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Bezeichnung der Erfindung: Biodegradation of carbonaceous materials

Title of invention:

Titre de l'invention :

Klassifikation / Classification / Classement : C02 F3/28

ENTSCHEIDUNG / DECISION

vom / of / du 20 August 1987

Anmelder / Applicant / Demandeur : Romero-Sierra, Cesar

Patentinhaber / Proprietor of the patent /

Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence :

EPÜ / EPC / CBE Article 84

Kennwort / Keyword / Mot clé : "Claims - inconsistency of claims and description"

Leitsatz / Headnote / Sommaire

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Case Number : T 150/85

D E C I S I O N
of the Technical Board of Appeal 3.3.1
of 20 August 1987

Appellant : Romero-Sierra, Cesar
P.O. Box 32 Graham Manor
Bath Ontario
Canada

Representative : Skailes, Humphrey John
Frank B. Dehn & Co.
Imperial House
15-19 Kingsway
London WC2B 6UZ
GB

Decision under appeal : Decision of Examining Division 026
of the European Patent Office
dated 11 January 1985 refusing
European patent application
No. 81 303 445.1 pursuant to Article
97(1) EPC

Composition of the Board :

Chairman : F. Antony

Members : J. Arbouw

P. Ford

Summary of Facts and Submissions

I. European patent application No. 81 303 445.1, filed on 27 July 1981 and published on 10 February 1982 with publication number 45 614 claiming priority of the prior application filed in New Zealand on 31 July 1980 (No. 193 588), was refused by the decision of the Examining Division of the European Patent Office dated 11 January 1985. The decision was based on ten claims of which independent Claim 1 was worded as follows:

- "1. A process for converting biodegradable carbon-containing materials into substances containing at least 5% of methylene groups and resembling crude oil which process comprises subjecting the biodegradable carbon-containing materials to bacterial action in a container under the following conditions:-
- (a) the container is maintained at a temperature suitable for the bacterial flora present to thrive,
 - (b) the container is sealed so that all evolved gases are retained in contact with the carbon-containing materials,
 - (c) the container is filled with carbon-containing material including the bacterial flora to leave a minimum amount of free space in the container, and
 - (d) the carbon containing material placed in the container includes at least sufficient water to maintain the bacterial flora alive."

- II. The application was rejected on the ground that the alleged invention was not disclosed in a manner for it to be carried out by a person skilled in the art.

The Examining Division considered that the solution to the technical problem underlying the invention was not operable because the product obtained by the process was not adequately identified and the sole distinction between the claimed process and the prior art process (see (1) Die Abwassertechnik, page 198 and (2) Biogas in Theorie und Praxis) was insufficient to explain why a different product is obtained.

- III. On 15 March 1985 the Appellant lodged an appeal against the decision by telex. A confirmation of the telex with payment of the prescribed fee was received on 18 March 1985.

In the Statement of Grounds submitted on 17 May 1985, it was pointed out that the decision to refuse a patent was not based on objections clearly and unequivocally founded in facts but on the Examiner's belief that the Examples submitted do not work. Without factual evidence this belief cannot be a ground for rejection.

- IV. In communications of 17 September 1986 and - after oral proceedings to which the Appellant had been duly summoned, but at which he was not represented - of 23 April 1987, the Board informed the Appellant of its opinion that the application appears not to meet the requirements of Article 84 EPC.

- V. In his replies dated 24 November 1986 and 24 June 1987, the Appellant reaffirmed his position.

He requested that:

- (1) the impugned decision be set aside;
- (2) a patent be granted on the basis of Claim 1 filed with the reply dated 24 November 1986 and Claims 2 to 10 as originally filed;
- (3) in the alternative to (2), that a patent be granted on the basis of the alternative Claim 1 filed with the reply dated 24 November 1986.

The present Claim 1 according to main and alternative requests reads as follows:

Main request

"1. A process for converting biodegradable carbon-containing materials of organic origin into oily substances containing at least 5% of methylene groups which process comprises subjecting the biodegradable carbon-containing materials to bacterial action in a container under the following conditions:-

- (a) the container is maintained at a temperature suitable for the bacterial flora present to thrive,
- (b) the container is sealed so that all evolved gases are retained in contact with the carbon-containing materials,
- (c) the container is filled with carbon-containing material including the bacterial flora to leave a minimum amount of free space in the container, and
- (d) the carbon-containing material placed in the container includes at least sufficient water to maintain the bacterial flora alive."

Alternative request

"1. A process for converting biodegradable carbon-containing organic waste material (for example sewage, manure, faeces, wood chips or garbage) into oily substances containing at least 5% of methylene groups, which process comprises subjecting said material to bacterial action in a container under the following conditions:-

- (a) the container is maintained at a temperature suitable for the bacterial flora present in the material to thrive,
- (b) the container is sealed so that all evolved gases are retained in contact with the said material,
- (c) the container is filled so as to leave a minimum amount of free space in the container,
- (d) the carbon-containing material placed in the container includes at least sufficient water to maintain the bacterial flora alive, and
- (e) the degradation process is continued at least until the pressure within the container has fallen to the atmospheric level."

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.

2. There is no objection to the present claims on formal grounds since they are adequately supported by the specification as originally filed. Claim 1, according to the main request, results from a combination of Claim 1 as originally filed and page 2, lines 6-9 of the specification. Claim 1 according to the auxiliary request is based on Claim 1 as originally filed and on page 2, lines 6-9 and Example 4 of the specification. The Claims 2-10 are based on the Claims 2-10 as originally filed.
3. The Examining Division rejected the Appellant's European patent application under Article 97(1) EPC for failure to meet the requirements of Articles 83 and 84 EPC. In its communication dated 23 April 1987, the Board informed the Appellant that it considered that the application could be regarded as satisfying Article 83 EPC, that, however, the requirements of Article 84 EPC appeared not to be met in that the claims and the description were not in agreement.
4. Article 78(1)(b) EPC provides that a European patent application shall contain a description of the invention and Article 78(1)(c) EPC provides that it shall contain one or more claims. The relationship between the description and the claims is important, because, inter alia, the description shall be used to interpret the claims (Article 69(1) EPC) and because the claims shall be supported by the description (Article 84 EPC). The Protocol on the interpretation of Article 69 EPC underlines the significance of the description when the extent of protection conferred by a European patent is being determined. It is in accordance with the expressed policy of maintaining a just balance between a fair protection for the patentee and a reasonable degree of certainty for third parties, that the European Patent Office must ensure that applicants comply properly with the requirement of agreement between claims and description.

5. This requirement is not met, insofar as the claims according to the main request are concerned, in the following respects:

5.1 Claim 1, feature (b) where it is prescribed "that all evolved gases are retained in contact with the carbon-containing materials" is not supported by the statement on page 9, lines 28-29, that "these gases ... can be fed to another bacterial culture".

The Board cannot follow the Appellant's view, as expressed in paragraph 2(i) of his letter dated 24 June 1987, that this "paragraph is not meant to imply that evolved gases can simply be vented to atmosphere, but rather, can go to another reactor. In other words, that a group of reactors could be connected to a single common manifold, so that each would pressurize the other to some degree." The wording of Claim 1 is clear in that the biodegradable organic material is placed in a sealed container so that all evolved gases are retained in contact with the carbon-containing materials. In other words, the evolved gases are to be kept in contact with that organic material from which they originate.

5.2 Claim 1, feature (b) is not supported by Example 1 (see page 11, line 28) where it is stated that some leakage occurred. Although Example 1 for this reason is not an example of the claimed invention, this example provides for the second highest conversion rate (20.5%).

The Appellant cannot be heard with the argument that the leakage only occurred during the final heating step. Claim 1 clearly prescribes that all evolved gases should remain in contact with the organic material.

- 5.3 Claim 1, feature (c) prescribes that a minimum amount of free space should be left in the container; this is not supported by Example 11, in that a free air space of about one half of the total space was left above the mixture.

The Board cannot follow the Appellant's view (see paragraph 2(iii) of his letter dated 24 June 1987) that this requirement of a minimum amount of free space also includes the conditions as indicated in Example 11, i.e. a free space of one half of the total space in the cylinder and a pressurization during the final stage of the reaction.

- 5.4 Claim 1, feature (b) is not supported by Example 10 according to which the highest conversion rate (57%) is obtained. According to Example 10, the mixture remaining from Example 3 was retreated under air pressure. This contradicts the statement on page 6, lines 6-10 of the description. Since the product of Example 3 (see page 12, line 22) is a mixture under pressure, this pressure is released before further treatment.

The Appellant agreed that Example 10 is not an example according to the invention. This is, however, not made clear in the specification.

6. Concerning the auxiliary request, the defects pointed out in paragraph 5 equally apply. Additionally, Claim 1, according to the auxiliary request, is also not supported by Examples 2 and 3, which yield products under pressure. Therefore, these examples do not meet the requirement of Claim 1, feature (e) according to the auxiliary request that "the degradation process is continued until the pressure within the container has fallen to atmospheric level". Nevertheless, these examples yield products with high conversion rates (11.3% and 19%).

The Appellant agreed that some residual pressure was found in the experiments described in Examples 2 and 3, but submitted that this merely indicates that the experiments were stopped too soon and in fact had not finished.

However, since Claim 1, according to the auxiliary request, explicitly prescribes that the degradation process is continued until the pressure within the container has fallen to atmospheric level, these examples do not support Claim 1 according to the auxiliary request.

7. For these reasons given above, Claim 1, according to the main request as well as to the auxiliary request, is not supported by the description. Therefore, the application does not meet the requirements of Article 84 EPC.

Order

For these reasons, it is decided that:

The appeal is dismissed.



The Registrar



The Chairman

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JA 20/08/87
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