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D E C I S I O N
of 10 October 2003

Case Number: T 0423/03 - 3.3.3

Application Number: 96200706.8

Publication Number: 0738743

IPC: C08G 64/20

Language of the proceedings: EN

Title of invention:

Method for producing an aromatic polycarbonate

Applicant:

Asahi Kasei Kabushiki Kaisha

Opponent:

-

Headword:

-

Relevant legal provisions:

EPC Art. 76(1), 123(2)

Keyword:

"Divisional application extended beyond parent application
(yes)"

Decisions cited:

T 0441/92

Catchword:

-



Case Number: T 0423/03 - 3.3.3

D E C I S I O N
of the Technical Board of Appeal 3.3.3
of 10 October 2003

Appellant: Asahi Kasei Kabushiki Kaisha
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 26 November 2002
refusing European application No. 96200706.8
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: R. Young
Members: W. Sieber
E. Dufrasne

Summary of Facts and Submissions

I. European patent application No. 96 200 706.8, filed in accordance with Article 76 EPC as a divisional application of the earlier application 94 921 798.8 (21 July 1994), claiming a JP priority of 23 July 1993 (182 896/93) and published under No. 0 738 743 on 23 October 1996 (Bulletin 1996/43), was refused by a decision of the examining division issued in writing on 26 November 2002.

II. The decision was based on a single claim which read as follows:

"A method for producing an aromatic polycarbonate, which comprises:
introducing to an introduction zone having a perforated plate at least one polymerizing material selected from the group consisting of:
a molten monomer mixture of an aromatic dihydroxy compound and a diaryl carbonate, and
a molten prepolymer obtained by a process comprising reacting an aromatic dihydroxy compound with a diaryl carbonate, and
allowing said polymerizing material to pass downwardly through said perforated plate and fall through a fall polymerization reaction zone, thereby effecting a fall polymerization of said polymerizing material during the fall thereof to obtain a polymer at a bottom of said fall polymerization reaction zone, said fall being a wire-wetting fall, wherein said fall polymerization reaction zone has at least one wire provided in correspondence with at least one hole of the perforated

plate and extending downwardly through said fall polymerization reaction zone."

- III. The application was refused because the subject-matter of the claim then on file did not meet the requirements of Articles 123(2) and 76(1) EPC.

According to the decision, the original parent application did not disclose two inventions but only one single invention which remained the subject-matter of the parent application, ie free-fall polymerization. The claim underlying the decision was based on Comparative Example 1 of the parent application which was clearly an embodiment outside the scope of the only invention disclosed. It was, however, not possible to file a divisional application based on subject-matter which had not been described as forming part of the invention(s). Moreover, Comparative Example 1 of the parent application was apparently intended to illustrate the results achievable with a method already disclosed in the prior art.

- IV. On 6 January 2003, a notice of appeal against the above decision was filed by the applicant (hereinafter referred to as the appellant), the prescribed fee being recorded as paid on the same date.

In the statement of grounds of appeal, filed on 28 March 2003, the appellant argued that the subject-matter of Comparative Example 1 undoubtedly was part of the parent application. Although it was admitted that Comparative Example 1 described an embodiment outside the invention claimed in the parent application, it was not or did not illustrate a method of the prior art.

The mere fact that the method of Comparative Example 1 was not explicitly identified as a second invention in the parent application could not form a reason to refuse the application for violating Article 123(2) in combination with Article 76(1) EPC.

V. In a communication dated 4 July 2003 accompanying a summons to oral proceedings, the board raised objection against the claim under Article 76(1) and Article 123(2) EPC since the claimed subject-matter was an unallowable generalization of Comparative Example 1 of the parent application.

VI. In preparation for the oral proceedings, the appellant filed on 8 September 2003 a new claim (main request) and, as an auxiliary request, an alternative claim. The claim of the main request read as follows:

"A method for producing an aromatic polycarbonate, which comprises:
introducing to an introduction zone having a perforated plate at least one polymerizing material selected from the group consisting of:
a molten monomer mixture of an aromatic dihydroxy compound and a diaryl carbonate, and
a molten prepolymer obtained by a process comprising reacting an aromatic dihydroxy compound with a diaryl carbonate, said perforated plate having a plurality of holes each having an area of 0.01 to 100 cm², and
allowing said polymerizing material to pass downwardly through said perforated plate and fall through a fall polymerization reaction zone, thereby effecting a fall polymerization of said polymerizing material during the fall thereof to obtain a polymer at a bottom of said

fall polymerization reaction zone, said fall being a wire-wetting fall, wherein said fall polymerization reaction zone has a plurality of wires provided in correspondence with said plurality of holes of the perforated plate and extending downwardly through said fall polymerization reaction zone."

The claim of the auxiliary request differed from the claim of the main request in that the further limitation "wherein the distance between adjacent holes is from 1 to 500 mm, as measured between the centers of the adjacent holes" was inserted after the wording "having a plurality of holes each having an area of 0.01 to 100 cm²".

- VII. Oral proceedings were held on 10 October 2003, in the course of which the discussion focussed on the question whether or not the subject-matter of the claims of both requests on file was clearly and unambiguously derivable from the parent application (Article 76(1) EPC).
- VIII. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claim of the main request or, in the alternative, on the basis of the claim of the auxiliary request, both claims filed on 8 September 2003.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 EPC and Rule 64 EPC and is therefore admissible.
2. The issue to be dealt with in this appeal is whether or not the claimed subject-matter complies with the requirements of Articles 76(1) and 123(2) EPC.

Articles 76(1) and 123(2) EPC

3. The filing of a European divisional application is governed by Article 76 EPC. The second sentence of Article 76(1) EPC requires that a divisional application "may be filed only in respect of subject-matter which does not extend beyond the content of the earlier application as filed". An examination under Article 76(1) EPC thus bears a resemblance to that under Article 123(2) EPC. Nevertheless, it has to be born in mind that the requirement of Article 76(1) EPC is separate from that of Article 123(2) EPC. In fact, Article 76(1) EPC ensures that a divisional application does not extend **beyond the content of the earlier (parent) application as filed** whereas Article 123(2) EPC ensures that, once the conditions of Article 76(1) EPC have been met, the divisional application is not amended after filing in such a way that it contains subject-matter which extends **beyond the content of the divisional application as filed** (eg T 441/92 of 10 March 1995, not published in OJ EPO, points 4.1 and 4.2 of the reasons).

4. In the present case, the respective amended claim of the main and the auxiliary request has been filed after the filing of the divisional application so that the questions to be decided are
 - (a) whether or not the claimed subject-matter complies with the provisions of Article 76(1) EPC, and
 - (b) whether or not the amended claims meet also the requirements of Article 123(2) EPC, ie have a basis in the divisional application as filed.

Article 76(1) EPC

5. When carrying out the examination under Article 76(1) EPC, the subject-matter claimed in the divisional application has to be compared with the content of the earlier (parent) application as filed, whereby the content of an application comprises the whole disclosure, express or implied, that is directly and unambiguously derivable from the application including information which is implicit and immediately and unambiguously apparent to a person skilled in the art reading the application.
6. Each amended claim of the main and the auxiliary request is directed to a method for producing an aromatic polycarbonate via a wire-wetting fall polymerization whereby the polymerizing material is allowed to pass downwardly through a perforated plate having a plurality of holes each having an area of 0.01 to 100 cm² whereby a plurality of wires is provided in correspondence with that plurality of holes of the perforated plate. It is a matter of fact that the

parent application as filed does not explicitly disclose the claimed subject-matter so that the relevant question is whether or not there is a clear and unambiguous implicit disclosure thereof in the parent application as filed.

7. The appellant was trying to establish that the disclosure of the parent application related to fall polymerization in general as a method for producing an aromatic polycarbonate encompassing two alternatives, namely free-fall polymerization and non-free-fall polymerization with wire-wetting fall polymerization as an example of the latter. Although free-fall polymerization was, according to the appellant, certainly the preferred embodiment of fall polymerization, the parent application envisaged also non-free-fall polymerization where a falling polymerization material contacts an object causing resistance to fall, such as a wall or a guide. Examples of non-free-fall polymerization mentioned in the parent application as filed were wall-wetting polymerization (Claim 7), guide-wetting polymerization (page 20, lines 3 to 15, page 34, lines 17 to 21 and page 35, lines 8 to 11) and wire-wetting polymerization (Comparative Example 1), as a specific example of guide-wetting polymerization. Thus, a person skilled in the art could recognize that the parent application as filed disclosed a separate invention (or embodiment) relating to non-free-fall polymerization, and in particular to wire-wetting fall polymerization.

- 7.1 First of all, the board takes note that the focus of the parent application as filed is entirely on free-fall polymerization which is presented on 127 pages as

the invention. There is no general reference to fall polymerization under which it would be possible to subsume an even handed presentation of two different embodiments of fall polymerization. In fact, the unqualified term "fall polymerization" is not used in a single phrase in the parent application.

7.2 As regards the appellant's reference to Claim 7 of the parent application, it is true that Claim 7 discloses a combination of an agitation polymerization, a wall-wetting fall polymerization and a free-fall polymerization. However, as can be seen from page 46, lines 2 to 5 and page 54, lines 14 to 18 of the parent application as filed, this embodiment is a combination of the present invention, ie free-fall polymerization, with other polymerization methods. Again, the focus is on **the invention** and Claim 7 does by no means establish wall-wetting polymerization as part of a separate invention relating to non-free-fall polymerization.

7.3 Also the passages at pages 34 and page 35 do not disclose guide-wetting polymerization as an example of non-free-fall polymerization. Page 34 contains a definition of the terminology "free-fall" which means that "... a falling polymerizing material does not contact an object causing resistance to fall, such as a guide or wall" (page 34, lines 19 to 21). Page 35 describes the perforated plate used in the free-fall polymerization which may have a nozzle or a guide connected thereto "as long as a polymerization material can fall freely after passing such a nozzle or guide" (page 35, lines 10 to 11). Thus, these passages define exactly the opposite of what the appellant wants to

gather from these passages, namely free-fall polymerization.

7.4 During the oral proceedings, the appellant relied mainly on the passage at page 20 which is in fact the only passage in the parent application referring to non-free-fall polymerization. This passage reads as follows: "Further, it has become clear that aromatic polycarbonates can be produced more easily by a free-fall polymerization process than by a non-free-fall polymerization, such as polymerization by allowing a polymerizing material to fall along and in contact with a guide. This is also surprising because, according to conventional knowledge regarding a method for producing polyesters and polyamides, it has been recognized that a non-free-fall process is superior to a free-fall process. This fact clearly shows that knowledge about the polymerization reaction of polyesters and polyamides cannot be applied to the polymerization of aromatic polycarbonates."

7.4.1 It is conspicuous to the board that this passage neither refers to non-free-fall polymerization as a separate "invention" nor describes general aspects of non-free-fall polymerization. On the contrary, the statement in that passage was made, in the board's view, to highlight the surprising effect associated with free-fall polymerization in the context of the previously discussed prior art. This is evident from the reference in the second sentence to "conventional knowledge". In the light of this, therefore, a person skilled in the art would have no reason to interpret the reference to non-free-fall polymerization as the

presentation of a second, separate invention besides free-fall polymerization.

7.4.2 But even if the board accepted, in favour of the appellant, that the passage at page 20 discloses a separate invention (or embodiment) directed to non-free-fall polymerization, the information provided in this passage is rather limited and, as mentioned above, does not describe general aspects of non-free-fall polymerization let alone such details as a perforated plate with a plurality of holes of a specific size as required in the claim of the main and of the auxiliary request. In order to arrive at the claimed subject-matter, it would be necessary to combine the quite minimal disclosure of non-free-fall polymerization at page 20 with details disclosed only in the context of free-fall polymerization. Such a combination is, however, not allowable since, firstly, the passage at page 20 has no grammatical or factual relationship to the following general description, the latter in any case being directed exclusively to free-fall polymerization, and, secondly, there is no other hint in the parent application which would suggest that the details disclosed for free-fall polymerization would apply equally to non-free-fall polymerization. Hence, the claim of each request defines an embodiment comprising features which were never linked before, contrary to Article 76(1) EPC.

7.5 It remains to be examined whether Comparative Example 1, alone or in combination with the passage at page 20, could be considered as a valid basis for the claimed subject-matter, since Comparative Example 1 is indeed a concrete disclosure of wire-wetting fall polymerization.

Although this example is presented in the parent application as a comparative example, the board, in principle, agrees with the appellant that a comparative example could form the basis of a divisional application, provided such a divisional application meets the requirements of the EPC.

7.5.1 Comparative Example 1 describes a wire-wetting fall polymerization where "50 strands of 0.1 mm Ø SUS 316 wires were hung vertically from the respective holes of the perforated plate to the reservoir portion at the bottom of the free-fall polymerizer, so that the prepolymer did not fall freely (not free-fall) but fell along and in contact with the wires (wire-wetting fall)". However, as explained above, neither the passage at page 20 nor the remaining parent application as filed disclose general aspects of non-free-fall polymerization and wire-wetting fall polymerization, respectively, which would support a generalization of the concrete technical information given in Comparative Example 1.

7.5.2 Quite apart from the above, the generalization includes the omission of a concrete feature of Comparative Example 1 which amounts to the disclosure of a new type of fall polymerization. According to Comparative Example 1, the wires extend from the holes of the perforated plate to the reservoir portion at the bottom of the polymerizer. This feature has been omitted in the claims of both requests. As a consequence, the wires can end now at any height above the reservoir so that a free-fall polymerization immediately follows the wire-wetting fall polymerization, namely from the end of the wire down to the reservoir portion at the bottom

of the polymerizer. Such a fundamental change of emphasis in the understanding of non-free-fall polymerization, and in particular of wire-wetting fall polymerization, to include a combination with a free-fall polymerization is not clearly and unambiguously derivable from Comparative Example 1, whether taken alone or in combination with the passage at page 20.

7.5.3 It follows from the above that Comparative Example 1, whether taken alone or in combination with the passage at page 20, is not a valid basis for the claimed subject-matter in the sense of Article 76(1) EPC.

8. In summary, the appellant was inviting the board to perceive a generality of disclosure in the earlier (parent) application which is not clearly and unambiguously derivable therefrom. In fact, the appellant's broad interpretation of parts of the parent application links features which were never linked before. Such an approach, which might be appropriate in the case of obviousness, cannot succeed in relation to Article 76(1) EPC. Hence, the claim of the main request and of the auxiliary request, respectively, fails to meet the requirements of Article 76(1) EPC.

9. As the amended claims of both the main and the auxiliary request are found to contain subject-matter which extends beyond the content of the earlier (parent) application, any further consideration as to whether the amended claims also meet the separate requirement of Article 123(2) EPC is superfluous.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

E. Görgmaier

R. Young