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D E C I S I O N
of 5 April 2000

Case Number: T 0577/97 - 3.3.5

Application Number: 90908746.2

Publication Number: 0471033

IPC: B01D 53/70

Language of the proceedings: EN

Title of invention:
Catalytic destruction of organohalogen compounds

Patentee:
AlliedSignal Inc.

Opponent:
SIEMENS AG

Headword:
Destruction of organohalogen compounds/ALLIEDSIGNAL

Relevant legal provisions:
EPC Art. 54(1), 114(2), 111(1)
EPC R. 57a

Keyword:
"Novelty - no, no new choice"
"Late filed evidence - admitted"
"New claims filed during oral proceedings - admitted"

Decisions cited:
T 0426/97, T 0557/94, T 0097/90, T 0852/90, T 0113/96,
T 0926/93, T 0605/96, T 0855/96, T 0840/93

Headnote:

There is no basis in the EPC to refuse auxiliary requests at oral proceedings because of the circumstance that the new claims are apparently "not clearly allowable". In contrast to the situation in examining proceedings, where Rule 86(3) EPC requires that amendments after expiration of the time limit set in the first communication of the EPO are subject to the consent of the EPO, Rule 57a EPC does not contain such a requirement. The discretion not to admit auxiliary requests should in principle be limited to exceptional cases in which the filing of the auxiliary request can be said to amount to an abuse of procedural rights (point 3 of the reasons).



Case Number: T 0577/97 - 3.3.5

D E C I S I O N
of the Technical Board of Appeal 3.3.5
of 5 April 2000

Appellant: SIEMENS AG
(Opponent) Postfach 22 16 34
D-80506 München (DE)

Representative: -

Respondent: AlliedSignal Inc.
(Proprietor of the patent) 101 Columbia Road
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Representative: Brock, Peter Williams
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 25 March 1997
rejecting the opposition filed against European
patent No. 0 471 033 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: R. K. Spangenberg
Members: G. J. Wassenaar
J. P. B. Seitz

Summary of Facts and Submissions

- I. The appeal is from the decision of the Opposition Division to reject the opposition against European patent No. 0 471 033 comprising claims 1 to 15. Claim 8 thereof reads as follows:

"A process for treating a gas stream containing compounds selected from the group consisting of organohalogen compounds, other organic compounds and mixtures thereof, comprising contacting the gas stream with a catalyst comprising titania at a temperature of 200 to 500°C in the presence of an oxidizing agent and water in a amount effective to convert said compounds to carbon dioxide, water and haloacids."

- II. In the decision, inter alia, the following prior art documents were considered:

D1: EP-A-0 252 521

D3: J. appl. Chem. Biotechnol. 1975, 25, pages 241-248

The Opposition Division held that the subject-matter of the claims as granted was new and involved an inventive step in view of the available prior art documents.

- III. In the statement of the grounds of appeal, the appellant(opponent) maintained that the subject matter of the granted claims lacked novelty and inventive step. Apart from the citations already on file before the Opposition Division, further reference was made to a new citation:

D22: DE-C-3 019 879.

During oral proceedings, which were held on 5 April 2000, novelty and inventive step of the subject matter of claim 8 as granted was attacked on the basis of D1 and D22.

- IV. The respondent argued that the new citation D22 should be disregarded for being filed late and requested that the case be remitted to the Opposition Division for full consideration if the Board were not to disregard D22 and to consider that this document could affect the validity of the claims. During the oral proceedings the respondent submitted an amended set of claims 1 to 14 as auxiliary request. Claim 8 thereof reads as follows:

"A process for treating a gas stream containing compounds selected from the group consisting of organohalogen compounds and mixtures thereof with other organic compounds, comprising contacting the gas stream with a catalyst comprising titania and vanadium oxide in a concentration from 0.1 to 20 weight percent of the titania at a temperature of 200 to 500°C in the presence of an oxidizing agent and water in a amount effective to convert said compounds to carbon dioxide, water and haloacids."

- V. The appellant objected to the admissibility of the claims according to the auxiliary request. It was argued that amended claim 8 now comprised a catalyst composition which had not been discussed earlier so that a fresh case had been opened, which should not be allowed at this late stage of the proceedings. The respondent was aware of the objections and the evidence from the beginning of the appeal proceedings so that auxiliary requests, if deemed necessary to overcome the objections, could have been filed in due time before the oral proceedings. Moreover amended claim 8 was not clearly allowable and there were many decisions of the Boards of Appeal according to which new claims filed

for the first time during oral proceedings should not be admitted unless they were clearly allowable. The novelty and inventive step objections raised against the subject matter of the main request were maintained with respect to the subject matter of the auxiliary request.

- VI. The respondent's arguments with respect to the novelty objections may be summarized as follows:
D1 disclosed three different methods for treating organohalogen compounds referred to as (a), (b) and (c), whereby method (b) corresponded to the method of granted claim 8. Titanium compounds were mentioned only as a possibility amongst numerous other possible catalytic materials. Titania was only mentioned in relation to method (c). There was no reason to choose titania for method (b).

D22 disclosed the right catalyst but not the feature that haloacids were formed. In fact it disclosed that if chlorine were present, oxides thereof would be formed. Moreover the treatment of chlorinated compounds was only cited incidentally and no mixtures thereof with other organic compounds were disclosed.

- VII. The appellant requested that the decision under appeal be set aside and that the European patent No. 0 471 033 be revoked. He further requested that the first auxiliary request submitted during the oral proceedings be considered filed too late, and therefore not admitted into the proceedings.

The respondent requested that the appeal be dismissed and that the patent be maintained as granted. As auxiliary request, the respondent requested the maintenance of the patent with claims 1 to 14 filed during the oral proceedings.

Reasons for the Decision

1. The appeal is admissible.
2. *Late filed evidence and remittal*
 - 2.1 With the grounds of the appeal a new document D22 was submitted. The respondent argued that D22 was filed late and should be disregarded for being not more relevant than any of the documents on file before the Opposition Division. For the reasons given in detail below when discussing novelty, the Board is of the opinion that at least in some aspects D22 is more relevant than any of the documents on file before the Opposition Division. This alone is sufficient reason to take D22 into consideration. Moreover this new document was filed right at the beginning of the appeal proceedings and the filing can be regarded as a reaction to the remark in the decision under appeal that the appellant did not substantiate by "any piece of the art" his argument that titania was so familiar to the skilled person as a catalytic material that he would give preference to this oxide (point 4.5 of the reasons). It is thus even questionable whether D22, submitted with the grounds of the appeal, can be regarded as being not submitted in due time within the meaning of Article 114(2) EPC. D22 is therefore admitted in these proceedings (see also T 855/96 of 10 November 1999, point 2 of the reasons and T 426/97 of 14 December 1999, point 2 of the reasons).
 - 2.2 The respondent requested remittal of the case to the department of first instance should the Board consider that D22 could affect the validity of the claims for full consideration of the effect of that document. No further arguments to support this request were provided. The Board is not aware of any Article or Rule

in the EPC from which a right of remittal could be derived if the factual framework of a case was changed during appeal proceedings by the filing of a new document. Under Article 111(1) EPC the Board of Appeal has a discretion during appeal proceedings before it, either to "exercise any power within the competence of the department which was responsible for the decision appealed (here: the Opposition Division) or (to) remit the case to that department for further prosecution." The attribution of a discretionary power would be meaningless if the boards were ipso facto obliged to remit the case whenever new matter has been raised in appeal proceedings, irrespective of the nature of such matter. Thus, in accordance with the jurisprudence of the Boards of Appeal (cf. T 557/94 of 12 December 1996, point 1.3 of the reasons and T 605/96 of 10 February 1999, point 4 of the reasons), Article 111 EPC also confers the power upon a Board of Appeal to act *inter alia* as the first and only instance in deciding upon a case taking into account a document which was only filed in appeal proceedings, without the possibility of further appellate review. Remittal of a case results in a substantial delay of the procedure which keeps the public in uncertainty about the fate of the patent for several more years. It also involves additional costs for all the parties and the office. Remittal, due to the admission of a new document may, however, be considered if, without remittal, a party would not have had sufficient opportunity to defend itself against an attack based on the new document, or if the factual framework has changed to such an extent that the case is no longer comparable with the one decided by the first instance (see eg T 97/90, OJ EPO 1993, 719). In the present case the respondent was aware of D22 since the filing of the grounds of the appeal, ie almost three years before the oral proceedings took place. Furthermore D22 was only cited in support of arguments already present before the first instance, so that the

Board does not find that the citation of this additional evidence amounts to a substantial change in the factual framework. The Board further took into consideration the fact that the effect of D22 was clear so that after a remittal, which would have led to a substantial delay of the proceedings, there was no reasonable chance that the final decision would have been different. The Board therefore holds that there is no reason to remit the case to the first instance. The request to remit the case to the first instance (see point IV above) is therefore refused (see also T 852/90 of 2 June 1992, T 113/96 of 19 December 1997 and T 605/96 of 10 February 1999, point 4 of the reasons).

3. *Admissibility of the auxiliary request*

The appellant objected to the admissibility of the auxiliary request submitted during oral proceedings for being late filed. The filing of amended claims in opposition proceedings is governed by Article 123 and Rule 57a EPC. Neither the Article nor the Rule contains a time limit for the amendments. The Board therefore holds, in agreement with the case law, that it has at least the discretion to accept amended claims at any stage of the opposition proceedings, thus also during oral proceedings. In several decisions of the Boards of Appeal, auxiliary requests submitted during oral proceedings were refused because the amended claims were not "clearly allowable" (see Case Law of the Boards of Appeal, third edition, point 14.2, pages 506 to 509). In T 926/93 (OJ EPO 1997, 447, point 3 of the reasons) the refusal to admit an auxiliary request filed during oral proceedings, containing a main claim comprising the subject-matter of a granted dependent sub-claim, was based on the argument that the opponent did not need to be prepared for such a limitation of the claims so that acceptance of the new request would have made it necessary to adjourn the proceedings and

to remit the case to the first instance for examination of the new request. The Board does not deny that in exceptional cases adjourning the proceedings and remittal of the case to the first instance might be the consequence of admitting a new request but holds that in general an opponent should be prepared that, as a defence against his attacks, claims are limited during oral proceedings to subject matter of one of the dependent claims, especially, as in this case, if in the notice of opposition the patent is opposed in full and all the claims as granted are attacked. The Board further considers that if during discussion of amended claims submitted during oral proceedings they turn out not to fulfil the requirements of the EPC their admission does not harm the other party and helps to settle the dispute between the parties. On the other hand, if it turns out that the amended set of claims fulfils the requirements of the EPC their rejection on procedural grounds seriously harms the patentee. The rejection of possibly acceptable claims would violate Article 52(1) EPC, the key Article of the EPC, stating that European patents **shall be granted for any inventions** which are susceptible of industrial application, which are new and which involve an inventive step. According to Article 102(3) this article is equally relevant to the maintenance of the granted patent. Therefore, the patentee is normally given an opportunity to limit his claims even at the oral proceedings, so that he is given a last chance to obtain a patent (see T 840/93, OJ EPO 1996, 335, point 3.2 of the reasons).

In the Board's view there is no basis in the EPC to refuse auxiliary requests at oral proceedings because of the circumstance that the new claims are apparently "not clearly allowable". In contrast to the situation in examining proceedings, where Rule 86(3) EPC requires

that amendments after expiration of the time limit set in the first communication of the EPO are subject to the consent of the EPO, Rule 57a EPC does not contain such a requirement. Therefore, the Board is of the opinion that the discretion not to admit auxiliary requests should in principle be limited to exceptional cases in which the filing of the auxiliary requests can be said to amount to an abuse of procedural rights, as was clearly the case in the situation dealt with in T 840/93, where a number of parallel divisional applications covering the same subject-matter were still pending. The present auxiliary request contains as only substantial amendment a new claim 8 which corresponds to granted claim 9 with the further limitation that one of the original three substance categories is deleted. It was filed early during the oral proceedings in direct response to issues discussed therein. There is thus no sign of any abuse of procedural rights and the Board is satisfied that the auxiliary request was filed in accordance with Rule 57a EPC. The auxiliary request is therefore admitted.

4. *Main request*

- 4.1 The broadest claim of the patent in suit is claim 8 comprising a process according to which a gas stream containing any organic compound is treated.

D1 discloses a process for the treatment of a gas stream containing polychlorinated cycloalkyl compounds with 4 to 8 C-atoms, comprising contacting the gas stream with a catalyst at elevated temperatures (page 1, lines 7 to 11 and page 7, lines 1 to 11). The process is preferably performed with an metal oxide catalyst at temperatures of 200 to 550°C in the presence of oxygen and water such that hydrogen chloride is produced (page 7, lines 12 to 15 and 28 to 36). The metal in the metal oxide is preferably chosen

from a group of metals comprising Ti (page 4, lines 31 to 35). D1 does not disclose that the organic compounds to be treated are converted to carbon dioxide. This conversion is however the automatic result of the reaction conditions. Since these conditions are equal, the same reaction products must be formed. In fact, the respondent has not denied that with the processes disclosed in D1 carbon dioxide is also formed. The Board cannot accept the respondent's argument that titania is only disclosed in a list of suitable catalysts for method (c), so that, in order to arrive at the claimed subject-matter, the skilled person had to perform a twofold selection, namely of method (b) out of methods (a), (b) and (c), and of titania from a large group, and that therefore the process of claim 8 is a selection invention. While it is true that the list of catalysts on page 4 is disclosed immediately after the description of method (c), it follows from the detailed description of method (b) on pages 6 to 8, in particular page 7, lines 12 to 15, that the metal oxides and metal carbonates mentioned on page 4 are also the preferred catalysts for method (b). Therefore, D1 clearly discloses that for the treatment of a gas containing the chlorinated organic compounds, metal oxides, selected from one single list of metals, are preferred so that the use of metal oxides comprising titania as catalyst is not a new choice, but is disclosed in the form of a technical teaching especially suitable for the gas treatment. Thus the method of claim 8 lacks novelty over D1.

- 4.2 D22 discloses a process for the complete oxidation of organic compounds to carbon dioxide and water, comprising contacting a gas stream containing the organic compound and air at a temperature of 300 to 500°C with a catalyst comprising titanium dioxide and vanadium pentoxide (column 3, lines 35 to 66). Since water is produced in the reaction, the contacting takes

place in the presence of water. The respondent's argument that a skilled person would not consider adding water in the process of D22 is irrelevant because claim 8 does not require it. In fact, the patent in suit explicitly mentions that the water can be provided by combusting an organic compound (see claim 14). The respondent's further argument that D22 fails to disclose the conversion of the halogens in organic halogen compounds to haloacids is irrelevant too, since the process of claim 8 is not limited to the treatment of a gas containing organohalogen compounds, but is also directed to a gas stream containing other organic compounds which need not contain halogens. Thus the subject matter of claim 8 also lacks novelty over D22.

5. *Auxiliary request*

According to the auxiliary request the process of claim 8 is limited to the treatment of a gas stream containing organohalogen compounds and the use of a catalyst comprising titania and vanadium oxide in a concentration from 0.1 to 20 weight percent of the titania.

D22 discloses the use of a catalyst comprising titanium dioxide (titania) and vanadium pentoxide in an amount of 0.5 to 20 weight percent of the titanium dioxide for the complete oxidation of organic compounds to carbon dioxide and water. Specifically disclosed organic compounds to be treated are, amongst others, chlorine containing organic compounds (claim 1 and column 3, lines 35 to 53). The respondent's argument that the skilled person would not consider treating chlorinated compounds by the process of D22 because this document indicates that if chlorine-containing compounds are treated chlorine oxides will be produced which are harmful for the catalyst and the environment, cannot be

accepted. It is true that D22 discloses that if the organic compound contains other elements such as nitrogen, phosphorus or chlorine, oxides of the other elements are formed. The skilled person will however be aware that this may be the case if nitrogen and phosphorus are present but not if the organic compound contains chlorine. The Board agrees with the appellant that it is basic knowledge in chemistry that by catalytic oxidation of chlorine-containing organic compounds under the conditions mentioned in D22 chlorine oxides are at most formed to a negligible extent. This is confirmed by D1, where under the prevailing conditions, in the presence of the water produced during combustion, chlorine will be converted to hydrogen chloride; see D1, page 7. Thus, the skilled person will immediately recognize that the disclosure in D22 that oxides of nitrogen, phosphorus and chlorine may be formed is wrong and that in the case of the treatment of chlorine containing organic compounds hydrogen chloride is substantially the sole chlorine-containing reaction product. Therefore, D22 clearly and unambiguously discloses a process falling within the ambit of claim 8 of the auxiliary request. The subject matter of this claim therefore lacks novelty over D22 so that the auxiliary request is not allowable.

Order

For these reasons it is decided that:

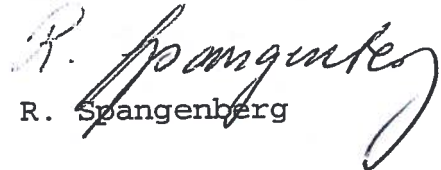
1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:



S. Hue

The Chairman:



R. Spangenberg

