

Internal distribution code:

- (A) Publication in OJ
(B) To Chairmen and Members
(C) To Chairmen
(D) No distribution

**Datasheet for the decision
of 13 January 2011**

Case Number: T 0291/08 - 3.3.10

Application Number: 01918923.2

Publication Number: 1268388

IPC: C07C 51/47

Language of the proceedings: EN

Title of invention:

Method of removing organic iodides from organic media

Patentee:

Celanese International Corporation

Opponent:

BP Chemicals Limited

Headword:

Method of removing organic iodides/CELANESE

Relevant legal provisions:

EPC Art. 56, 111(1)

Relevant legal provisions (EPC 1973):

-

Keyword:

"Inventive step (no) - determination of the closest prior art"
"Remittal (no)"

Decisions cited:

T 0133/87, T 0800/91

Catchword:

-



Case Number: T 0291/08 - 3.3.10

DECISION
of the Technical Board of Appeal 3.3.10
of 13 January 2011

Appellant: BP Chemicals Limited
(Opponent) Chertsey Road
Sunbury-on-Thames
Middlesex TW16 7BP (GB)

Representative: Wilson, Nicola
BP International Limited
Patents & Agreements
Chertsey Road
Sunbury-on-Thames
Middlesex TW16 7LN (GB)

Respondent: Celanese International Corporation
(Patent Proprietor) 1601 West LBJ Freeway
Dallas
TX 75234 (US)

Representative: Kirsch, Susan Edith
Carpmaels & Ransford
One Southampton Row
London WC1B 5HA (GB)

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
20 November 2007 concerning maintenance of
European patent No. 1268388 in amended form.

Composition of the Board:

Chairman: J. Mercey
Members: J.-C. Schmid
D. S. Rogers

Summary of Facts and Submissions

I. The Appellant (Opponent) lodged an appeal against the interlocutory decision of the Opposition Division which found that the amended European patent No. 1 268 388 according to the then pending main request met the requirements of the EPC. Claim 1 read as follows:

"1. A method of removing iodides from acetic acid or acetic anhydride comprising:

(a) providing a stream of acetic acid or acetic anhydride comprising organic iodides wherein at least 20% of the organic iodides in the stream comprise C₁₀ or higher organic iodides and wherein the organic iodide comprises dodecyl iodide;

(b) contacting the stream at a temperature of at least 80°C with a macroreticular, strong acid, ion exchange resin wherein at least 1 percent of the active sites of the resin have been converted into the silver or mercury form; and

(c) wherein the silver or mercury exchanged ion exchange resin is effective to remove at least 90 wt% of the organic iodides in the stream of acetic acid or acetic anhydride."

II. Notice of opposition was filed by the Appellant requesting revocation of the patent in suit in its entirety on the ground of lack of inventive step (Article 100(a) EPC). *Inter alia* the following documents were submitted in the opposition proceedings:

- (1) EP-A-0 893 160,
- (6) US-A-5 416 237,
- (7) EP-A-0 482 787,
- (8) EP-A-0 196 173 and
- (10) EP-A-0 484 020.

III. The Opposition Division decided that the subject-matter according to the then pending main request fulfilled the requirements of Article 123(2) and (3) EPC and was novel and inventive. According to the Opposition Division, the closest prior art was document (6) which was concerned with the elimination of distillation stages after the preparation of acetic acid by a Monsanto type process for the preparation of acetic acid. The technical problem to be solved by the patent-in-suit was to reduce the amount of equipment necessary in the work-up procedure of a typical Monsanto process for preparing acetic acid. The solution was to effect the whole removal of the iodides by means of a silver- or mercury-loaded macroreticular strong acid ion-exchange resin at a temperature of at least 80°C. Since there was no evidence that the product obtained from the single distillation zone of document (6) had a composition falling within that specified in claim 1 of the patent-in-suit, this document gave no hint of eliminating the heavy ends distillation column without any further complicated measures and letting the more energy efficient purification train take the strain of the resulting increased burden of heavy iodides. The opposition division concluded by acknowledging an inventive step in the choice of the composition to be purified, and the associated advantage of it deriving from an energetically more efficient procedure for purifying acetic acid of its iodides.

IV. At the oral proceedings before the Board, held on 13 January 2011, the Respondent (Proprietor of the patent) defended the maintenance of the patent-in-suit on the basis of a main request and auxiliary requests 1 to 3, all requests being submitted on 9 December 2010.

Independent claim 1 of the main request differs from claim 1 as maintained by the Opposition Division in that it is specifically directed to a method of removing dodecyl iodide, that the at least 20% of higher organic iodides in step (a) are higher than C₁₀, that step (b) only requires a contact temperature with the resin of at least 50°C and that the ion exchange resin is a sulfonic acid functionalised resin.

Claim 1 of auxiliary request 1 differs from claim 1 of the main request only in that step (b) requires a contact temperature with the resin of from 50°C to 100°C.

Claim 1 or auxiliary request 2 is identical to claim 1 upheld by the Opposition Division.

Claim 1 of auxiliary request 3 differs from claim 1 of the main request only in that step (b) requires a contact temperature with the resin of at least 80°C.

V. The Appellant objected that claim 1 of the main and auxiliary request 1 comprised methods wherein the stream was contacted with the resin at temperatures less than 80°C which were not covered by the claims maintained by the Opposition Division and, hence, contravened the principle of the prohibition of

reformatio in peius. Document (8) was the closest prior art document. This document had the same objectives as the patent-in-suit, i.e. the removal of alkyl iodides from acetic acid and additionally had the most relevant technical features in common, the only difference being the choice among alkyl iodides of dodecyl iodide. This choice was arbitrary, therefore the subject-matter of claim 1 lacked an inventive step. Figure 4, filed with the letter of 1 October 2002 before the Examining Division, showed that the removal of dodecyl iodide was already effective at 25°C. As the initial contents of dodecyl iodide in acetic acid were not indicated for the different isotherms, it could not be concluded from Figure 4 that higher temperatures improved the removal of dodecyl iodide. In any case, document (1) taught that the removal of iodides was improved by operating at high temperatures. Accordingly, the subject-matter of claim 1 of the auxiliary requests also lacked an inventive step.

VI. According to the Respondent, document (6) was the closest prior art. This document related to a process for producing acetic acid by carbonylation of methanol and was cited in the patent-in-suit as the starting point for the invention. The present invention was based on the recognition that the acetic acid stream produced by the process of document (6) contained higher alkyl iodides. Taking document (8) as the closest prior art was based on hindsight. Should nevertheless document (8) be considered to be closer to the invention than document (6), then documents (7) and (10) must be considered to be even closer than document (8), since these documents disclosed methods for removing C₁₀ alkyl iodide, which was an alkyl iodide

structurally closer to dodecyl iodide than the hexyl iodide disclosed in document (8). The methods of removing alkyl iodides were described in those documents as being more efficient than the method according to document (8). In addition, starting from document (8) as the closest prior art was a new argument requiring remittal to the first instance. Even starting from document (8) as the closest prior art, the skilled man would have had no reason to specifically choose to remove dodecyl iodide, since said iodide was not disclosed in this document. The process of document (8) was preferably carried out at room temperature, a temperature at which dodecyl iodide was not removed from acetic acid. Thus any arguments based on this document were based on hindsight. There was also no motivation in this document to select a temperature greater than 50°C, since this document taught that it was preferable to operate under ambient conditions of 20° to 45°C. In addition, the good level of removal of dodecyl iodide at high temperatures could not have been expected in the light of document (8).

VII. The Appellant requested that the decision under appeal be set aside and that the patent be revoked.

The Respondent requested that the appeal be set aside and that the patent be maintained on the basis of the main request, or, alternatively, on the basis of one of the auxiliary requests 1 to 3.

VIII. At the end of the oral proceedings the decision of the Board was announced.

Reasons for the Decision

1. The appeal is admissible.

2. *Reformatio in peius*

The Appellant raised an objection based on the prohibition of *reformatio in peius* with respect to the main and the auxiliary request 1. However, in view of the outcome of these appeal proceedings which are in its favour (see below), a decision of the Board on this issue is unnecessary.

3. *Remittal (Article 111(1) EPC)*

3.1 The Respondent requested that the Board remit the case to the first instance on account of the new argument made during the oral proceedings by the Appellant, namely that document (8) was the closest prior art.

3.2 Pursuant to Article 111(1) EPC the Board may exercise any power within the competence of the first instance or remit the case to that department. Having arrived at the present stage of the appeal proceedings, the Board should therefore assess the appropriateness of a remittal.

3.3 In the present case, the examination as to the requirement of inventive step is made in respect of a document already taken into consideration in the decision under appeal, namely document (8). In the decision under appeal the Opposition Division decided that document (6) was the closest prior art, that means that the Opposition Division was of the opinion that

document (6) was a more promising springboard for the invention than document (8). However, starting instead from document (8) as the closest prior art does not fundamentally change the factual framework of the case and hence does not justify a remittal to the first instance.

In the communication accompanying the summons to oral proceedings, the Board indicated to the Parties that they should be prepared to discuss whether document (8) represented the closest prior art. The Respondent, thus, had sufficient time to respond to an argument based on document (8) and in fact provided arguments as to why document (8) should not be taken as the closest prior art. Thus its right to be heard under Article 113(1) was not violated.

3.4 The justification put forward by the Respondent for its request to remit the case to the first instance was the right to have two instances. However, Article 111(1) EPC establishes no absolute right for Parties to have matters raised in appeal proceedings examined by two successive instances; on the contrary, it leaves the Board of Appeal to decide upon a remittal in the light of the circumstances (see *inter alia* T 133/87, point 2 of the reasons, not published in OJ EPO).

3.5 Under the present circumstances, the Respondent's request to remit the case to the first instance is thus refused.

Main request

4. *Amendments (Article 123(2) and (3) EPC)*

Claim 1 is based on the combination of original claims 10 and 15, which are identical to granted claims 13 and 18 respectively. Additionally the organic iodide to be removed is specified as being dodecyl iodide according to page 1, line 5 of the application as filed. The requirements of Article 123(2) and (3) EPC are thus satisfied.

5. *Inventive step (Article 56 EPC)*

According to the established jurisprudence of the Boards of Appeal it is necessary, in order to assess inventive step, to establish the closest state of the art, to determine in the light thereof the technical problem which the invention addresses and successfully solves, and to examine the obviousness of the claimed solution to this problem in view of the state of the art. This "problem-solution approach" ensures the assessment of inventive step on an objective basis.

5.1 *Closest prior art*

In the context of the problem-solution approach, the Boards of Appeal have developed certain criteria in order to identify the closest prior art. The crucial criteria are that the "closest prior art" is normally a prior art document disclosing subject-matter conceived for the same purpose as the claimed invention and additionally having the most relevant technical features in common.

5.2 The patent-in-suit is concerned with the removal of higher alkyl iodides, more particularly dodecyl iodide, from acetic acid or acetic anhydride (see column 1, lines 5 to 9; column 2, lines 52 to 55).

In relation to this objective and to the relevant technical features in common, a decision must be made as to which of documents (6) and (8) is to be considered as the "closest prior art". The Appellant and the Respondent had divergent views in this respect.

5.2.1 Document (8), which the Appellant considered as the closest prior art, is specifically concerned with the problem of removing iodides from non-aqueous organic media, in particular from acetic acid (see column 1, lines 3 to 12). The specific nature of the iodide compounds to remove is not critical, but they are typically alkyl iodides (column 3, lines 15 to 18; claims 4 and 5), for example, hexyl iodide (Example VIII).

The method for removing the iodide compounds comprises contacting the medium containing said iodide compounds with a macroreticulated, strong-acid, ion exchange resin which has at least one percent of its active sites converted to the silver or mercury form (claim 1). The contact with the resin is operated at a temperature from 17°C to 100°C (claim 7). Preferably the resin is of the "RSO₃H type" (column 4, line 20), more preferably Amberlyst 15 (column 4, last two lines and Examples).

5.2.2 Document (6), which the Respondent considered as the closest prior art, relates to a process for producing

acetic acid by carbonylation of methanol (see column 1, lines 7 to 9). It aims to produce pure carboxylic acid (column 1, lines 16 to 21).

Document (6) identifies only methyl iodide formed by quenching hydrogen iodide with methanol as an alkyl iodide to be removed, the possible presence of other alkyl iodides in the acetic acid produced not being disclosed in that document (see column 7, lines 23 to 47).

The iodide impurities in the acetic acid produced by the process disclosed in document (6) may be removed *inter alia* by passing the product through one or more ion exchange resin beds, suitable resins including *inter alia* the macroreticular strong acid cation exchange resin which has at least 1% of its active sites in the silver or mercury form according to the disclosure of document (8) (see column 8, lines 18 to 24).

5.2.3 Thus, neither document (6) nor (8) aims specifically at removing dodecyl iodide from acid acetic.

However, the objective of document (8) of removing any alkyl iodides, for example hexyl iodide, from acetic acid is closer to the objective of the patent-in-suit of removing dodecyl iodide than that of document (6) of removing only those iodide impurities produced in the particular process of preparing acetic acid disclosed in that document, wherein only methyl iodide is specifically identified.

Furthermore, as to the relevant technical features in common, to arrive at the feature of using a macroreticular resin according to step (b) of claim 1 of the patent-in-suit, in document (6) a first choice has to be made to select the method of passing the acid through an ion exchange resin bed (see column 7, line 48 to 53), followed by a second choice to select the macroreticular strong acid cation exchange resin which has at least 1% of its active sites in the silver or mercury form (see column 8, lines 18 to 24), whereas according to the method of document (8) the alkyl iodides are removed by the resin according to claim 1 of the patent-in-suit.

Furthermore, in contrast to document (8), which indicates operating temperatures of from 17°C to 100°C (see column 7, lines 37 to 44), document (6) does not disclose any operating conditions for removing the iodides with the macroreticular resin, let alone the temperature at which the acetic acid is contacted with the resin. The temperature is, however, an essential technical feature of the patent-in-suit, claim 1 of the patent-in-suit requiring a temperature of at least 50°C (main request), from 50°C to 100°C (auxiliary request 1) and at least 80°C (auxiliary requests 2 and 3).

Therefore, document (8) has more technical features in common with the patent-in-suit than document (6).

- 5.2.4 The Board concludes therefore that document (8) represents prior art which is closer to the invention of the patent-in-suit than document (6).

5.2.5 According to the Respondent document (6) was cited in the patent-in-suit as the starting point for the invention, and additionally for this reason should be taken as the closest prior art.

In paragraph [0009] of the patent-in-suit, the technical problem is formulated with respect to prior art methods using resin beds described in the preceding paragraphs of the patent-in-suit which did not efficiently remove higher organic iodides from acetic acid. Those prior documents describing these methods are cited in paragraphs [0003] to [0007] and include document (8) (see paragraph [0003], column 1, lines 22 to 35; US 4 615 806 being the US equivalent of document (8)). Document (6) is acknowledged in paragraph [0008] of the patent-in-suit without, however, any reference being made to methods of removing iodides with resin beds. Accordingly, if anything, document (8) is cited as a starting point for the invention of the patent-in-suit rather than document (6).

Notwithstanding this finding, a prior art document described in a patent as the starting point for the invention is to be taken as the starting point in the problem/solution approach only if there is no prior art of greater technical relevance to the solution as claimed (see T 800/91, point 6 of the reasons, not published in OJ EPO). This is not so in the present case, since document (8) is much closer to the claimed invention than document (6) (see point 5.2.3 above).

5.2.6 The Respondent further argued that document (6) should be regarded as representing the closest prior art since the acetic acid product stream obtained by the process

disclosed in that document contained higher alkyl iodides.

According to the jurisprudence of the Boards of Appeal, the disclosure of a particular prior art document must always be considered as it stands. In the present case, as conceded by the Respondent, document (6) does not disclose that the produced acetic acid contains higher alkyl iodides. Hence, the technical feature relating to the presence of higher alkyl iodides in the acetic acid produced according to document (6), on which the Respondent relies to argue that document (6) is closer than document (8), is not disclosed in that document, with the consequence that this argument does not convince the Board.

5.2.7 According to the Respondent, the choice of document (8) as the closest prior art was based on hindsight, because the present invention was based on the recognition that the acetic acid stream produced by the process of document (6) contained higher alkyl iodides. However, that argument is also irrelevant since claim 1 does not comprise any feature specifying how the acetic acid containing the higher alkyl iodides is obtained, in particular it does not require that it is obtained by a process according to document (6). Thus, the skilled person did not need to "recognise" that the acetic acid stream produced by the process of document (6) contained higher alkyl iodides.

5.2.8 Finally the Respondent submitted that in the case where document (8) was considered to be closer to the invention than document (6), then documents (7) and (10) must be considered to be even closer since these

documents disclosed methods for removing C₁₀ alkyl iodide, which was an alkyl iodide structurally closer to dodecyl iodide than the hexyl iodide disclosed in document (8). Furthermore, the methods of removing alkyl iodides were disclosed in these documents as being more efficient than the method according to document (8).

Documents (7) and (10) aim to remove iodides, e.g. C₁ to C₁₀ alkyl iodides, from acetic acid (see document (7), claims 1 and 10; document (10), page 2, lines 35 to 37). Accordingly, although mentioning *inter alia* C₁₀ alkyl iodides, the objectives of these documents principally do not differ from those of document (8) indicating any alkyl iodide and specifying that the specific nature of the iodide compounds is not critical (see column 3, lines 15 to 18).

However, since the methods of documents (7) and (10) principally operate with mesoporous or macroporous resins (see document (7), page 2, lines 29 and 30; document (10), page 2, lines 23 to 26 and 45 to 46) to remove the iodide compounds, the method disclosed in document (8) operating specifically with the macroreticular resins as defined in claim 1 of the patent-in-suit has more technical features in common with the claimed method.

With respect to the argument regarding the lower effectiveness of the method described in document (8) compared to those of documents (7) and (10), the Board notes that Article 56 EPC requires the assessment of inventive step to be made "having regard to the state of the art", Article 54(2) EPC defining the state of

the art "to comprise everything made available to the public". As a consequence, there is no legal basis in the EPC to preclude a particular state of the art, in the present case document (8), from being taken into account when assessing inventive step, merely because later published documents, e.g. documents (7) and (10) mention some drawbacks in the method according to document (8), all the more so because the patent-in-suit does not aim to solve these drawbacks.

5.2.9 The Board is therefore of the opinion that document (8) represents the prior art closest to the patent-in-suit.

5.3 In view of document (8), the problem underlying the patent-in-suit, as submitted by the Respondent during the oral proceedings before the Board, is to provide a method of removal of higher alkyl iodides.

5.4 The proposed solution is the method of claim 1 characterized by removing dodecyl iodide by providing a stream of acetic acid or acetic anhydride comprising organic iodides wherein at least 20% of the organic iodides in the stream comprise C₁₀ or higher organic iodides and wherein the organic iodide comprises dodecyl iodide and contacting said stream with the resin at a temperature of at least 50°C.

5.5 The Board is satisfied that the problem underlying the patent in suit has been successfully solved by the method of claim 1. Moreover, the Appellant did not challenge this finding.

5.6 Finally, it remains to decide whether or not the proposed solution to the objective problem underlying

the patent-in-suit is obvious in view of the state of the art.

- 5.6.1 Document (8) describes removing alkyl iodides from acetic acid with a macroreticulated, strong-acid, ion exchange resin (see point 5.2.1 above). The method is operated at a temperature from 17°C to 100°C (see claim 7 and column 7, line 42).

The choice of removing a particular higher alkyl iodide, namely dodecyl iodide, from a stream comprising organic iodides, wherein at least 20% comprise C₁₀ or higher alkyl iodides and comprising dodecyl, together with a particular temperature threshold, namely at least 50°C, from within the general teaching of document (8) is neither critical nor purposive. This is because no particular effect has been shown to be associated with this choice, which lies within the routine activity of the skilled person faced with the problem of providing an alternative method. This is all the more so, since document (8) explicitly indicates that neither the choice of the iodides to be removed nor the temperature of removal is critical (see column 3, lines 15 to 21 and column 7, lines 37 to 44, respectively).

- 5.7 Hence, the subject-matter of claim 1 of the patent in suit results from an arbitrary choice within the ambit of document (8) and consequently lacks an inventive step in view of document (8) alone.

- 5.7.1 The Respondent argued that document (8) did not disclose dodecyl iodide and thus a skilled person would have had no incentive to specifically select this compound.

However, this argument is not convincing since no specific motivation is required to make an arbitrary choice of a particular embodiment from a host of equally possible embodiments in order to provide a mere alternative.

- 5.7.2 According to the Respondent, dodecyl iodide could not be removed at ambient temperature and therefore the choice of the temperature threshold of at least 50°C was not arbitrary.

However, in the absence of any substantiating facts and corroborating evidence, the Board considers the Respondent's allegation that dodecyl iodide is not removed at ambient temperature as mere speculation.

Moreover, this allegation is contradicted by the facts. As pointed out by the Appellant, the plot of the isotherm removal of dodecyl iodide at 25°C in Figure 4, filed with letter dated 1 October 2002 before the Examining Division, clearly shows that dodecyl iodide is removed at 25°C. Figure 4 is a plot of various elution isotherms at 25°C, 50°C, 75°C and 100°C showing the concentration of dodecyl iodide in acetic acid over time varying from one to twenty hours and the isotherm at 25°C of hexyl iodide. Although not specified, the initial dodecyl iodide content in the acetic acid must have been more than 100,000 ppb, since after 20 hours isotherm, i.e. when the resin becomes less efficient, the stream contains that amount of dodecyl iodide. However, at the beginning of the isotherm, i.e. after one hour, the stream contains only 10,000 ppb dodecyl

iodide, corresponding to more than 90% dodecyl iodide removal at ambient temperature.

- 5.7.3 The Respondent further argued that there was no motivation to select a temperature greater than 50°C since the process of document (8) was preferably carried out at ambient temperature. Furthermore Figure 4 filed with the letter dated 1 October 2002 showed an unexpected level of removal of dodecyl iodide at higher temperatures.

However, Figure 4 fails to indicate the initial concentrations of hexyl and dodecyl iodides in the acetic acid with the consequence that Figure 4 cannot provide a fair comparison, neither for the relative removal of hexyl iodide compared to that of dodecyl iodide, nor for the relative removal of dodecyl iodide at different isotherms.

Irrespective of the fact that Figure 4 does not properly support the effect of higher levels of removal of dodecyl iodide at higher temperatures, that effect is nevertheless obvious in view of document (1), which teaches that it is desirable to operate at a temperature as high as possible in order to effect maximum removal of iodides (see document (1), column 3, lines 49 to 51).

- 5.8 As a result, the Respondent's main request is not allowable as the subject-matter of claim 1 thereof lacks inventive step pursuant to Article 56 EPC.

Auxiliary request 1

6. *Amendments (Article 123(2) and (3) EPC)*

Claim 1 of auxiliary request 1 differs from claim 1 of the main request exclusively by the indication of the upper temperature limit of 100°C for the contacting step (b), said temperature finding support at page 3, line 26 of the application as filed. The requirements of Article 123(2) and (3) are therefore satisfied.

7. *Inventive step (Article 56 EPC)*

Document (8) already teaches that the temperature at which the removal of iodide compounds takes place is usually from 17°C to 100°C (see column 7, line 42). Therefore the indication of the upper temperature of 100°C in claim 1 cannot render the claimed method non-obvious over document (8).

In these circumstances, the Respondent's auxiliary request 1 is rejected for lack of inventive step.

Auxiliary requests 2 and 3

8. Independent claim 1 of auxiliary request 3 is directed to an embodiment comprised within claim 1 according to auxiliary request 2, namely to the embodiment of a method of removing dodecyl iodide, wherein at least 20% of the organic iodides in the stream comprise higher organic iodides having greater than C₁₀ and wherein the ion exchange resin is a sulfonic acid functionalised resin.

In case this embodiment according to auxiliary request 3 lacked inventive step, a consequence must be that the subject-matter of auxiliary request 2, which comprises that obvious embodiment, cannot, at least to that extent, involve an inventive step either. For this reason, it is appropriate that the subject-matter of claim 1 of the auxiliary request 2 insofar as it relates to the embodiment comprised in claim 1 of auxiliary request 3, and that of claim 1 of auxiliary request 3, is examined first as to its inventive ingenuity.

9. *Amendments (Article 123(2) and (3) EPC)*

Claim 1 of auxiliary request 2 is based on the combination of original claims 10 and 14, which are identical to granted claims 13 and 17 respectively, wherein the organic iodide comprises dodecyl iodide according to page 3, line 7 of the application as filed.

Claim 1 of auxiliary request 3 differs from claim 1 of the main request exclusively in that step (b) requires a contact temperature with the resin of at least 80°C instead of at least 50°C. This amendment, which constitutes a restriction of the claimed scope, is based on original claim 14.

The requirements of Article 123(2) and (3) EPC are thus satisfied.

10. *Inventive step (Article 56 EPC)*

The considerations concerning inventive step with respect to the main request are neither based on nor

affected by the indication of a temperature threshold which is within the teaching of document (8) (see points 5.6.1 and 5.7.2 and 5.7.3 above). As document (8) discloses that the usual operating temperature is up to 100°C (see column 7, line 42), the indication in claim 1 of the threshold of at least 80°C cannot render the claimed method non-obvious over document (8).

Thus, the subject-matter of claim 1 of auxiliary request 3, and consequently that of claim 1 of auxiliary request 2, lack an inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar

The Chair

C. Rodríguez Rodríguez

J. Mercey