

Internal distribution code:

- (A) [] Publication in OJ
(B) [] To Chairmen and Members
(C) [X] To Chairmen

D E C I S I O N
of 14 December 2000

Case Number: T 0989/99 - 3.3.3

Application Number: 90105337.1

Publication Number: 0389948

IPC: C08G 63/183

Language of the proceedings: EN

Title of invention:

Process for the preparation of polyethylene terephthalate

Applicant:

MITSUI CHEMICALS, INC.

Opponent:

-

Headword:

-

Relevant legal provisions:

EPC R. 86(3)

Keyword:

"Principles for exercise of discretion under Rule 86(3) EPC"

Decisions cited:

G 0007/94, T 0171/85, T 0063/86, T 0166/86, T 0313/86,
T 0182/88, T 0640/91, T 1050/93, T 0863/96

Catchword:

-



Case Number: T 0989/99 - 3.3.3

D E C I S I O N
of the Technical Board of Appeal 3.3.3
of 14 December 2000

Appellant: MITSUI CHEMICALS, INC.
2-5, Kasumigaseki 3-chome
Chiyoda-ku
Tokyo 100 (JP)

Representative: Hansen, Bernd, Dr. Dipl.-Chem.
Hoffmann Eitle
Patent- und Rechtsanwälte
Postfach 81 04 20
D-81904 München (DE)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 20 April 1999
refusing European patent application
No. 90 105 337.1 pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: C. Gérardin
Members: C. Idez
A. Lindqvist

Summary of Facts and Submissions

- I. European patent application No. 90 105 337.1 was filed on 21 March 1990 in the name of Mitsui Petrochemical Industries Ltd, claiming priority from eight earlier patent applications in Japan. The application was published under No. 0 389 948 on the 3 October 1990.
- II. At the oral proceedings held on 11 November 1997 (cf. Minutes of Oral Proceedings issued on 28 January 1998), the Examining Division decided that the main request as well auxiliary requests 1 to 3 submitted by the Applicant during the hearing were not allowable under Article 84 EPC, but that no objection arose concerning auxiliary request 4; consequently the Applicant was invited to bring the description into line with the fourth auxiliary request. It also informed the Applicant of its intention to issue a communication under Rule 51(4) EPC on that basis. It further decided that it would not allow any further amendments to the claims (Rule 86(3)EPC) and that, in case the Applicant would not be prepared to accept the grant of a patent on the basis of the fourth auxiliary request, the application would be refused according to Rule 51(5) EPC.

Claim 1 of the fourth auxiliary request read as follows:

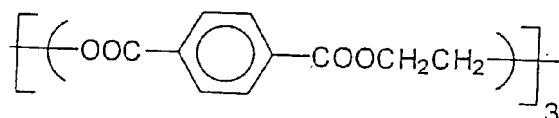
"A process for preparing polyethylene terephthalate comprising the following steps:

- i. esterifying terephthalic acid or its ester-forming derivative with ethylene glycol or its ester-forming derivative;

ii. liquid phase polycondensing the esterification product by heating said product to melt in the presence of a polycondensation catalyst, selected from germanium, antimony or titanium compounds;

iii. optionally moulding the polyethylene terephthalate thus obtained into the form of granules having an average diameter of 2 to 5 mm, or pre-crystallising it by heating to a temperature lower than that of the subsequent solid phase polycondensation step;

iv. preparing a polyethylene terephthalate
- having an intrinsic viscosity of at least 0.54 dl/g whereby the intrinsic viscosity is determined at 25°C by measuring the viscosity of a solution of polyethylene terephthalate in o-chlorophenol
- having a density of more than 1.38 g/cm³, and
- containing less than 0.45% by weight of a cyclic trimer of the formula



in a solid phase polycondensation step wherein the product of step ii) or iii) is heated in an inert atmosphere to a temperature below the melting point of said product; and,

v. subsequently, without any intermediate step, bringing the product of the solid phase

polycondensation for a period of 5 min to 10 hours into contact with hot water having a temperature of between 40°C and 110°C , or passing through the particulate product for a period from 5 min to 14 days water vapour, water vapour containing gas or water vapour containing air kept at a temperature of between 40°C and 150°C in an amount of at least 0,5 g in terms of water vapour per 1 kg of said particulate polyethylene terephthalate."

III. With its letter of 8 June 1998 the Applicant submitted an adapted description and a fair copy of Claim 1, said to substantially correspond to Claim 1 of the fourth auxiliary request submitted at the oral proceedings, but in fact differing in the following respects:

- the amount of cyclic trimer had been changed from "less to 0.45% by weight" to "less than 0.50% by weight", and
- the phrase "without any intermediate step " had been deleted in step v..

IV. In its communication under Rule 51(4) EPC of 9 September 1998 the Examining Division informed the Applicant of its intention to grant a patent on the basis of Claim 1 of the fourth auxiliary request as submitted during the oral proceedings of 11 November 1997. In an annex to this communication it was stated that the amendments in Claim 1 filed with letter of 8 June 1998 could not be accepted on the grounds that the Examining Division felt bound by its decision announced at the end of the oral proceedings of not to allow any further amendments of the claims (Rule 86(3)

- EPC).
- V. In response to the communication under Rule 51(4) EPC the Applicant indicated by its letter of 14 January 1999 that it was not prepared to accept the grant on the basis of auxiliary request 4 and invited the Examining Division to reconsider its position and to accept the minor amendments in Claim 1.
- VI. In a communication issued on 4 February 1999 the Examining Division referred again to its decision announced at the end of the oral proceedings and maintained its position not to allow these amendments on the grounds already mentioned in the annex of the communication under Rule 51(4)EPC.
- VII. By its letter of 9 April 1999 the Applicant indicated that he did not accept the grant of the patent in the text proposed by the Examining Division in its communication under Rule 51(4) EPC of 9 September 1998.
- VIII. On 20 April 1999 the Examining Division refused the application in accordance with Article 97(1) and Rule 51(5) EPC on the ground that there was no text to serve as a basis for the grant of a European patent (Article 113(2) EPC).
- IX. On 26 April 1999 an appeal was lodged by the Appellant (Applicant) against this decision with simultaneous payment of the prescribed fees.
- X. The Statement of Grounds of Appeal was filed on 20 August 1999 and a new main request based on one claim as well as three auxiliary requests were annexed to this statement.

Claim 1 of the main request reads as follows:

"A process for preparing polyethylene terephthalate comprising the following steps:

i. esterifying terephthalic acid or its ester-forming derivative with ethylene glycol or its ester-forming derivative;

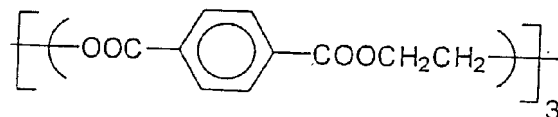
ii. liquid phase polycondensing the esterification product by heating said product to melt in the presence of a polycondensation catalyst, selected from germanium, antimony or titanium compounds;

iii. optionally moulding the polyethylene terephthalate thus obtained into the form of granules to prepare a particulate polyethylene terephthalate having an average diameter of 2 to 5 mm;

iv. optionally pre-crystallising the particulate polyethylene terephthalate obtained in step iii. by heating to a temperature lower than that of the subsequent solid phase polycondensation step;

v. preparing a polyethylene terephthalate
- having an intrinsic viscosity of at least 0.54 dl/g whereby the intrinsic viscosity is determined at 25°C by measuring the viscosity of a solution of polyethylene terephthalate in o-chlorophenol
- having a density of more than 1.38 g/cm³, and
- containing less than 0.50% by weight of a

cyclic trimer of the formula



in a solid phase polycondensation step wherein the product of the step ii), iii) or iv) is heated in an inert atmosphere to a temperature below the melting point of said product; and,

vi. subsequently bringing the product of the solid phase polycondensation for a period of 5 min to 10 hours into contact with hot water having a temperature of between 40°C and 110°C, or passing through the particulate product for a period from 5 min to 14 days water vapour, water vapour containing gas or water vapour containing air kept at a temperature of between 40°C and 150°C in an amount of at least 0,5 g in terms of water vapour per 1 kg of said particulate polyethylene terephthalate."

XI. The arguments of the Appellant in the Statement of Grounds of Appeal may be summarized as follows:

(i) The essential points at issue were the allowability of the following minor amendments, i.e.

- the change of the amount of cyclic trimer from "less than 0.45% by weight" to "less than 0.50% by weight", and

- the deletion of the term "without any intermediate step".

(ii) These minor amendments did not require a reopening of substantive examination, so that they would not delay the issuing of the decision of granting a patent.

(iii) When applying Rule 86(3) EPC, the Examining Division should have taken into account the conditions limiting the extent of its discretion, as set out in several decisions of the boards of appeal.

XII. The Appellant requested that the decision of the Examining Division be set aside, and that the allowability of Claim 1 of the main request or, alternatively, of any of the auxiliary requests as submitted with the Statement of Grounds to Appeal be acknowledged and the case remitted to the Examining Division with the order to grant a patent on that basis. As a further auxiliary request the Appellant requested oral proceedings.

Reasons for the Decision

1. The appeal is admissible.

2. *Procedural matter*

2.1 The admissibility of amendments after reply to the first communication from the Examining Division is governed by Rule 86(3) EPC:

"After receipt of the first communication from the Examining Division the applicant may, of his own volition, amend once the description, claims and drawings provided the amendment is filed at the same time as the reply to the communication. No further amendment may be made without the consent of the Examining Division."

2.2 Although at first sight the last sentence would appear to give entire freedom to the Examining Division to exercise its discretion, in practice the extent of that discretion has been defined by several decisions of the boards of appeal.

(i) There is no discretion in the obligation to admit amendments which remove deficiencies constituting violations of the EPC (cf. T 171/85 published in OJ EPO 1987, 160).

(ii) In all the other cases the Office's interest in a speedy completion of the proceedings must be balanced with the interests of the Applicant in the grant of a patent with the amended claims (cf. T 166/86, OJ EPO 1987,372).

(iii) When exercising a discretion, whether for or against a particular party, the reasons for the exercise of that discretion should be given (cf. T 182/88 published in OJ EPO 1990, 287).

2.3 There is no evidence in the decision under appeal that these factors have been considered. It also appears from paragraph 5 of the minutes of the oral proceedings that no reason has been given by the Examining Division, when exercising its discretion, for not

allowing further amendments of the claims.

- 2.4 Thus, in these circumstances, the Board considers that it should interfere with the decision of the Examining Division by setting it aside and should itself decide the question of discretion which has been raised. It follows that the acceptance of the amended claim depends on the consent of the Board acting within the competence of the Examining Division (Article 111(1) EPC).
- 2.5 By doing, the Board should not review all the facts and circumstances of the case as if it were in the place of the department of first instance, in order to decide whether or not it would have exercised its discretion in the same way as that department. The Board should only overrule the way in which the first-instance department had exercised its discretion if it came to the conclusion either that the department has not exercised its discretion in accordance with the proper principles as set out above, or that it had done so in an unreasonable way, and has thus exceeded the proper limits of its discretion (cf. G 7/94, OJ EPO 1994, 775; T 640/91, OJ EPO 1994, 918).
- 2.6 A particular aspect to consider in the present appeal is that , as will appear when discussing the wording of the single claim according to the main request, this claim does not correspond exactly to Claim 1 underlying the decision under appeal (e.g. Claim 1 according to auxiliary request 4), but comprises further minor amendments. As noted in T 63/86 (OJ EPO 1988, 224) it might be appropriate for the board to exercise the discretion of the Examining Division under Rule 86(3) EPC.

3. *Main request*

3.1 With respect to Claim 1 proposed for grant by the Examining Division in its communication of 9 September 1998, the claim on file differs by (a) the insertion in step iii. of the wording "to prepare a particulate polyethylene terephthalate" between "granules" and "having an average diameter of 2 to 5 mm", (b) the indication in an optional step iv. that the pre-crystallising is performed with the particulate polyethylene terephthalate obtained in step iii., (c) the change of the amount of cyclic trimer from 0.45% by weight to 0.50% by weight in step iv. now renumbered as step v., and (d) the deletion of the wording "without any intermediate step" in step v. now renumbered as step vi..

3.2 Amendments (a) and (b) are respectively supported by lines 1 to 7 and by lines 10 to 14 of page 17 of the description as originally filed.

The support for amendment (c) is to be found on lines 14 to 18 on page 18 of the description as originally filed.

3.3 In the application as originally filed there is no basis for the feature that no intermediate step should be carried out between the polycondensation step and the treatment of the product of the solid phase polycondensation with hot water or water vapour. On the contrary, the presence of the wording "comprises" in original Claim 4 clearly indicates that additional steps are not excluded between the solid phase polycondensation and the water treatment.

Thus, the deletion of the wording " without any intermediate step" does not extend the subject-matter of the application beyond the content of the application as filed.

3.4 It is considered that amendments (a),(b) and (c) do not introduce a lack of clarity in the amended claims, since amendments (a) and (b) merely specify the physical state of the polyethylene terephthalate and the amended value (0.50% by weight) of the oligomer content is as clear as the value (0.45% by weight) in Claim 1 proposed to grant by the Examining Division.

3.5 During the oral proceedings the Examining Division objected that the wording "comprises" in the definition of the process according to Claim 1 of the main request submitted with letter of 10 October 1997 of the Appellant rendered this claim unclear, since this wording did not exclude the presence of further steps (e.g. injection molding) between the solid phase polycondensation and the treatment by water or water vapour of the product of the solid phase polycondensation. This led the Appellant to incorporate the feature "without any intermediate step" in step v. of all the requests submitted during the oral proceedings.

3.6 Although the wording "comprises" used in the definition of the process according to present Claim 1 does not exclude intermediate steps between steps v. and vi. (for example cooling the product of solid phase polycondensation), Claim 1 unambiguously requires in step vi. that the product, which is brought in contact with hot water or water vapour, is the product of the solid phase polycondensation, so that intermediate

steps which would modify the product of the solid phase polycondensation are implicitly excluded. Therefore no lack of clarity in the definition of the product submitted to the treatment of step vi. can arise from the deletion of the wording "without any intermediate step".

3.7 Thus, it follows that Claim 1 of the main request complies with the requirements of Article 123(2) and 84 EPC.

3.8 The nature of amendments (a), (b) and (c) is not such as to remove deficiencies in the claims which violate vital provisions of the EPC and, consequently, does not fall under the category (i) as mentioned in paragraph 2.2 above.

Amendments (a) and (b) add clarity to the wording of the claims by specifying the physical state of the polyethylene terephthalate and amendment (c) extends the scope of protection in comparison to the claim as proposed to grant by the Examining Division. In the Board's view the Appellant's interests to a clear wording of the claim and to a scope of protection reflecting the technical contribution to the art by the application are legitimate. The incorporation of these three amendments does not require a reopening of the substantive examination, since they have no effect on the issues of novelty and inventive step.

For this reason there can be no doubt that the interest of the Appellant should outweigh the interest of the Office in a speedy completion of the proceedings and that, consequently, consent to these amendments should be given (category (ii)).

3.9 Concerning amendment (d): As pointed out by the Appellant (cf. Statement of Grounds of Appeal, page 6, paragraph "criterion a"), there was no explicit basis for the feature "without any intermediate step" in the application documents as originally filed. If the feature "without any intermediate step" was intended to be a disclaimer, the Board has strong doubts whether the conditions for introducing it were met. According to well established case law disclaimers can be allowed to overcome a lack of novelty under the conditions set out in decision T 863/96 of 4 February 1999 (not published in OJ EPO), to exclude subject-matter which does not solve the technical problem (cf. T 313/86 of 12 January 1988, not published in OJ EPO) or to overcome a lack of clarity (cf. T 1050/93 of 7 November 1996, not published in OJ EPO). In the present case, however, this wording did not correspond to any of these situations. Thus, it is highly questionable whether the proposed term complied with Article 123(2). As a consequence the patent would have been granted on a basis likely to be objectionable under Article 123(2) EPC, which in turn might result for the Appellant in an inescapable trap between Article 123(2) EPC and Article 123(3) EPC in case of opposition. In the Board's view, thus, the request to cancel the term "without any intermediate step" falls under the above category (i); since amendment (d) corresponds exactly to that request, consent to that amendment must be given.

3.10 It follows from these considerations that the consent is given to all amendments and that, consequently, the Appellant's main request must be granted.

3.11 There is thus no need to consider the auxiliary

requests nor to arrange oral proceedings which the Appellant has requested as a further auxiliary request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to grant a patent on the basis of Claim 1 of the main request submitted on 20 August 1999 and a description yet to be adapted.

The Registrar:

The Chairman:

E. Görgmaier

C. Gérardin