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**Datasheet for the decision  
of 7 December 2021**

**Case Number:** T 1816/18 - 3.3.10

**Application Number:** 10740669.6

**Publication Number:** 2477961

**IPC:** C07C273/16, C01C1/12, C05C3/00,  
C05C9/00

**Language of the proceedings:** EN

**Title of invention:**

REMOVAL OF UREA AND AMMONIA FROM EXHAUST GASES

**Patent Proprietor:**

Stamicarbon B.V.

**Opponent:**

thyssenkrupp Fertilizer Technology GmbH

**Headword:**

REMOVAL OF UREA AND AMMONIA FROM EXHAUST GASES/Stamicarbon

**Relevant legal provisions:**

EPC Art. 123(2), 123(3), 84  
RPBA Art. 12(4)

**Keyword:**

Late-filed request - submitted with the statement of grounds  
of appeal

Claims - clarity - main request (yes)

Amendments - added subject-matter (no) - broadening of claim  
(no)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**

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**Chambres de recours**

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Case Number: T 1816/18 - 3.3.10

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.10**  
**of 7 December 2021**

**Appellant:** Stamicarbon B.V.  
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**Respondent:** thyssenkrupp Fertilizer Technology GmbH  
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**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 9 May 2018  
revoking European patent No. 2477961 pursuant to  
Article 101(3) (b) EPC.**

**Composition of the Board:**

**Chairman** P. Gryczka  
**Members:** J.-C. Schmid  
F. Bostedt

## **Summary of Facts and Submissions**

- I. The patent proprietor (appellant) lodged an appeal against the decision of the opposition division revoking European patent No. 2 477 961.
- II. The opponent (respondent) filed an opposition requesting revocation of the patent-in-suit in its entirety on the grounds of lack of novelty and inventive step (Article 100(a) EPC) and insufficient disclosure of the invention (Article 100(b) EPC).

With a letter dated 26 March 2018 the respondent further submitted that claim 1 of the patent as granted infringed Article 123(2) EPC. During the oral proceedings held on 27 April 2018, the opposition division introduced the ground of opposition under Article 100(c) EPC into the opposition proceedings.

- III. According to the opposition division, the gas stream used for the recovery of urea dust and ammonia according to the process of claim 1 of the patent as granted could not be specified according the passage of page 1, lines 7-9 of the application as filed, since this passage related to the the state of the art but not to the invention. Hence this passage did not disclose that a waste air stream resulting from the granulation, prilling and product cooling process steps could be used in the claimed process.

In addition this passage referred to "exhaust gases" from urea plants, to "waste air streams" which were specific streams within urea plants and chemical fertilizer plants, and to "a waste air stream" which

were not seen as a gas stream that could be used in the recovery of urea dust and ammonia in the claimed process. Thus, subject-matter of claim 1 of the patent as granted and of the then pending auxiliary requests 1, 1A, 2 and 3 extended beyond the content of the application as filed (Article 123(2) EPC).

- IV. With the statement setting out the grounds of appeal, the appellant additionally filed auxiliary request 1B to address a clarity objection of the opposition division against auxiliary request 1.
- V. In the communication pursuant to Article 15(1) RPBA 2020 dated 3 June 2020, the Board indicated that claim 1 of the patent as granted (main request) might not meet the requirements of Article 123(2) EPC, whereas claim 1 of auxiliary request 1, 1A and 1B appeared to meet these requirements. It was furthermore indicated that there was no need to reword claim 1 of the patent as granted to overcome the objection of Article 123(2) EPC as was done in claim 1 of auxiliary requests 1 and 1A, with the consequence that these requests 1A might not comply with Rule 80 EPC.
- VI. By letter dated 4 August 2020, the appellant withdrew the main and auxiliary requests 1 and 1A, and made auxiliary request 1B the main request. The appellant further filed amended auxiliary requests 2 to 4.
- VII. Claim 1 of the main request reads as follows:

"1. Method for recovery of urea dust and ammonia from a gas stream, being a waste air stream from granulation, prilling or product cooling process steps, wherein said waste air stream is released as exhaust gas from a urea plant, urea granulation tower, or urea prilling tower,

by contacting said gas stream with an aqueous sulphuric acid solution, thus forming an acid solution of ammonium sulphate and urea, wherein ammonia is added to the acid solution thus forming a neutralized solution of urea and ammonium sulphate in water, and the neutralized solution is concentrated to a melt comprising less than 5 wt% of water, which melt is subsequently transferred into solid particles comprising urea and ammonium sulphate."

VIII. According to the respondent there was no basis in the application as filed for the gas stream, being a waste air stream from granulation, prilling or product cooling process steps, wherein said waste air stream is released as exhaust gas from a urea plant, urea granulation tower, or urea prilling tower. Hence claim 1 of the main request contravened the requirement of Article 123(2) EPC. Furthermore, the respondent agreed with the opposition division in that there was a lack of clarity (Article 84 EPC) since it was not clear whether the "gas stream" used for the method of claim 1 was an "exhaust gas" or a "waste air stream". Claim 1 of the main request also extended the protection conferred by the granted patent (Article 123(3) EPC) since a "waste air stream" was something different from an "exhaust gas".

IX. The appellant requested that the decision under appeal be set aside and that the case be remitted to the opposition division for further prosecution.

The respondent requested that the appeal be dismissed.

X. At the end of the oral proceedings held on 7 December 2021, the Board announced the decision.

## **Reasons for the Decision**

*Main request (filed as auxiliary request 1B with the statement of the grounds of appeal)*

### *Admissibility*

1. The respondent objected to the admissibility of the main request into the proceedings since it should have been filed before the opposition division.
2. For the question of the admission of the main request, which was filed with the statement of grounds of appeal on 17 September 2018, Article 12(4) RPBA 2007 applies (see Article 25(2) RPBA 2020).
3. The main request was filed with the statement of the grounds of appeal in response to the finding in the contested decision that claim 1 of auxiliary request 1 then pending lacked clarity (see point 3 on page 11 of the contested decision; see also page 20 of the statement of the grounds of appeal). The main request only results from a reformulation of auxiliary request 1 then pending and does not bring any new substantive matter to the appeal procedure.

Thus, the main request filed with the statement of the grounds of appeal is admitted into the proceedings.

### *Amendments (Article 123(2) EPC)*

4. The respondent objected to the amendment made to claim 1 of the main request, which specifies that the gas stream is "a waste air stream from granulation,

prilling or product cooling process steps, wherein said waste air stream is released as exhaust gas from a urea plant, urea granulation tower, or urea prilling tower", for not having a basis in the application as filed.

5. In order to determine whether or not an amendment adds subject-matter that extends beyond the content of the application as filed, it has to be examined whether technical information has been introduced, which a skilled person would not have directly and unambiguously derived from the application as filed.
6. According to the appellant, the section of page 1, lines 7-9 of the application as filed revealed without any ambiguity that the gas stream mentioned in the process of claim 1 of the application as filed is a waste air stream from granulation, prilling or product cooling process steps, wherein said waste air stream is released as exhaust gas from a urea plant, urea granulation tower, or urea prilling tower.
7. According to the respondent, this section of the application as filed related to the state of the art but not to the invention. Consequently, this section could not support any modification to claim 1.
8. The claimed invention is a method of recovering urea dust and ammonia from a gas stream. This method is disclosed in the context of waste air streams containing urea dust and ammonia which are released from urea plants, urea granulation towers, urea prilling towers and chemical fertilizer plants, as described in the section of page 1, lines 1 to 9 of the application as filed.

Contrary to the submissions of the respondent, this passage does not solely relate to a discussion of the state of the art, but situates the invention in its general context namely in the recovery of urea dust and ammonia from exhaust gases from urea plants, urea granulation towers and urea prilling towers. Hence, this section refers to technical features which define the claimed invention.

Accordingly, this section of the application as filed is part of the disclosure and may be relied on to support the amendments made to the preamble of claim 1.

9. According to the respondent, this section did not disclose that waste air stream resulting from the granulation, prilling and product cooling process steps could be used as the gas stream from which the urea dust and ammonia were to be recovered according to the process of claim 1. This section referred to "exhaust gases" from urea plants, to "waste air streams" which were specific streams within urea plants and chemical fertilizer plants, and to "a waste air stream" which resulted in particular from granulation, prilling and product cooling process steps. There was no disclosure in this section or in any other part of the application as filed that these streams or gases were gas streams from which urea dust and ammonia had to be recovered according to the process of claim 1 of the application as filed.
10. The process of claim 1 of the application as filed is disclosed to apply to the recovery of dust urea and ammonia from a gas stream. This gas stream is not further limited in claim 1 of the application as filed and may thus include any gas stream. As explained

above, the limitation to specific suitable gas streams in claim 1 of the main request defines the claimed method more precisely, namely as is disclosed in the first paragraph of the application as filed which gives examples of gas streams that contain urea dust and ammonia.

The skilled person would immediately and unambiguously recognize that waste air streams released as exhaust gas from urea plant, urea granulation tower, or urea prilling tower, which contain urea dust and ammonia, are suitable gas streams to carry out the claimed method for recovery of urea dust and ammonia.

Therefore, the amendments reflect technical information that can be unambiguously deduced by the skilled person from the content of the application as filed.

11. The respondent's objection that urea granulation towers and urea prilling towers are not disclosed as releasing waste air streams containing dust urea and ammonia, simply because these plants were not named as plants, lacks merit as the person skilled in the art - from whose standpoint this is assessed (see Case law of the Board of Appeal, 9<sup>th</sup> edition 2019, II.E.1.3.2) - immediately recognises that these urea granulation towers and urea prilling towers are plants releasing dust urea and ammonia.

Consequently, specifying the gas stream to be processed by the claimed method as a gas stream being a waste air stream from granulation, prilling and product cooling process steps, wherein said waste stream is released as exhaust gas from a urea plant, urea granulation tower, or urea prilling tower is directly and unambiguously derivable from the application as filed.

12. Hence, the Board concludes that the subject-matter of claim 1 of the main request does not extend beyond the content of the application as filed. Claim 1 of the main request thus satisfies the requirements of Article 123(2) EPC.

*Articles 84 EPC and 123(3) EPC*

13. According to the respondent, the waste air stream is also defined as an exhaust gas in claim 1. As the meaning of an exhaust gas is different from that of a waste air stream, the skilled person is faced with an ambiguity and does not know which one of these two expressions defines the gas stream of the method of claim 1. Hence, claim 1 of the main request IB does not meet the requirements of Article 84 EPC and 123(3) EPC.
14. With respect to claim 1 of the patent as granted, claim 1 of the main request further requires that the waste air stream is released as an exhaust gas from a urea plant, urea granulation tower, or urea prilling tower.

The Board does not see any lack of clarity arising from this additional limiting feature. A waste air stream may be an exhaust gas. Thus, claim 1 specifies that the waste air stream has the additional characteristic of being an exhaust gas from a urea plant, a urea granulation tower or a urea prilling tower. There is no room for interpretation. Indeed, urea granulation and prilling steps use cooling air resulting in a waste air stream which is exhausted from the granulation or prilling unit, and these units are part of the urea plant.

The amendments to claim 1 as granted bring about a restriction of the scope of the claims, and therefore of the protection conferred thereby, which is in keeping with the requirements of Article 123(3) EPC

*Other issues*

15. The parties requested that the Board not admit various documents and submissions into the appeal proceedings. However, since these documents and submissions were not relevant to arrive for the Board at its conclusion that the claims of the main request meet the requirements of Article 123(2) and (3) EPC, and of Article 84 EPC, their admission into the proceedings need not be decided by the Board.

*Remittal*

16. As the opposition division has not ruled on the other grounds of opposition pursuant to Articles 100(a) and (b) EPC, the Board considers it appropriate to remit the case to the opposition division for further prosecution. This was also requested by both parties.

*Auxiliary requests 2 to 4*

17. Since the main request is allowable under Article 123(2) and (3) EPC for the reasons set out above, there is no need for the Board to decide on lower ranking auxiliary requests.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chairman:



C. Rodríguez Rodríguez

P. Gryczka

Decision electronically authenticated