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**D E C I S I O N**  
of 30 March 1995

**Case Number:** W 0011/94 - 3.2.4

**Application Number:** PCT/US93/11312

**Publication Number:** -

**IPC:** -

**Language of the proceedings:** EN

**Title of invention:**

Method and apparatus for treating an engine exhaust gas stream

**Applicant:**

Engelhard Corporation

**Opponent:**

-

**Headword:**

-

**Relevant legal provisions:**

PCT R. 13.1, 13.2, 40.2

**Keyword:**

"Invitation to pay an additional search fee - unjustified"

**Decisions cited:**

W 0003/93

**Catchword:**

-



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Boards of Appeal

Chambres de recours

Case Number: W 0011/94 - 3.2.4  
International Application No. PCT/US93/11312

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.4  
of 30 March 1995

**Applicant:** Engelhard Corporation  
101 Wood Avenue  
Iselin, New Jersey 08830 (US)

**Representative:** -

**Subject of the Decision:** Protest according to Rule 40.2(c) of the Patent Cooperation Treaty made by the Applicant against the invitation (payment of additional fee) of the European Patent Office (branch at The Hague) dated 9 March 1994.

**Composition of the Board:**

**Chairman:** C. Andries  
**Members:** M. Hatherly  
B. Schachenmann

## Summary of Facts and Submissions

I. On 9 March 1994 the International Searching Authority (ISA) dispatched an invitation to the Applicant to pay three additional search fees on the grounds that the international application contained four inventions, including the following:

- Invention II: Claims 46 - 57, 70 - 77:  
Exhaust gas purifying apparatus and method wherein the exhaust gases pass successively through a beta zeolite material comprising adsorbent zone, and a catalyst zone.
- Invention III: Claims 78 - 86, 87, 86:  
Exhaust gas purifying apparatus wherein the exhaust gases pass successively through an adsorbent zone comprising a zeolite having a relative bronsted acidity of less than 0,5, and a noxious components converting means.

Concerning inventions I, II and III, the ISA stated that:

- those features which were common to all claims were **a priori** obvious to the person skilled in the art,
- of the remaining features, i.e. the special technical features, none was common to all groups, nor the same or corresponding, and
- accordingly there was no technical relationship between the claimed inventions and so Rule 13.1 PCT was not fulfilled.

II. The Applicant replied to the invitation in due time by paying the three additional search fees on 11 April 1994. However one of these three fees was paid under protest, the letter of 13 April 1994 stating that:

- the exhaust gas purifying apparatus and related method of group II included the use of the beta zeolite in the adsorbent zone,
- group III presented an exhaust gas purifying apparatus with a general zeolite characterization, although the zeolite was restricted to a specific Bronsted acidity, and a general characterization of the catalyst zone as a means for converting noxious components, and
- accordingly, groups II and III, while containing patentably distinct features, did not lack unity of invention so as to be required to be grouped into separate claim groupings.

III. On 7 October 1994 the Review Panel of the EPO dispatched the result of a prior review of the justification for the invitation to pay the disputed one additional search fee. It found that the fee was not to be reimbursed and invited the Applicant to pay a protest fee for the examination of the protest (Rule 40.2(e) PCT).

IV. On 20 October 1994 the Applicant paid the protest fee without submitting further arguments.

V. One of the independent claims in group II (Claim 46) reads:

"An exhaust gas purifying apparatus for converting noxious components such as hydrocarbons and other pollutants from an engine exhaust gas stream into

innocuous products, the apparatus defining a flow path for the exhaust gases and comprising:

an adsorbent zone disposed in the flow path for temporarily adsorbing unburned hydrocarbons from the exhaust gas stream and comprising a Beta zeolite material; and

a catalyst zone disposed in the flow path downstream of the adsorbent zone and comprising a catalyst effective for the conversion of at least some of the pollutants and desorbed unburned hydrocarbons into innocuous substances."

The sole independent claim in group III (Claim 78) reads:

"An exhaust gas purifying apparatus for converting noxious components such as hydrocarbons and other pollutants from an engine exhaust gas stream into innocuous products, the apparatus defining a flow path for the exhaust gases and comprising:

an adsorbent disposed in the flow path for temporarily adsorbing unburned hydrocarbons from the exhaust gas stream and comprising a zeolite having a relative Bronsted acidity of less than 0.5; and

means for converting noxious components such as hydrocarbons and other pollutants from an engine exhaust gas stream into innocuous products downstream from the adsorbent."

### Reasons for the Decision

1. The protest is admissible. The Board is responsible under Article 154(3) EPC for deciding on the protest.
2. In these protest proceedings it is to be decided whether, on the basis of the reasons given by the ISA under Rule 40.1 PCT (see the above Section I) and the counter-reasons provided by the Applicant under Rule 40.2(c) PCT (see the above Section II), the invitation to pay the disputed additional search fee was justified.
3. The invitation dated 9 March 1994 lists the claims for each of four alleged inventions I to IV. The Applicant subsequently made slight changes in the numbering of the claims to remove duplications. Accordingly the present numbering of the claims does not exactly match the numbering in the invitation, however the slight differences are not relevant for the present decision.
4. *Considering the wording of the invitation per se*
  - 4.1 The invitation states that the features of the claims of groups I to III can be split into features known **a priori** and features which are special features. The invitation argues that none of the special features is common to all groups, nor are they the same or corresponding, thus there is no technical relationship between the claimed inventions and therefore the requirement of unity of invention is not fulfilled.
  - 4.2 It is clear that the finding that there is no special feature common to all three groups I to III, even if correct, would be in itself insufficient. For there to

be ~~three~~, separate, unlinked inventions I to III, it is necessary for there to be no special technical feature common to any ~~two~~ of the three groups I to III.

4.3 The invitation states that the features of groups I, II and III "which are **a priori** obvious to the person skilled in the art without necessitating the quotation of any prior art document" are "an exhaust gas purifying apparatus or method wherein the exhaust gases pass through an adsorbent".

The invitation continues that the "remaining technical features...being not obvious to the person skilled in the art...can be considered **a priori** as special features" and consist of:

- Group II: "a beta zeolite comprising adsorbent zone, followed by a catalyst zone."
- Group III: "a zeolite having a specific bronsted acidity comprising adsorbent zone, followed by noxious components converting means."

4.4 Even these interpretations of the special technical features of groups II and III can immediately be seen to have common subject-matter. Firstly, there is an adsorbent zone comprising a zeolite. Secondly, the catalyst zone of group II has much in common with the noxious components converting means of group III because a catalyst in an exhaust gas purifying apparatus converts noxious components. The invitation's conclusion that groups II and III have no special features in common is thus incorrect.

5. *Considering the claims*

5.1 The subject-matter in groups II and III is most broadly defined by the respective independent claims which are Claims 46 and 52 for group II and Claim 78 for group III. Claims 46 (apparatus) and 52 (method) have analogous features and steps so that it suffices to compare Claim 46 (group II) with Claim 78 (group III).

5.2 Claim 46 can be analysed as follows:

- 46a An exhaust gas purifying apparatus for converting noxious components such as hydrocarbons and other pollutants from an engine exhaust gas stream into innocuous products, the apparatus defining a flow path for the exhaust gases and comprising: an adsorbent disposed in the flow path.
- 46b The adsorbent is an adsorbent zone.
- 46c The adsorbent is for temporarily adsorbing unburned hydrocarbons from the exhaust gas stream.
- 46d The adsorbent comprises a zeolite material.
- 46e The zeolite is a Beta zeolite.
- 46f A catalyst zone is disposed in the flow path downstream of the adsorbent zone and comprises a catalyst effective for the conversion of at least some of the pollutants and desorbed unburned hydrocarbons into innocuous substances.



5.3 Claim 78 can be analysed as follows:

- 78a An exhaust gas purifying apparatus for converting noxious components such as hydrocarbons and other pollutants from an engine exhaust gas stream into innocuous products, the apparatus defining a flow path for the exhaust gases and comprising: an adsorbent disposed in the flow path.
- 78b The adsorbent is for temporarily adsorbing unburned hydrocarbons from the exhaust gas stream.
- 78c The adsorbent comprises a zeolite.
- 78d The zeolite is a zeolite having a relative Bronsted acidity of less than 0.5.
- 78e There are means for converting noxious components such as hydrocarbons and other pollutants from an engine exhaust gas stream into innocuous products downstream from the adsorbent.

5.4 Claims 46 and 78 can be compared using the above analyses as follows:

- Features 46a and 78a are identical and are apparently what the ISA regards to be known **a priori**.
- An absorbent zone (feature 46b) does not seem to differ from an adsorbent (last part of feature 78a).
- Features 46c and 78b are identical.

- Features 46d (zeolite material) and 78c (zeolite) appear to be identical.
  
- Wording 78e is a general wording which covers the wording of 46f (78e is the generic and 46f the specific). This can also be seen from Claim 83 which is appendant to Claim 78 and states that the means for converting the noxious components comprises a catalyst zone disposed in the flow path downstream of the adsorbent zone and comprising a catalyst effective for the conversion of at least some of the pollutants and desorbed unburned hydrocarbons into innocuous substances. Thus Claim 83 further defines the converting means of Claim 78 using wording identical to that of Claim 46. Feature 78e is therefore common to Claims 46 and 78.
  
- Features 46e and 78d differ.

5.5 Thus there are features common to Claims 46 and 78 which are not alleged in the invitation to be known **a priori**. The combination of common and different features of inventions II and III can solve a common technical problem. Thus there is no **a priori** lack of unity between groups II and III. No **a posteriori** objection was made.

6. Thus the invitation by the ISA to pay the disputed additional search fee concerning groups II and III was unjustified. Thus this additional search fee is to be reimbursed (Rule 40.2(c) PCT).

The protest concerned solely this additional search fee and so was entirely justified. Accordingly the protest fee is to be refunded (Rule 40.2(e) PCT).

- 7. The Board is not entitled to investigate of its own motion whether a unity of invention objection could have been raised for some other reason other than that given in the invitation, see Section 4 of decision W 3/93 (OJ EPO 1994, 931). Accordingly, the objection of lack of unity could be raised again for different reasons (e.g. **a posteriori**) in the event of subsequent proceedings under PCT Chapter II.

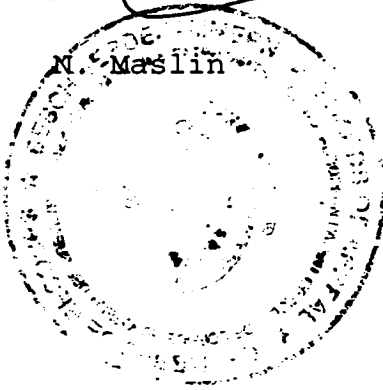
**Order**

**For these reasons it is decided that:**

- 1. The protest is entirely justified.
- 2. The one additional search fee paid under protest shall be reimbursed.
- 3. The protest fee shall be refunded.

The Registrar:

*N. Maslin*



The Chairman:

*C. Andries*

C. Andries

Beglaubigt/Certified  
 Certifiée conforme  
 München/Munich

Geschäftsstelle  
 Registry/Greffe  
 10. MAI 1995

*Maslin*  
*B.P.*