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**Datasheet for the decision  
of 17 October 2007**

**Case Number:** T 1011/04 - 3.3.05

**Application Number:** 96905773.6

**Publication Number:** 0810981

**IPC:** C03C 25/10

**Language of the proceedings:** EN

**Title of invention:**

Method for manufacturing a mineral wool product

**Patentee:**

Rockwool Lapinus B.V.

**Opponent:**

SAINT-GOBAIN ISOVER

**Headword:**

Method for manufacturing a mineral wool product/ROCKWOOL  
LAPINUS

**Relevant legal provisions:**

EPC Art. 123(2),(3), 54, 56, 84

**Keyword:**

"Change from method claims to use claims"  
"Amendments (allowable)"  
"Clarity (yes)"  
"Novelty (yes)"  
"Inventive step (yes)"

**Decisions cited:**

G 0005/83, G 0006/88

**Catchword:**

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Case Number: T 1011/04 - 3.3.05

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.05  
of 17 October 2007

**Appellant:**  
(Opponent)

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(Patent Proprietor)

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**Decision under appeal:**

Decision of the Opposition Division of the  
European Patent Office posted 7 July 2004  
rejecting the opposition filed against European  
patent No. 0810981 pursuant to Article 102(2)  
EPC.

**Composition of the Board:**

**Chairman:** B. Czech  
**Members:** E. Waeckerlin  
H. Preglau

## Summary of Facts and Submissions

I. The appeal is from the decision of the opposition division to reject the opposition against the European patent No. 0 810 981.

II. Claim 1 as granted reads as follows:

*"1. Method for manufacturing a product on a basis of mineral wool, comprising of:*

*i) preparing a phenol-formaldehyde resin comprising phenol and formaldehyde in a molar ratio of 1 : 2.8 to 1 : 6, ammonia and a sugar preparation containing aqueous preparation;*

*ii) applying the preparation to the mineral wool; and*

*iii) curing the mineral wool with forming of the product."*

III. The prior art referred to by the opponent during the opposition procedure comprises *inter alia* the following documents:

A1: US 4 339 361 A

A2: US 3 231 349 A

A3: CA 1 001 788 A

In the contested decision, the opposition division held that the patent as granted met the requirements of the EPC. In particular it was held that the method set out in the independent claim 1 was novel and involved an inventive step having regard to the combination of A1,

representing the closest prior art, with either A2 or A3.

IV. In its statement of grounds of appeal, the appellant (opponent) referred to three further documents, namely:

A6: GB 1 293 744 A

A7: FR 2 237 930 A

A8: Gould, David F: Phenolic Resins.  
Reinhold Publishing Corp., 1959, pp. 149 - 151.

The appellant argued that A1 disclosed at least implicitly all technical features of the method according to claim 1 of the patent in suit. Example 3 of A6 and example VIII of A7 were also prejudicial to the novelty of the method of claim 1 as granted.

In case the method of claim 1 was to be considered as novel, it was obvious in view of the combination of A1 and A2 in the light of the information contained in A3 and A8, respectively. It was questionable whether the technical problem posed, namely the reduction of the ammonia emission, was effectively solved over the whole scope of claim 1, irrespectively of the amounts of ammonia and sugar used in the method, and irrespectively of the specific type of sugar.

V. With its reply, the respondent (proprietor of the patent) refuted the arguments of the appellant, arguing that neither A1 nor any other document referred to by the appellant disclosed that a sugar preparation could be used for reducing the ammonia emission during the

manufacture of a mineral wool product using a binder system based on a phenol-formaldehyde resin, wherein ammonia is used to bind excess formaldehyde.

VI. With a further letter dated 7 September 2007 the appellant submitted the following documents:

TR: A test report called "annexe technique", accompanied by a declaration of a technical expert, Mr O. Pons y Moll, and three data sheets concerning the compounds used in the tests.

The appellant maintained its novelty objections in respect of A1, A6 and A7. Concerning inventive step, the appellant insisted that claim 1 did not provide a solution of the problem as set out in the patent in suit, which was the reduction of the ammonia emission, because claim 1 was silent on the nature and reactivity of the sugar compound used, and because the conditions for a reaction between the sugar and the ammonia were not indicated. Moreover, the results reported in TR showed that even when using the specific sugar and the conditions referred to in the examples of the patent in suit, the problem of reducing the ammonia emission was not solved. Examples 1 and 3 were not described in sufficient detail to be reproducible, whereas the reproduction of example 2 with different types of sugars showed that no reduction of the ammonia emission was achieved. Hence the method according to claim 1 did not involve an inventive step.

VII. With a letter dated 17 September 2007 the respondent objected to the appellant's submissions and submitted various further documents including:

ES: Expert statement of Mr E. Hansen

Referring to the contents of this statement, the appellant criticised that the experiments reported in TR were not a true and technically correct reworking of example 2 of the patent in suit. Therefore the conclusions drawn therefrom were not conclusive.

With the same letter, the appellant also filed three sets of amended claims as first, second and third auxiliary requests. The wording of claim 1 of said third auxiliary request is as follows:

*"1. Use of a sugar preparation in a method for manufacturing a product on a basis of mineral wool, comprising of:*

- i) preparing a phenol-formaldehyde resin comprising phenol and formaldehyde in a molar ratio of 1 : 2.8 to 1 : 6, ammonia and a sugar preparation containing aqueous preparation;*
  - ii) applying the preparation to the mineral wool; and*
  - iii) curing the mineral wool with forming of the product,*
- for reducing the ammonia emission."*

VIII. In a subsequent letter dated 2 October 2007, the appellant referred to the following further documents:

A9: GB 806 652 A

A10: GB 849 876 A

A11: US 4 525 197 A

A12: US 5 371 140 A

B1: Knop, A. and Pilato, L.A.: Phenolic Resins.  
Berlin : Springer Verlag, 1985, p. 213 - 219.

Documents A9, A10 and A11 were submitted to illustrate the nature of the products called "ammonium lignosulphonate" and "Totanin" referred to in A6 and A7. Document A12 disclosed or at least suggested a process according to claim 1 of the main, first and second auxiliary request, respectively. Document B1 was supposed to show that it was known in the field of mineral fibre binders to use a resin containing ammonia *inter alia* as a formaldehyde scavenger.

Concerning the third auxiliary request, the appellant argued that since it was apparent from the experimental evidence of TR that the claimed technical effect did not exist, there was no invention.

IX. During oral proceedings held on 17 October 2007, the respondent withdrew all previous requests on file except the third auxiliary request which became the new main request (see point VII above for the wording of claim 1).

X. The arguments of the parties concerning the sole remaining (main) request of the respondent, presented essentially at the oral proceedings, can be summarised as follows:

The appellant expressly stated that it had no objections concerning the allowability of the

amendments effected by the respondent to the claims and the description. Having regard to the adaptation of the description to the amended claims, the appellant submitted, however, that section [0022] of the description had to be deleted.

At the oral proceedings, the appellant maintained its objection of lack of inventive step and argued, in addition, that claim 1 lacked clarity because several features presented as essential in the patent in suit were not recited in the said claim, namely the type and concentration of the sugar used, the reactivity of the sugar with ammonia, and the required molar ratio of ammonia to sugar. Whilst an excess of sugar over ammonia had been presented as essential, an excess of ammonia over sugar was used in example 2 of the patent in suit. No method for calculating the molar ratios was indicated in the patent in suit. Moreover, whereas claim 1 stated that a sugar preparation is used "*for reducing the ammonia emission*", the patent in suit did not contain any indication how to measure the ammonia emission. More particularly, it was unclear at which point the reported values of ammonia emission had been measured, i.e. at the fibre forming stage or at the curing stage. However, the indications in example 2 of the patent in suit appeared to relate to the emission of ammonia measured after curing. Referring to TR, the appellant argued that the reproduction of example 2, which was understood to fall under claim 1, had shown that no measurable effect was achieved. The reproduction of said example 2 had been carried out at a conventional temperature, since example 2 did not provide process details.



Regarding inventive step, the appellant argued that the claimed effect, i.e. a reduction of the ammonia emission, was not achieved over the full breadth of claim 1. Since the claimed effect was not even achieved when reworking example 2, i.e. an example falling under the terms of amended claim 1, there was a lack of inventive step.

According to the respondent the amendments to the claims were based page 2, lines 12 to 15, of the application as filed. In its view it was not necessary to delete section [0022] in order to adapt the description to the amended claims. Concerning the alleged lack of clarity it denied that any essential features were missing in claim 1, the features considered to be essential by the appellant being merely preferred ones.

The respondent held that there was no ambiguity regarding the point where the ammonia emission had to be measured. Referring to sections [0004] and [0005] of the patent in suit, it argued that the right point was where the exhaust air from the process is released into the atmosphere. The conditions in the spinning chamber were decisive for the amount of ammonia emitted from the process.

Concerning inventive step, the respondent referred to section [0008] of the patent in suit and argued that the claimed invention permitted the reduction of the ammonia emission of the process in a less expensive manner than usual methods, such as for instance the use of scrubbers. According to all three examples of the granted patent a significant reduction of the ammonia

emission was achieved, namely to less than 50 ppm in examples 1 and 2, and to less than 30 ppm in example 3. Since the tests performed by the appellant were not a proper reproduction of example 2 of the patent in suit, they were not suitable for demonstrating that the claimed effect could not be achieved.

- XI. The appellant requested that the decision under appeal be set aside and that the European patent No. 0 810 981 be revoked.

The respondent requested that the decision under appeal be set aside and that the patent be maintained on the basis of claims 1 to 10 filed as third auxiliary request on 17 September 2007, description pages 2 and 3 as filed during the oral proceedings and description page 4 as granted.

## **Reasons for the Decision**

### *1. Allowability of the amendments to the claims*

1.1 The allowability of the amendments to the claims has not been challenged by the appellant. The amended claims 1 to 10 correspond to claims 1 to 10 as granted, with the exception that they were changed from claims to a method for manufacturing a product to claims to the use of a sugar preparation in the said method for manufacturing a product for the purpose of reducing the ammonia emission.

1.2 Such use is disclosed in the application as originally filed (see page 2, lines 12 - 15 and page 2, line 33 to

page 3, line 4 of the corresponding published PCT application).

1.3 Present use claim 1 relates to an activity comprising all the features of the method according to claim 1 as granted (see decision of the Enlarged Board of Appeal G 5/83, OJ EPO 1985, 64, reasons 11 to 13).

Additionally, it comprises the feature "*for reducing the ammonia emission*" which requires this specific effect to be achieved (see also below, point 2.1). Hence, the amendments do not lead to an extension of the protection conferred by the claim.

1.4 The board is thus satisfied that the amendments meet the requirements of Article 123(2) and (3) EPC.

## 2. Novelty

2.1 In decision G 6/88 of the Enlarged Board of Appeal (OJ EPO, 1990, 114) the following is stated with respect to a claim to a new use of a known compound (see reasons, point 9): "*... such new use may reflect a newly discovered technical effect described in the patent. The attaining of such a technical effect should then be considered as a functional technical feature of the claim (e.g. the achievement in a particular context of that technical effect). If that technical feature has not been previously made available to the public by any of the means as set out in Article 54(2) EPC, then the claimed invention is novel, even though such technical effect may have inherently taken place in the course of carrying out what has previously been made available to the public.*"

2.2 The novelty of the claimed subject-matter has not been called into question by the appellant. The board has assured itself that none of the prior art documents cited by the appellant discloses the use of a sugar preparation in a method for manufacturing a product on a basis of mineral wool as defined in steps i) to iii) of present claim 1 for the purpose of reducing the ammonia emission. The application of the quoted findings of the Enlarged Board of Appeal to the present case thus leads to the conclusion that the subject-matter of claim 1 is novel over the cited prior art, at least by virtue of the functional technical feature "*for reducing the ammonia emission*". This conclusion holds true even if some of the cited prior art documents indeed disclosed methods comprising all features set out in steps i) to iii), as alleged by the appellant, in particular the feature of adding a sugar preparation, and it holds true even if in these methods the ammonia emission is inherently reduced by virtue of the said addition of a sugar preparation.

2.3 Thus, the subject-matter of claim 1 and, consequently, of dependent claims 2 to 10 meets the requirement of novelty as required by Article 52(1) in conjunction with Article 54(1),(2) EPC.

3. *The claimed effect*

3.1 As indicated under point 1.2 above, the claimed use of a sugar compound for reducing the ammonia emission in the context of a process comprising steps i) to iii) is undisputedly disclosed in general terms in the application as filed.

3.2 At the oral proceedings, the appellant first raised objections concerning the sufficiency of the disclosure, but subsequently withdrew these objections expressly. The appellant emphasised, however, that claim 1 does not specify the type of sugars to be used, the amount of sugar, the molar ratio of sugar to ammonia, and the conditions required for achieving a reaction between the sugar and ammonia, although it is stated in section [0016] of the patent in suit that a sugar compound is suitable insofar as it enters into a reaction with ammonia and does not substantially suppress the action of the resin preparation.

3.2.1 In this respect the board observes, however, that according to the description of the patent in suit a wide variety of diverse sugar compounds including monosaccharides, disaccharides and polysaccharides such as glucose, fructose, sucrose, maltose, lactose, dextrin and starch are suitable for reducing the ammonia emission (see section [0016]). Moreover a specific example of a suitable sugar preparation on basis of glucose syrup is given in examples 1 to 3 (see sections [0023], [0025], [0028]). Furthermore, there are no indications in the patent in suit that conditions are required which would deviate substantially from the conditions usually applied in the context of the known industrial processes for manufacturing products on the basis of mineral wool comprising the steps i) to iii) as set out in claim 1.

3.2.2 Therefore, the board is convinced that the skilled person is in a position to put the use according to claim 1 into practise without undue burden. In particular, by following the guidance given in the

patent in suit and making full use of the information disclosed therein (see sections [0009], [0015] to [0018] and [0031], and examples 1 to 3), and by relying on mere routine experiments - if necessary at all - the skilled person will be able to identify sugar preparations and process conditions suitable for achieving the intended effect, i.e. a reduction of ammonia emission without unwanted side effects.

3.3 In the absence of any conclusive evidence to the contrary (see points 3.4 to 3.5.4 below), the board also accepts that the examples of the patent in suit corroborate that a sugar preparation can indeed be used to achieve a reduction of the ammonia emission. A reduction of the ammonia emission to a level of less than 50 ppm is reported in example 1, from about 200 ppm to less than 50 ppm in example 2, and to less than 30 ppm in example 3 (see patent in suit, sections [0023], [0027] and [0030]).

3.4 The mere allegations of the appellant that examples 1 and 3, respectively, could not be reproduced, are not accepted by the board. Although it has to be admitted that the information given in these examples is not comprehensive in every respect, the appellant has not shown that the skilled person would be unable to make sensible choices based on the information provided by the patent in suit and, if required, common general knowledge to complete the missing information and to perform methods falling within the terms of these examples in order to test whether or not a reduction of the ammonia emission is achieved when using sugar as described in the said examples.

- 3.5 The board notes that the tests performed by the appellant as reported in TR are not a proper reproduction of example 2 of the patent in suit.
- 3.5.1 Said example 2 relates to the manufacture of a mineral wool product comprising mixing a preparation containing a phenol-formaldehyde resin, urea and ammonia with a sugar preparation immediately before atomizing the mixture obtained in a spinning chamber, in which mineral wool fibres are spun in an air flow, depositing mixed preparations on the fibres and curing the product thus obtained to form a rigid binding (see patent in suit, sections [0024] to [0026]). In contrast therewith, the tests carried out by the appellant relate to a laboratory test system in which an aqueous mixture containing resin, urea, ammonia and sugar is heated in a flask to a temperature of 184°C, and the total amount of ammonia escaping from the flask over a period of 60 minutes is collected and determined. These test conditions are thus very different from what is disclosed in example 2.
- 3.5.2 Referring also to document ES, the respondent has pointed out at the oral proceedings that in the manufacturing of bonded mineral wool products, the heat treatment of the mineral wool in the curing oven takes typically only 5 to 10 minutes and not 60 minutes as in the tests performed by the appellant. Furthermore, the temperature of 184°C used by the appellant was much higher than the temperatures usually prevailing in the spinning chamber, into which the binder solution is atomised and where most of the ammonia was released into the air flow. Under the test conditions reported in TR, the decomposition of the urea component of the

binder into ammonia, which occurs at temperatures of about 135 to 140°C, could be an explanation for the unchanged ammonia emission levels despite the use of sugar reported in TR.

3.5.3 At the oral proceedings, the appellant has emphasised that the patent in suit and example 2 were silent about the temperatures prevailing in the spinning and curing chambers, as well as the duration of the curing treatment. It was not mentioned either that most of the ammonia emission stemmed from the spinning stage.

3.5.4 However, considering that example 2 expressly relates to the ammonia emission from a process for manufacturing a bonded mineral fibre product, and considering also that various process parameters such as the temperatures and residence times in the different process steps will have an impact on the ammonia emission from such a manufacturing process, the board is not convinced that the experimental setup used by the appellant can be considered as a model for such a process. Consequently, the board does not accept that it can be concluded from the results reported in TR that no reduction of the ammonia emission is achieved when carrying out such a manufacturing process along the lines of example 2 of the patent in suit.

#### 4. *Clarity*

4.1 The functional feature "*for reducing the ammonia emission*" was originally disclosed in a general manner (see above, points 1.2 and 3.1). It limits the claims to those uses of a sugar preparation in the context of the manufacturing of a mineral wool product, wherein a



reduction of the ammonia emission is actually achieved, see (see above, point 2.1). This effect is achieved by adopting, based on the information disclosed in the patent, appropriate measures without any undue experimental burden being involved (see above, point 3.2.2). The feature in question expresses the necessary result of all the said measures in a general functional form. Claim 1 is thus sufficiently supported by the description and the wording of claim 1 as such is clear. Under these circumstances, claim 1 is not objectionable for lack of clarity merely because it does not expressly recite each and every process detail, which contributes to the achievement of the overall result, such as the type or amount of the sugar used, or the reaction conditions.

4.2 The appellant has further criticised that the patent contained no information as to where the ammonia emission is measured.

4.2.1 However, it is apparent from the context of the patent in suit as a whole (see in particular sections [0005] to [0008], and examples 1 to 3) that what is aimed at is a reduction of the amount of ammonia which is emitted to the environment together with off-gas stemming from the process for manufacturing the mineral wool product. Claim 1 requires that the emission of ammonia stemming from the manufacturing process has to be lowered by virtue of the use of a sugar preparation, irrespective of the point at which the ammonia emission is measured. Thus, the fact that the more specific origin of the ammonia emissions (i.e. the spinning chamber or curing oven) is not indicated in claim 1 does not render the claim unclear. Moreover, this

particular aspect is not presented as essential in the patent in suit.

4.3 The appellant also criticised that no method for calculating the molar ratio of sugar and ammonia is indicated in the patent in suit, and that although according to section [0017] a stoichiometric or excess amount of sugar relative to ammonia had to be used, the molar ratio of sugar to ammonia was 1 : 7 in example 2.

4.3.1 It is however stated in the section [0017] of the patent in suit that an excess of sugar is merely preferable, in order to achieve a marked reduction of the ammonia emission. Such an excess of sugar is thus not presented as an essential feature of the invention. Moreover, in the subsequent section [0018] of the patent in suit, it is expressly indicated that the amount of sugar actually necessary to achieve the desired ammonia reduction may be determined by routine experiments. The proper ratio of sugar to ammonia is thus just one of the process details contributing to the achievement of claimed effect, and claim 1 is not objectionable for lack of clarity merely because no such ratio is mentioned therein (see also above, point 4.1).

4.4 The board thus concludes that the claims meet the requirements of clarity and support by the description laid down in Article 84 EPC.

5. *Inventive step*

5.1 By virtue of the functional feature "*for reducing the ammonia emission*", the present claims are limited to

those uses wherein the technical effect, i.e. a reduced ammonia emission, is actually achieved (see above, point 2.1). It is apparent from the preceding considerations that the appellant has not convincingly established that the claimed effect cannot be achieved, or that it cannot be achieved over the whole ambit of the claims. The appellant's argumentation concerning the alleged lack of inventive step must thus fail.

5.2 Having regard to the present use claims, the appellant has not invoked any specific prior art documents to substantiate his objection concerning the alleged lack of inventive step. For the following reasons, the board is also convinced that the claimed subject-matter is not obvious in view of the prior art cited by the appellant.

5.3 In the description of the patent in suit reference is made to "*the usual method for removing ammonia from gas, for instance by means of using scrubbers*" (see section [0008]). Said usual method can be considered to represent the closest prior art. The appellant has not disputed that the use of scrubbers for this purpose belonged to the prior art, but stated at the oral proceedings that it was clear at the time when the application was filed that the totality of the off-gases collected from all stages of the production line were treated in this manner.

5.4 In accordance with the patent in suit (see sections [0006] to [0008]), the technical problem can be seen in providing a way of reducing the ammonia emission in the context of a method for manufacturing a mineral wool product wherein a phenol-formaldehyde resin preparation

- is used as a binder, which preparation also contains ammonia for binding the excess amount of formaldehyde, without substantially adversely affecting the curing of the binder, and without substantially increasing the emission of phenol and/or formaldehyde.
- 5.5 In the patent in suit it is suggested that the technical problem be solved by using an aqueous sugar preparation as a component of the binder mixture applied to the fibres.
- 5.6 In view of the information contained in the patent in suit, in particular the examples 1 to 3, the board finds it plausible and convincing that the stated technical problem is indeed solved by the claimed use of a sugar preparation.
- 5.7 Hence it remains to be investigated whether the solution defined in present claim 1, i.e. the use of a sugar, is obvious in respect of the cited prior art.
- 5.8 First of all, the board notes that none of the documents cited by the appellant is concerned with the issue of the ammonia emission in methods for manufacturing products on the basis of mineral wool comprising the steps of preparing a phenol-formaldehyde resin preparation, applying said preparation to the mineral wool, and curing the mineral wool product with forming of the product.
- 5.9 In some of the cited documents the use of sugar as a component of the binder composition in the manufacture of mineral fibre products is expressly disclosed, but

for purposes other than the reduction of the ammonia emission.

- 5.9.1 Thus, according to A1, various types of sugar compounds may be added to phenol and formaldehyde, either at the beginning or during the condensation reaction, or after the phenol-formaldehyde resin has been formed. The sugar acts as a co-called "*extender*" which is added to reduce the amount of phenol in binder systems (see col. 2, lines 29 - 41; col. 4, lines 48 - 63; col. 5, lines 30 - 50).
- 5.9.2 Document A2 is concerned with a method for producing vitreous fibre products using a phenolic resole binder with a molar ratio of formaldehyde to phenol of 1.6 to 2.3, which is lower than the molar ratio set out in present claim 1. A2 discloses *inter alia* the use of glucose as "*high temperature anti-oxidants*" having also a beneficial effect "*relative to odor control*" (see col. 5, lines 8 - 11). There is no disclosure in A2, however, that the unpleasant odours of the products are associated with the emission of ammonia.
- 5.9.3 Document A6 discloses a binder composition suitable for use with glass fibres, which contains a phenol-formaldehyde resin, urea, ammonium lignosulphonate such as the material known by the trade name "Totanin", and optionally  $\text{NH}_4\text{OH}$  (see page 1, lines 45 - 51; 70 - 74; page 3, lines 23 - 47, example 3). Within the context of A6 the term "*ammonium lignosulphonate*" is used to refer to the material produced as by-product in the digestion of, for example, wood pulp, by ammonium bisulphite, such as the material known under the trade name "Totanin". This type of material contains a

proportion of hexoses and pentoses, i.e. monosaccharides containing six and five carbon atoms, respectively (see page 1, line 86 to page 2, line 9). The component containing sugar, i.e. ammonium lignosulphonate, acts as an "extender" (see page 1, lines 50 - 51). Moreover the use of ammonium lignosulfonate tends to shorten the setting time (see page 1, lines 48 - 50).

5.9.4 Similarly A7 discloses a binder composition for bonding fibres such as mineral wool or glass fibres containing *inter alia* a phenol-formaldehyde resin and acidic lignosulphonates such as the ammonium lignosulphonates known under the trade name "Totanin" (see e.g. page 20, lines 4 - 34, example VIII). According to A7 the ammonium lignosulfonate component acts as a pH-neutralising agent and as an "extender" (see page 11, lines 19 - 21), as well as a dispersing agent (see page 10, line 3). Moreover the presence of lignosulfonate is stated to assist in reducing the amount of vaporised volatile materials and decomposition products which contaminate the exhaust air from the suction chamber (see page 24, lines 1 - 4). However, A7 does not disclose any specific function of sugar components possibly contained in the ammonium lignosulphonate product, let alone a reduction of the ammonia emission (see page 5, lines 25 - 33).

5.9.5 Document A12 discloses emulsifiable compositions containing a phenol-formaldehyde resin, an emulsifying agent and an aldehyde scavenger, for example  $\text{NH}_4\text{OH}$ . Combinations of gum arabic and certain polysaccharides may be used as emulsifying agents (see col. 12, lines 57 - 62).

5.10 The other documents referred to by the appellant do not mention at all the use of sugar as a component of binder systems, let alone that sugar may be capable of reducing the ammonia emission.

5.11 It emanates from the above analysis that the cited prior art contains no pointer towards the claimed solution.

5.12 The board concludes, therefore, that the subject-matter of claim 1 involves an inventive step as required by Articles 52(1) and 56 EPC. The same applies to dependent claims 2 to 10, which refer directly or indirectly back to claim 1.

6. *Adaptation of the description*

6.1 The appellant has not substantiated for which particular reasons it considered that the amendments to the claims made it necessary to delete section [0022] of the description of the patent in suit. The board is, however, convinced that the amended description including the unamended section [0022] supports the amended claims and is in conformity therewith, since the said section is not in contradiction with the wording of the claims and does not give rise to doubts concerning their ambit.

6.2 The amendments to the description effected by the appellant meet the requirements of Article 123(2) and 84 EPC.

7. For all these reasons, the appellant's request is allowable.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
  
2. The case is remitted to the department of first instance with the order to maintain the patent on the basis of the following documents:  
Claims 1 to 10, filed as third auxiliary request on 17 September 2007,  
description: pages 2 and 3, submitted during the oral proceedings, page 4 as granted.

The Registrar

The Chairman

S. Fabiani

B. Czech