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**Datasheet for the decision
of 30 April 2019**

Case Number: T 0499/16 - 3.3.05

Application Number: 10718201.6

Publication Number: 2432581

IPC: C05G3/00, B01J2/16, C05C9/00

Language of the proceedings: EN

Title of invention:
PROCESS FOR PRODUCING GRANULES

Patent Proprietor:
Stamicarbon B.V.

Opponent:
BASF SE

Headword:
Granulation process/Stamicarbon

Relevant legal provisions:
EPC Art. 100(b)

Keyword:
Grounds for opposition - insufficiency of disclosure (no)

Decisions cited:

T 1404/05, T 0553/11, T 1526/09

Catchword:



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Case Number: T 0499/16 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 30 April 2019

Appellant: Stamicarbon B.V.
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 17 December
2015 revoking European patent No. 2432581
pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman E. Bendl
Members: S. Besselmann
R. Winkelhofer

Summary of Facts and Submissions

- I. The present appeal lies from the decision of the opposition division to revoke European patent No. 2432581. The patent in suit concerns a process for producing granules.
- II. Claim 1 of the patent in suit reads:
*"A process for the production of granules from a liquid composition, said process comprising the steps of: applying the liquid composition onto solid particles that are kept in a continuous movement by a gas stream in a granulation zone of an oblong granulator, thereby depositing and solidifying said liquid composition around said solid particles to increase the size of the particles and thereby form grown solid particles; discharging a stream of said grown solid particles from the granulation zone, dividing, in a size-sorting apparatus, said stream of said grown solid particles into individual streams based on the size of said grown solid particles to thereby produce streams of undersized, oversized, and desired-sized grown solid particles; transferring said stream of said oversized grown solid particles to a size-reducing apparatus; crushing said stream of said oversized grown solid particles in said size-reducing apparatus, thereby reducing the particle size of said oversized grown solid particles and thereby producing a stream of crushed solid particles; **characterized in that** said stream of crushed solid particles is introduced in the granulator at a place on a line straight below the center of the leaving gas stream or a place that is in a horizontal direction not further removed from that line than $L/10$, wherein L is the lengths [sic] of the oblong granulator."*

Dependent claims 2-4 relate to preferred embodiments.

- III. In its decision, the opposition division found that the skilled person would have been unable to determine the center of the leaving gas stream and thus the place for introducing the stream of crushed particles. It concluded that the invention had not been sufficiently disclosed (Article 100(b) EPC).
- IV. The patent proprietor (appellant) lodged an appeal against this decision.
- V. The appellant's arguments, as far as relevant for the present decision, may be summarised as follows:

The "center of the leaving gas stream" is the center of the gas stream at the moment in time when it leaves the granulator, and thus is the center of the gas outlet. This is also clear from comparative example A and example 1 of the patent in suit. This outlet is an opening in the wall and is depicted in figures 3 and 4 as a large circle on the granulator wall. The arrows in the figures show the direction of flow, not the position of the outlet.

The "line straight below the center of the leaving gas stream" would have been understood as a straight vertical line extending downwardly from the center of the outlet.

The term "length" refers to the length of a horizontal cross section of the granulator, which for a rectangular cross section is the length of the longest side.

VI. The respondent's arguments, as far as relevant for the present decision, may be summarised as follows:

The patent in suit provides no instructions on how to identify the center of the leaving gas stream. The leaving gas stream is a three-dimensional entity generally contained in a conduit. Its center cannot be equated with a point on the reactor wall. The place where the gas stream leaves the reactor may be located outside the granulator, as is shown by the arrows in figures 3 and 4 of the patent in suit.

Moreover, the "line straight below the center" can have any orientation. How to determine $L/10$ is also not known because the length is not clearly defined.

The skilled person would therefore have been unable to determine the place for introducing the stream of crushed particles.

Even if other claim interpretations are also possible, the proposed interpretation of the leaving gas stream as a three-dimensional entity contained in a conduit is encompassed by the claim. It is a technically reasonable interpretation because the skilled person would have expected the path of the conduit to affect dust deposition. Based on the proposed interpretation, the invention may not be carried out. The present case is therefore similar to T 1404/05, and the claim is open to an objection of lack of sufficiency of disclosure.

With reference to T 553/11, the claim is not inherently limited to workable embodiments.

Furthermore, the claim relates to oblong granulators in general and thus includes embodiments with inclined walls and embodiments where the gas leaves the granulator in an upward manner via a conduit located at the top of the granulator. In such cases, it is also not possible to determine the place for introducing the stream of crushed solid particles. The invention may therefore not be carried out across the entire scope of the claim.

- VII. The appellant requests that the decision be set aside and that the opposition be rejected (main request) or, alternatively, that the patent be maintained on the basis of one of auxiliary requests 1-3 of 10 May 2017.
- VIII. The respondent requests that the appeal be dismissed.

Reasons for the Decision

Main request

1. Sufficiency of disclosure, Article 100(b) EPC
- 1.1 Sufficiency of disclosure is generally assessed on the basis of the disclosure of the patent as a whole.
- 1.2 The patent in suit relates to a process for the production of granules from a liquid composition and addresses the technical problem of reducing the amount of product dust to which the granulator is exposed so as to reduce cleaning frequency (paragraph [0011]).
- 1.3 According to the patent in suit, dust formation is reduced by introducing the stream of crushed solid particles in the granulator at a place below the place

where the gas stream leaves the granulator (paragraph [0013]).

1.4 As mentioned, the characterising feature of claim 1 defines the place for introducing the stream of crushed solid particles in the following manner: "said stream of crushed solid particles is introduced in the granulator at a place on a line straight below the center of the leaving gas stream or a place that is in a horizontal direction not further removed from that line than $L/10$, wherein L is the lengths [sic] of the oblong granulator."

1.5 *"Center of the leaving gas stream"*

1.5.1 The respondent argues in particular that the skilled person would have been unable to identify the "center of the leaving gas stream" based on its interpretation of this expression as referring to the gas stream as a three-dimensional entity, possibly beginning inside the granulator and continuing outside the granulator.

1.5.2 However, the characterising feature of claim 1 reflects the general instruction to solve the problem posed by "introducing said stream of crushed solid particles in the granulator at a place below the place where the gas stream leaves the granulator" (paragraph [0013] of the patent in suit). Hence, the "center of the leaving gas stream" is a more specific definition of the "place where the gas stream leaves the granulator", namely, the gas outlet. The "center of the leaving gas stream" consequently signifies the center of the opening in the wall of the oblong granulator constituting the gas outlet. Whether, based on the area thus defined, all attempts to identify the center lead to exactly

identical results is a question of clarity rather than of sufficiency of disclosure.

- 1.5.3 This understanding is also supported by the examples and figures 3 and 4.

In example 1, "the undersize product, together with the crushed oversize product were fed into the granulator in the same side wall, at a location directly underneath of the air outlet as shown in Fig. 4, in which 1 represents the inlet of undersized and crushed oversized product and 2 represents the place where the gas stream leaves the granulator" (paragraph [0037]).

Hence, this example is concerned with the location of the inlet of crushed particles and the air outlet, both of which are said to be located in the same side wall. The skilled person would have understood that the circles in figures 3 and 4 represented these inlets and outlets, respectively. The figures do not contain any other element to which the reference numerals may refer. Moreover, the examples do not give any special meaning to the arrows depicted in figures 3 and 4 and do not contain any teaching which would suggest that the "place where the gas stream leaves the granulator" would be different from the outlet.

- 1.5.4 Consequently, there is no basis for the respondent's interpretation, according to which the entire flow path of the leaving gas stream needs to be taken into account.

- 1.5.5 The present case is therefore not comparable to that of a parameter which is so ill-defined that the skilled person would not have been able to identify the

measures necessary for solving the problem posed, as argued by the respondent with reference to T 1526/09.

1.5.6 Furthermore, it is not the case that the claim, considered in isolation, encompasses additional embodiments based on the respondent's interpretation. In the context of claim 1, an understanding of the term "leaving gas stream" as encompassing the entire flow path of this gas stream would not have allowed the identification of a "center" which could serve as a reference point for arranging the place for introducing the stream of crushed particles, and hence would not have resulted in a reasonable interpretation of the claim.

1.5.7 The present case is therefore different from T 1404/05 (catchword) in which several claim constructions were possible. It is also different from T 553/11 (reasons 2.3.5) in which the claim included non-working embodiments, and it had to be decided whether these non-working embodiments were inherently excluded in view of the description.

1.6 *Further instructions regarding the place for introducing the stream of crushed solid particles*

1.6.1 The respondent argues that the instructions to determine the place for introducing the stream of crushed particles in relation to the "straight line" and the length of the oblong granulator are also insufficient.

1.6.2 Example 1 constitutes a specific embodiment of claim 1 (see also col. 6, lines 46-47), and illustrates the general solution set out in paragraph [0013]. It therefore derives from the patent as a whole that the

locating of the crushed particle inlet in the same side wall as the air outlet, directly underneath of the air outlet, as shown in example 1 in conjunction with figure 4, constitutes a way to introduce the stream of crushed solid particles into the granulator at a place on a line straight below the center of the leaving gas stream.

- 1.6.3 While the expression used in the claim does not directly refer to a vertical line, the skilled person again would have understood from the patent as a whole, in particular from the comparison of comparative example A with example 1, that the term "below" actually means a vertical line extending downwardly. This understanding is supported by the fact that claim 1 alternatively requires that the place for introducing the stream of crushed solid particles is "in a horizontal direction not further removed from that line than $L/10$ ", which would be meaningless if the "straight line" could be anywhere below the gas outlet.
- 1.6.4 In the respondent's view, there may be ambiguity as to the meaning of the term "length" of the granulator, which is not defined in the claim. According to the patent specification, the length is the length of a horizontal cross section and is the longest horizontal distance between the walls of the granulator (see paragraph [0005]). Allegedly, there may be doubts if it is the length of a side of the cross section in a horizontal plane (as implied by " $L=W$ " in the case of a square) or the length of the diagonal (the diagonal being the longest horizontal distance between the walls). However, even if this reasoning were accepted, there is no indication that this possible ambiguity would have prevented the skilled person from carrying out the invention.

1.7 *Invention to be performed across the entire scope of the claim*

1.7.1 The respondent presented a further line of argument according to which the invention may not be carried out across the entire scope of the claim, namely in the case of a granulator with inclined walls, and in the case of embodiments where the gas leaves the granulator in an upward manner via a conduit located at the top of the granulator.

1.7.2 However, there is no reason why the requirements of claim 1 should not be applicable in these cases.

Even when a granulator has inclined walls, it is possible to draw a vertical line which extends downwardly from the center of the outlet and to identify all places not further removed from that line than $L/10$ in a horizontal direction. All of these places which coincide with a side wall are suitable for introducing the stream of crushed particles.

This also applies to cases in which the outlet is located at the top of the granulator. A vertical line extending downwardly can nevertheless be drawn, and the places not further removed from that line than $L/10$ in a horizontal direction can be identified. Depending on the specific design and dimensions of the granulator, some of these places may coincide with side walls, and are consequently suitable for introducing the stream of crushed particles.

1.7.3 On the other hand, granulators where the requirement of claim 1 is not met, namely, where the stream of crushed particles is neither introduced at a place on a line

straight below the center of the leaving gas stream, nor at a place not further removed from that line than L/10 in a horizontal direction, are not useful for the claimed process. This, however, is no indication of lack of insufficiency of disclosure. It merely indicates that such processes are not encompassed by the claim.

- 1.8 The invention is therefore disclosed in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art.

Auxiliary requests

2. In view of the conclusion regarding the main request, there is no need to address the auxiliary requests.

Remittal of the case

3. The appealed decision solely concerned arguments with regard to sufficiency of disclosure. To give the parties the opportunity to present their case to the departments of first and second instance, the board exercises its discretion in accordance with Article 111(1) EPC and remits the case to the opposition division for continuation of the opposition proceedings, as also requested by both parties.

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 for further prosecution.

The Registrar:

The Chairman:



K. Götz-Wein

E. Bendl

Decision electronically authenticated