only harder bitumen should be used. There was further no clear correlation between PG grades as indicated in some examples of D0 and "80/100 hardness". In that respect, D8 only showed that there was a vague correlation between PG grade and hardness but did not justify the intermediate generalisation made by the appellant on the basis of the sole example 17. Besides, considering the information contained in D0, it was not even sure that the bitumen defined

in D11 and D12 were effectively used in the examples of D0.

(c) It was further well known that the acceptable hardness of a bitumen composition did not only depend on the bitumen type but also on other parameters such as aggregate and emulsifier used. Therefore, the 80/100 limitation could not be read in isolation of other parameters of the examples of D0, in particular example 17.

(d) Therefore, the amendment "wherein said bitumen in said emulsion is an 80/100 or harder bitumen" was not allowable pursuant to Article 76(1) EPC.

XI. The appellant requested that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of either the main request or the auxiliary request dealt with in the contested decision.

Respondent 1 requested that the appeal be dismissed or that the case be remitted to the first instance for further prosecution.

Respondent 2 did not file any submission or request in the appeal proceedings.

Reasons for the Decision

1. Respondent 2, who has not made any written submissions during the appeal proceedings, was duly summoned to oral proceedings but did not attend. The oral

proceedings were continued in his absence in accordance with Rule 115(2) EPC and Article 15(3) RPBA.

Main request

2. Article 76(1) EPC

2.1 In accordance with the established case law of the boards of appeal of the EPO, exactly the same principles are to be applied when assessing Article 76(1) EPC and Article 123(2) EPC (G 1/06, OJ 2008, 307, point 5.1 of the reasons; Case Law of the Boards of Appeal of the EPO, 8th edition, 2016, II.F.2.1). In particular, the relevant question to be answered in assessing whether the subject-matter of an amended claim extends beyond the content of the parent application, is whether after the amendment the skilled person is presented with new technical information (see G 2/10, OJ 2012, 376, point 4.5.1 of the reasons and Case Law of the Boards of Appeal of the EPO, 8th edition 2016, II.E.1 and II.F.2.1.1). In other words, the amendments are only allowable if the skilled person would derive the resulting claimed subject-matter directly and unambiguously, using common general knowledge, from the parent application as filed (here: D0).

2.2 Claim 1 of the main request differs from claim 1 of D0 *inter alia* in the addition of the following feature:

(a) "wherein said bitumen in said emulsion is an 80/100 or harder bitumen" (hereinafter "amendment (a)").

In that respect the indication "80/100" is related to the hardness of the bitumen *per se*, which characterises the range of depth penetrated by a weighted needle

under standard conditions (here between at least 80 dmm and at most 100 dmm).

2.3 It was not disputed by the appellant that, apart from the bitumen hardness mentioned in examples 16 and 17 of D0 (60/70 and 80/100, respectively), no other passage of the application as filed explicitly discloses any information regarding bitumen hardness.

2.4 Although it is indicated at page 7, lines 14-25 of D0 that the bitumen that may be used for the present invention are those which are "appropriate for paving applications under specific climatic conditions, for example, those which conform to the Strategic Highway Research Program (SHRP) pavement binder specifications", it was not shown that this would imply the use of bitumen having any specific hardness, in particular a hardness of 80/100 or higher.

The same is valid regarding original claim 16, which is directed to the use of the bituminous composition prepared by a process according to original claim 1 for paving applications.

It is further noted that no mention of hardness is made at page 5, lines 12-25 of D0, where other important features of the invention such as temperature behaviour, nature of the emulsifier or bitumen/ emulsifier solubility are explicitly indicated. The importance of the chemistry of the emulsion is further indicated at page 16, lines 20-22 and page 17, line 13 to page 19, line 14 of D0, also without mentioning bitumen hardness.

In view of the above, the appellant's argument according to which the skilled person would recognise

from D0 that the bitumen hardness is an important element of the invention does not convince.

2.5 Besides, the lack of any information related to bitumen hardness in that part of the description of D0 which is not related to the examples further means that there is also no information regarding a range of bitumen hardness.

2.6 Apart from the indication in examples 16 and 17 that bitumen graded 60/70 and 80/100 were used, respectively, the hardness of the bitumen used in the other examples of D0 is not explicitly indicated. However, the bitumen used in examples 1-15 of D0 are characterised by specific "PG grades" (PG 64-22, PG 70-22, PG 74-22, PG 78-28, chemically modified PG 64-22), which are known to be used to classify bitumen according to their maximum and minimum temperatures of use: PG 64-22 for instance means that the bitumen may suitably be used at temperatures between -22°C and 64°C.

It was disputed by the parties whether or not PG grades and hardness were unambiguously correlated. However, even if, to the appellant's benefit, it were to be concluded that the PG grades indicated in D0 imply that the bitumen used in the examples of D0 would be harder than a 80/100 bitumen, which was contested by the respondent, those disclosures would at most amount to few further individual values of bitumen hardness. In that respect, it is further noted that the appellant has only provided evidence indicating hardness values of 68 dmm and 60 dmm regarding two bitumen supplied by BP under the references PG 64-22 (D11: page 2, Table "Typical data", last column) and PG 70-22 (D12: page 2, Table "Typical data", last column), respectively. Even

if those two additional data were to be considered, it could not be concluded that the (maximum) four individual values of hardness specified in D0 would be sufficient to provide a direct and unambiguous disclosure for the range of bitumen hardness "80/100 or harder" now being defined in claim 1, as argued by the the appellant. In particular, considering that it is derivable from e.g. D8 (top right part of the figure on page 2) that hardness may reach values as low as 10/20, those four isolated values could not provide a valid support for the complete range "or harder".

2.7 The appellant argued that considering that any bitumen implicitly had a given hardness, amendment (a) amounted to limiting the open range of bitumen hardness implicitly defined in original claim 1 (by excluding the softer bitumen) without changing the teaching of D0.

2.7.1 However, the insertion in original claim 1 of the parameter related to the bitumen hardness (amendment (a)), which was not explicitly indicated in original claim 1, cannot be held to be directly and unambiguously derivable from original claim 1 with the mere justification that any bitumen defined in original claim 1 implicitly exhibited a certain hardness, so that a broad open range was implied. With no relevance given to the specific parameter, the complete absence of information cannot be taken as an implicit disclosure of a range going to any arbitrary small value to any arbitrary large value. In the absence of any kind of general information, no arbitrary open range can be directly and unambiguously derived from the parent application, so that there is no starting range available which can be further limited by taking

a specific value from one example.

2.7.2 In view of that conclusion, the issue whether or not amendment (a) changed the teaching of D0, as argued by the appellant, is not relevant.

2.8 In view of the above, it can neither be concluded that D0 discloses any range of hardness of the bitumen, nor that the feature "an 80/100 bitumen or harder" specified in operative claim 1 is directly and unambiguously derivable from the few individual values disclosed in D0. Therefore, in the present case, it cannot be concluded that there is a general implicit disclosure in D0 that the bitumen to be used in the method being claimed should be "an 80/100 or harder bitumen" and amendment (a) amounts to the presentation of new technical information which is not directly and unambiguously derivable from D0. Consequently, at least for that reason, the main request does not satisfy the requirements of Article 76(1) EPC.

2.9 In view of the conclusion reached above, it is not required for the Board to consider the other arguments in dispute between the parties, e.g. regarding whether or not the bitumen hardness feature may be read in isolation of other features disclosed in combination in the examples of the application as filed (intermediate generalisation; T 461/05).

Auxiliary request

3. Claim 1 of the auxiliary request being identical to claim 1 of the main request, the auxiliary request does not satisfy the requirements of Article 76(1) EPC for the same reasons as outlined for the main request.

4. None of the appellant's requests being allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

L. Malécot-Grob D. Semino

Decision electronically authenticated