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**Datasheet for the decision
of 31 January 2017**

Case Number: T 2160/15 - 3.3.05
Application Number: 08766899.2
Publication Number: 2155364
IPC: B01D53/62, B01D47/16, B01D53/78
Language of the proceedings: EN

Title of invention:

DEVICE AND PROCESS FOR REMOVAL OF CARBON DIOXIDE FROM
COMBUSTION GASES.

Applicant:

CO₂ Purification AS

Headword:

Carbon dioxide removal/CO₂ Purification AS

Relevant legal provisions:

EPC Art. 123(2)
EPC R. 115(2)
RPBA Art. 15(3)

Keyword:

Amendments - extension beyond the content of the application
as filed (yes) - allowable (no)

Decisions cited:

G 0002/10

Catchword:



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Case Number: T 2160/15 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 31 January 2017

Appellant: CO2 Purification AS
(Applicant) Heggstadmoen 13
7493 Trondheim (NO)

Representative: Oslo Patentkontor AS
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted on 22 May 2015 refusing European patent application No. 08766899.2 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman H. Engl
Members: G. Glod
O. Loizou

Summary of Facts and Submissions

- I. The appeal lies from the decision of the examining division to refuse European patent application EP 08 766 899 because it did not fulfil the requirements of Articles 123(2) and 84 EPC.
- II. With the statement of grounds of appeal of 22 July 2015, the appellant submitted a new set of claims as a sole request.

The only independent claim 1 reads as follows:

"1. A device for removing the carbon dioxide gas fraction from post combustion gases containing together or separately, dust, soot, carbon oxide and nitrogen oxides, wherein the combustion gases are contacted by a carbonate containing scrubbing water liquid, and where the gases and the scrubbing liquid are intimately mixed using rotating mechanical devices in a vertically standing cylinder (27), wherein the vertically standing cylinder has an inlet for the gas at its bottom and an outlet for the purified gas at its top, and wherein the vertically standing cylinder (27) has an inlet for the washing liquid at its top and an outlet for the washing liquid at its bottom

characterized in that *the vertically standing cylinder (27) internally does not include stream baffles for the washing liquid, and where the cylinder (27) internally also contains one or more rotating wire mesh discs (28) mounted on a rigid rotating axel (4) located in the center of the vertically standing cylinder (27) causing the water solution to rotate freely allowing an intimate mixing of the scrubbing water liquid and the gas by creating a foam allowing for transfer of the CO₂ gas into the scrubbing carbonate water liquid, where the cylinder also contains a number of horizontal gas*

and solution impermeable smooth discs (29) having a center hole, thus containing a portion of the rotating washing water liquid and where said rotating discs (29) at the cylinder's (27) center creates a foam on the discs (29) before the washing water liquid passes through the center hole downwards to the next disc (29), wherein said rotating wire mesh discs (28) have a light opening between 1 and 10 mm², and wherein the rotating wire mesh discs (28) have a diameter between 10% and 90% of the internal diameter of the vertically standing cylinder (27), and wherein the rotating discs (29) comprise an impenetrable disc section being between 40% and 95% of the diameter of the disc (29), while outside of this being equipped with a netting part."

- III. In a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA) attached to the summons to oral proceedings dated 6 October 2016, the board raised the question of the admissibility of the appeal as well as objections under Article 123(2) EPC. No response to the board's objections was received.
- IV. By a letter dated 17 January 2017, the appellant announced that it would neither attend nor be represented at the oral proceedings.
- V. Oral proceedings took place on 31 January 2017 in the absence of the duly summoned appellant. At the end of the oral proceedings, after deliberation, the chairman announced the decision of the board to dismiss the appeal.
- VI. The appellant essentially argued that the new set of claims submitted with the statement of grounds of

appeal addressed the objections raised by the examining division.

- VII. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of claims 1 to 9, as filed with its statement of grounds of appeal of 22 July 2015, or alternatively that the case be remitted to the examining division for further prosecution.

Reasons for the Decision

1. Absence from oral proceedings

In accordance with Rule 115(2) EPC and Article 15(3) RPBA, the board is not obliged to delay its decision by reason only of the absence at the oral proceedings of a party duly summoned.

In the present case, the appellant had already been informed by a communication pursuant to Article 15(1) RPBA that the appeal was not likely to succeed. Therefore, the appellant cannot be taken by surprise by the present decision.

In addition, the appellant had the opportunity to be heard, which however it waived by deciding not to be present at the oral proceedings.

2. Admissibility of the appeal (Article 108 EPC in conjunction with Rule 99(2) EPC)

Although the board has expressed doubts whether the present appeal is admissible for the reasons indicated in the communication pursuant to Article 15(1) RPBA, it does not have to decide on admissibility, since the

appeal is to be dismissed for the reasons set out below.

3. Article 123(2) EPC

Any amendment can only be made within the limits of what a skilled person would derive directly and unambiguously, using common general knowledge, and seen objectively and relative to the date of filing, from the whole of the documents as filed (G 2/10, Reasons 4.3). In that respect, it should also be noted that the description must not be considered to be a reservoir from which features pertaining to separate embodiments can be combined to create a new embodiment (Case Law of the Boards of Appeal of the EPO, 8th edition 2016, II.E.1.4.1).

As already indicated in the communication pursuant to Article 15(1) RPBA, the board considers that the following amendments are not directly and unambiguously derivable from the application as filed.

3.1 In claim 1:

3.1.1 The device disclosed in the application as filed contains rotating discs in the reactor (e.g. page 1, line 29; page 3, line 3; page 7, line 9, and claim 1). The board does not see a basis for the more general expression "rotating mechanical devices", nor did the appellant provide such a basis in the originally filed documents.

3.1.2 The expression "rotating wire mesh discs" is probably based on page 9, line 11 ("rotating wire netting discs"). However, it is not apparent where the combination of features from the following claim

passage originates:

"and where the cylinder (27) internally also contains one or more rotating wire mesh discs (28) mounted on a rigid rotating axel (4) located in the center of the vertically standing cylinder (27) causing the water solution to rotate freely allowing an intimate mixing of the scrubbing water liquid and the gas by creating a foam allowing for transfer of the CO₂ gas into the scrubbing carbonate water liquid, where the cylinder also contains a number of horizontal gas and solution impermeable smooth discs (29) having a center hole, thus containing a portion of the rotating washing water liquid and where said rotating discs (29) at the cylinder's (27) center creates a foam on the discs (29) before the washing water liquid passes through the center hole downwards to the next disc (29)".

One possible basis could be the description of figure 3 (page 7, lines 7 to 25), but no mention is made of a rigid axle. According to that description the rotating discs (28) are localised directly above a disc (29), which the board judges essential for obtaining the foam. In addition, it is not disclosed that all the discs (29) are solution impermeable smooth. It is merely indicated on page 8, line 6, that the device "may have a disc being smooth".

Therefore the board cannot see a basis for the passage in question, nor did the appellant provide any.

- 3.1.3 In claim 3 as filed, in line with description page 8, lines 3 and 4, "light openings between 1 and 10 mm²" are disclosed. In contrast, current claim 1 refers only to **a** light opening which should be between 1 and 10 mm².

- 3.2 A basis for claim 2 could not be found. The application as filed does not contain an explicit or implicit disclosure of the claim feature according to which "the wire mesh discs (28) have a diameter being 10% larger than the central hole in the plates (29)".
- 3.3 The combination of features present in claim 3 could not be found. More specifically, "a rotating wire mesh disc having a gas impermeable smooth plate on its top being 40% to 95% of the diameter of the wire mesh disc" is not disclosed in the application as filed.
- 3.4 The subject-matter of claim 5 is not directly and unambiguously derivable from the originally filed application documents. Example 6 discloses the specific value of 180 grams/litre, but does not mention that the scrubbing solution should generally contain less than 180 grams/litre of carbonates.
- 3.5 The range in claim 6 ("between 10% and 25%") is not disclosed anywhere in the application documents as originally filed.
- 3.6 The expression "chlorine", appearing in claim 8, cannot be found in the application as filed. In claim 10 as originally filed only "chlorite" was mentioned.
- 3.7 To summarise, the requirements of Article 123(2) EPC are not met.
4. In view of the above, the appellant's main request is rejected.

The auxiliary request for the case to be remitted to the examining division for further prosecution was made

on condition that the main request was found to be of merit. Since this is not the case, the auxiliary request need not be considered.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



C. Vodz

H. Engl

Decision electronically authenticated