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**Datasheet for the decision
of 20 February 2014**

Case Number: T 0532/11 - 3.3.10

Application Number: 01902384.5

Publication Number: 1289942

IPC: C07C273/04

Language of the proceedings: EN

Title of invention:

PROCESS AND PLANT FOR THE PRODUCTION OF UREA

Patent Proprietor:

UREA CASALE S.A.

Opponent:

DSM IP ASSETS B.V. / Stamicarbon B.V.

Headword:

Relevant legal provisions:

EPC Art. 123(2)
RPBA Art. 12(2), 13(1)

Keyword:

Amendments - added subject-matter (yes)
- main and first auxiliary requests
Late-filed auxiliary requests - admitted (no)
- second and third auxiliary requests

Decisions cited:

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 0532/11 - 3.3.10

D E C I S I O N
of Technical Board of Appeal 3.3.10
of 20 February 2014

Appellant: DSM IP ASSETS B.V. / Stamicarbon B.V.
(Opponent) Het Overloon 1 / Mercator 2
6411 Te Heerlen / 6135 KW Sittard (NL)

Representative: Kraak, Hajo
V.O.
Johan de Wittlaan 7
2517 JR Den Haag (NL)

Respondent: UREA CASALE S.A.
(Patent Proprietor) Via Giulio Pocobelli, 6
6900 Lugano-Besso (CH)

Representative: Zardi, Marco and Biazzi, Riccardo
M. Zardi & Co. SA
Via Pioda 6
6900 Lugano (CH)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
27 December 2010 concerning maintenance of the
European Patent No. 1289942 in amended form.**

Composition of the Board:

Chairman: P. Gryczka
Members: R. Pérez Carlón
D. Rogers

Summary of Facts and Submissions

- I. The appellant (opponent) lodged an appeal against the interlocutory decision of the opposition division to maintain European patent EP 1 289 942 on the basis of the then pending first auxiliary request.
- II. The grounds of opposition were that the subject-matter of the patent in suit was not novel and did not involve an inventive step (Article 100(a) EPC).
- III. *Inter alia*, the following documents were cited:
 - D3: WO 00/00466
 - D5: Harnstoff. Ullmanns Encyklopädie der technischen Chemie, 4th edition (1976) volume 12, pages 500-502
- IV. The opposition division considered *inter alia* that in claim 1 of the then pending first auxiliary request the feature "total condensation", which resulted from deleting the term "substantially" from the feature "substantially total condensation" in claim 1 as granted, found a basis in the application as originally filed and for that reason claim 1 of the then pending first auxiliary request did not contain added subject-matter.
- V. The respondent (patent proprietor) filed with the response to the grounds of appeal a main request corresponding to that upon which the patent was maintained in opposition proceedings, and a first auxiliary request. During the oral proceedings before the board, a second and third auxiliary requests were filed.

VI. Claim 1 of the main request reads as follows
(references (a) to (f) added by the board):

*"A process for the production of urea of the type
comprising the steps of:*

- (a) performing a reaction between ammonia and carbon dioxide in a reaction space to obtain a reaction mixture comprising urea, carbamate and free ammonia in aqueous solution,*
- (b) subjecting said mixture to a stripping treatment with the use also of carbon dioxide feed as a stripping agent to obtain a first flow comprising ammonia and carbon dioxide in vapor phase and a flow comprising urea and residual carbamate in aqueous solution,*
- (c) subjecting said first flow comprising ammonia and carbon dioxide in vapor phase to a total condensation to obtain a first portion of carbamate in aqueous solution,*
- (d) recycling said first portion of carbamate in aqueous solution to said reaction space,*
- (e) feeding said flow comprising urea and residual carbamate in aqueous solution to a urea recovery section,*
- (f) separating in said recovery section said residual carbamate from the urea to obtain a second portion of carbamate in aqueous solution.*

*characterised in that it comprises the additional steps
of:*

- (g) subjecting at least part of said second portion of carbamate in aqueous solution obtained in said urea recovery section to a treatment of partial decomposition to obtain a second flow comprising ammonia and carbon dioxide in vapor phase and a flow comprising residual carbamate in aqueous solution,*

(h) *recycling at least part of said second flow comprising ammonia and carbon dioxide in vapor phase directly to said reaction space and/or using at least part of said second flow comprising ammonia and carbon dioxide in vapor phase for the stripping treatment of the reaction mixture comprising urea, carbamate and free ammonia in aqueous solution."*

Step (c) of claim 1 of the first auxiliary request is identical to step (c) of claim 1 of the main request.

In claim 1 of the second and of the third auxiliary requests, step (c) reads:

*"subjecting said first flow comprising ammonia and carbon dioxide in vapor phase to a **substantially** total condensation to obtain a first portion of carbamate in aqueous solution"* (emphasis added by the board).

VII. The arguments of the appellant relevant for the present decision were the following:

The feature "total condensation" did not find a basis in the application as originally filed, which only disclosed a "substantially total condensation". The subject-matter of claim 1 of the main and first auxiliary requests contained for this reason added subject-matter.

The second and third auxiliary requests, filed during the oral proceedings before the board, were not filed in reaction to objections, facts or evidence freshly raised. In addition, they introduced new issues into the proceedings in particular the question of

reformatio in peius, since the opponent was the sole appellant in these proceedings. For these reasons, these requests should not be admitted into the proceedings.

VIII. The arguments of the respondent relevant for the present decision were the following.

The feature "total condensation" found a basis on page 5, line 2; page 6, line 11, page 9, line 23-24 and page 2, line 19 of the application as originally filed. Said feature was, further, implicitly disclosed with the meaning "condensing as much as technically feasible". Finally, the terms "total condensation" and "substantially total condensation" were equivalent and could be interchanged without adding any technical information. For these reasons claim 1 of the main request and of the first auxiliary request did not contain added subject-matter.

The second and third auxiliary requests were filed in response to the discussion on added subject-matter during the oral proceedings, which could not have been foreseen in the light of the written submissions. The amendment was simple and did not introduce any new issue which could imply additional burden for the appellant or the board. For these reasons, these requests should be admitted into the proceedings.

IX. Oral proceedings were held before the board on 20 February 2014.

X. The final requests of the parties were the following:

- The appellant requested that the decision under appeal be set aside and that the European patent

No. 1 289 942 be revoked, and that the second and third auxiliary requests be not admitted into the proceedings.

- The respondent requested that the appeal be dismissed, or that the patent be maintained upon the basis of the main request, or of one of the first to third auxiliary requests: the main and first auxiliary request being filed under cover of a letter dated 27 September 2011, and the second and third auxiliary requests being filed at the oral proceedings before the board on 20 February 2014.

XI. At the end of the oral proceedings before the board, the decision was announced.

Reasons for the Decision

1. The appeal is admissible.

Main request

2. Amendments:

- 2.1 Claim 1 of the main request requires in step (c) a "total condensation", whereas claim 1 as originally filed, which is identical to claim 1 as granted, requires a "*substantially* total condensation".

- 2.2 The opposition division found a basis for the feature "total condensation" in "paragraphs [32] and [37]" of the patent specification as published; corresponding passages in the application as originally filed can be found on page 5, lines 2-8 and page 6, lines 10-12. The opposition division further explained that it was usual

to delete a vague term such as "substantially" from a claim in order to avoid confusion about its scope.

2.3 Although deleting such vague terms may not lead to added subject-matter, the feature arising from such deletion needs a basis in the application as originally filed. It needs, thus, to be examined whether a basis for the feature "total condensation" can be found.

2.4 The respondent provided as a basis thereof the passages on page 5, line 2; page 6, line 11, page 9, line 23-24 and page 2, line 19 of the application as originally filed.

2.4.1 The passage on page 2, line 19 refers to the prior art document D3, not to the claimed invention, and hence does not provide a basis for the feature "total condensation" in the context of the claimed invention.

2.4.2 The passage on page 5, line 2 reads "the above-mentioned total condensation", and its antecedent "above-mentioned" is "the substantially total condensation" (page 4, line 34). Thus, this passage also fails to provide a basis for the feature "total condensation".

2.4.3 The passage on page 6, line 11 reads:

"The feed of a second portion of ammonia in the carbamate condenser significantly promotes the total condensation of the vapours coming from the first stripping unit".

This passage discloses that feeding ammonia to the condenser, which is not required by amended claim 1, "promotes total condensation", i.e. brings the

condensation closer to total. It fails, however, to disclose whether said ammonia feeding leads to achieving a "total" condensation. Therefore, the feature of claim 1 "total condensation" does not find a basis in this passage.

2.4.4 Finally, the passage on page 9, lines 23-24 refers to a "total condensation unit" which is capable of achieving a "substantially total condensation". Therefore, the degree of condensation disclosed there is also "substantially total", and not "total".

2.4.5 The board concludes, thus, that there is no explicit disclosure of the feature "total condensation" in the application as originally filed.

2.5 It remains to be examined whether the feature "total condensation" is implicitly disclosed in the application as originally filed, implicit disclosure meaning no more than the clear and unambiguous consequence of what is explicitly disclosed.

2.5.1 The respondent argued that the skilled reader would immediately understand that a "total condensation" was not possible since the non condensable gases would unavoidably entrain a part of the condensable components. The skilled reader would for this reason give to the term "total condensation" the meaning "condensing as much as technically feasible".

In favour of the respondent, the term "total condensation" will be considered equivalent to "condensing as much as technically feasible". Under this assumption, the feature "total condensation" would find a basis in the application as originally filed if its alleged meaning finds such a basis therein.

The application as originally filed does not provide any information about the degree of condensation other than "substantially total" and is, thus, silent about "condensing as much as technically possible", so that the meaning of "total condensation" alleged by the respondent finds no basis thereof.

The respondent further relied on the prior art document D3, cited on page 2, line 19 of the originally filed application, which should disclose what the skilled reader would understand as a "total condensation".

However, document D3 is silent either about a "total condensation" or about a condensation carried out at the feasible maximum. The examples of document D3 disclose 93% and 94% condensation of the components present in the pool condenser PLC (values obtained from examples 1 and 2 according to the embodiment of figure 1, see line PLC and line from the pool condenser to the ejector J, non-condensable gases excluded from the calculation). D3, however, fails to disclose whether these percentages amount to the highest possible degree of condensation, or whether a higher condensation degree could still be achieved.

- 2.5.2 The respondent further argued that the term "total condensation" was commonly used in the field of urea synthesis to describe one well known type of process as opposed to the so-called Stamicarbon process using a "partial condensation". The difference between a total and a partial condensation turned on whether the feed sent back from the condenser to the reactor contained uncondensed gases or whether it was, as in the patent in suit, a liquid feed which could be used in combination with an ejector. The skilled reader would,

thus, see no difference between the feature "total condensation" and "substantially total condensation" both in fact describing the same well known type of urea process, so that the amendment in claim 1 did not introduce any new technical information.

However, although the respondent has provided evidence that the "Stamicarbon" process requires a "partial condensation" (D5, page 500, paragraph 3.2, lines 16-17), it has failed to provide evidence that in other type of urea process the skilled person would give the same meaning to the terms "total condensation" and "substantially total condensation".

With respect to the argument that the feature "total condensation" was inherently disclosed by the step of sending a liquid feed to the reactor, the corresponding step d) of claim 1 is not restricted to a liquid feed and this argument fails already for this reason. Furthermore, a condenser provides a liquid feed independently from the degree of condensation, i.e. even if the condensation is not total.

- 2.6 The board, thus, concludes that the application as originally filed fails to provide a basis, either implicit or explicit, for the feature "total condensation" with the consequence that claim 1 of the main request contains added subject-matter (Article 123(2) EPC) and is, thus, not allowable.

First auxiliary request:

3. Since step c) of claim 1 of the first auxiliary request also contains the feature "total condensation", said request contravenes the requirements of Article 123(2) EPC for the same reason as the main request and is

therefore not allowable.

Second and third auxiliary requests:

4. The second and third auxiliary requests, in whose claim 1 the term "substantially" was reintroduced, were filed at a very late stage of the appeal proceedings, namely during the oral proceedings before the board.

The respondent argued that the amendment was simple and should not represent an additional burden for the appellant or the board. The requests were a response to the in-depth discussion on added subject-matter during the oral proceedings, which could not have been foreseen in the light of the written submissions and the decision of the opposition division.

5. The purpose of the appeal proceedings in *inter partes* proceedings is mainly to give a party being adversely affected the possibility of challenging the decision of the first instance. According to Article 12(2) of the RPBA, the statement of grounds of appeal and the reply shall contain a party's complete case. If, at a later stage of the proceedings, the respondent wants other requests to be considered, admission of these requests is a matter of discretion for the board of appeal (Article 13(1) RPBA).

In the present case, the objection which may have prompted the filing of these requests, namely added subject-matter in relation with the term "total condensation", was already part of the decision under appeal and was maintained by the appellant in its grounds of appeal. Therefore, these requests are not a reaction to objections, facts or evidence freshly raised. Although the respondent argued that the

amendment was simple and should not represent an additional burden for the opponent or the board, claim 1 of these requests raises new issues at a very late stage of the appeal proceedings. In particular, since the opponent is the sole appellant, the question would arise whether the modification carried out in the auxiliary requests 2 and 3 would infringe the principle of "*no reformation in peius*". Therefore, the board decides to make use of its discretion under Article 13(1) of the RPBA not to admit these requests into the proceedings.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



C. Rodríguez Rodríguez

P. Gryczka

Decision electronically authenticated