BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

Publication in the Official Journal ~~Yes~~ / No

File Number: T 679/89 - 3.4.2

Application No.: 85 730 099.0

Publication No.: 0 173 640

Title of invention: Method for treating exhaust gas

Classification: B01D 53/34

D E C I S I O N
of 16 July 1991

Applicant: Mitsubishi Jukogyo Kabushiki Kaisha

Headword:

EPC Article 54

Keyword: "Novelty - denied"

Headnote

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number : T 679/89 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 16 July 1991

Appellant : Mitsubishi Jukogyo Kabushiki Kaisha
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Tokyo (JP)

Representative : Meissner, Peter E., Dipl.-Ing. et al.
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Decision under appeal : **Decision of Examining Division 031 of the European Patent Office dated 28 March 1989 refusing European patent application No. 85 730 099.0 pursuant to Article 97(1) EPC.**

Composition of the Board :

Chairman : E. Turrini
Members : C. Black
C.V. Payraudeau

Summary of Facts and Submissions

I. European patent application No. 85 730 099.0 (publication No. 0 173 640) was refused by decision of the Examining Division.

II. The decision was based on claim 1 received on 6 September 1988 which reads as follows:

"A method for removing acidic gas components from an exhaust gas whose temperature is above its dew point and which contains at least one of hydrochloric acid, sulfur oxides and hydrogen fluoride using an alkaline neutralizing agent powder, being characterized by the steps of collecting said alkaline neutralizing agent powder already used, cooling said alkaline neutralizing agent powder below the dew point of said exhaust gas, and blowing said cooled powder again into said exhaust gas in order to remove acidic gas component from said exhaust gas."

III. The reason for the refusal was that the subject-matter of claim 1 was not novel having regard to the disclosure in DE-A-3 332 928.

IV. An appeal was lodged against this decision. The Appellant (applicant) requested that the decision be cancelled and a patent granted, presumably on the basis of claim 1 as set out in paragraph II above.

V. The gist of the Appellant's argument is as follows:

When a powdered alkaline neutralizing agent is used to remove acidic components from an exhaust gas, a layer of neutralization product forms on the surface of the alkaline powder particles and effectively prevents the

remaining alkali from taking part in neutralization. According to the application in suit, by cooling the alkaline neutralization agent below the dew point and reintroducing it into the exhaust gas to be treated, water condenses on the alkaline particles and provides a medium for improving the reactivity between the alkali and the acidic gas components in the exhaust gas. In contrast, in the method described in DE-A-3 332 928, the used alkaline reagent is cooled and reintroduced into the exhaust gas merely to reduce its temperature.

Reasons for the Decision

1. The appeal is admissible.

2. The Board sees no reason to dispute the finding of the Examining Division that, taking account of the amendments introduced into claim 1, the application does not contravene Article 123(2) EPC.

3. The Board also agrees with the Examining Division that DE-A-3 332928 discloses all of the features of claim 1, the subject-matter of which is therefore not novel. It is true that DE-A-3 332 928 does not state in words that the recycled alkaline powder is cooled to a temperature below the dew point of the exhaust gas prior to blowing it into the exhaust gas as is required by claim 1. However it is cooled to a temperature such that when it is blown into the exhaust gas the temperature of the latter is reduced to its dew point or thereabouts, so that the alkaline powder must necessarily have been cooled to a temperature below the dew point of the exhaust gas.

4. The Appellant's argument that the claimed method does not aim to cool the exhaust gas, as in DE-A-3 332 928, cannot

be followed. According to the description of the application in suit, the lower the temperature of the cooled neutralizing agent becomes, the higher the removal of acid gas becomes (Examples 1 and 2). Also page 7, lines 23, 24 refers to the ash being cooled to the lowest temperature possible. There is no suggestion of any controlled cooling which is any different from what is disclosed in DE-A-3 332 928 and which is such that water condenses on the neutralizing particles but the exhaust gas is not significantly cooled.

5. The Appellant also argues that the main point of the invention is that the spontaneous condensation of water on the surface of the alkaline reagent provides necessary water to be a medium for improving the reactivity between the alkali and the acidic gas compound. This cannot be seen as introducing novelty into the claimed method. Since the method steps of claim 1 are the same as those disclosed in DE-A-3 332 928, the effect will be the same. In any case DE-A-3 332 928 discloses that cooled additive ash particles function as nuclei for the condensation of water which is necessary for the neutralization reaction (page 8, lines 16 to 24), and this is not in substance different from what the Appellant is saying.

6. Since the grounds for the appeal contain no proposals for amendment and only seek to emphasise the arguments already put forward during the examination procedure, the Board is able to come to a decision without first giving its opinion in a communication.

Order

For these reasons, it is decided that:

1. The appeal is dismissed.

The Registrar: **The Chairman:**

P. Martorana E. Turrini

BB
CL