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**Datasheet for the decision  
of 16 December 2014**

**Case Number:** T 1316/10 - 3.3.05

**Application Number:** 03028873.2

**Publication Number:** 1431262

**IPC:** C05F17/02, C05F17/00, C02F11/02

**Language of the proceedings:** EN

**Title of invention:**  
A method and a plant for the aerobic treatment of materials  
having a highly fermentable organic component

**Patent Proprietor:**  
ENTSORGAFIN SpA

**Opponent:**  
A2A Ambiente S.P.A.

**Headword:**  
Entsorgafin/Aerobic treatment

**Relevant legal provisions:**  
EPC Art. 83, 56

**Keyword:**  
Sufficiency of disclosure -  
fresh ground for opposition (not admitted)  
Inventive step - main request (yes)

**Decisions cited:**  
G 0010/91

**Catchword:**



**Beschwerdekammern  
Boards of Appeal  
Chambres de recours**

European Patent Office  
D-80298 MUNICH  
GERMANY  
Tel. +49 (0) 89 2399-0  
Fax +49 (0) 89 2399-4465

Case Number: T 1316/10 - 3.3.05

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.05**  
**of 16 December 2014**

**Appellant:** A2A Ambiente S.P.A.  
(Opponent) Via Lamarmora 230  
25124 Brescia (BS) (IT)

**Representative:** Bottero, Claudio  
Porta, Ceccacci & Associati S.p.A.  
Via Trebbia 20  
20135 Milano (IT)

**Respondent:** ENTSORGAFIN SpA  
(Patent Proprietor) Strada Prov. per Castelnuovo,  
Scrvia 7/9,  
15057 Tortona (AL) (IT)

**Representative:** DREISS Patentanwälte PartG mbB  
Patentanwälte  
Friedrichstrasse 6  
70174 Stuttgart (DE)

**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
14 April 2010 concerning maintenance of the  
European Patent No. 1431262 in amended form.**

**Composition of the Board:**

**Chairman** G. Raths  
**Members:** A. Haderlein  
C. Vallet

## Summary of Facts and Submissions

I. The present appeal of the opponent (appellant) lies from the opposition division's interlocutory decision finding that European patent No. 1 431 262 in amended form and the invention to which it relates meet the requirements of the EPC.

The patent in suit concerns a method and a plant for the aerobic treatment of materials having a highly fermentable organic component.

II. Notice of opposition was filed on the basis of Article 100(a) in conjunction with Articles 52(1) and 54(1) EPC and of Article 100(a) in conjunction with Articles 52(1) and 56 EPC. It was based *inter alia* on the following documents:

A3d: Technical description of the waste treatment plant of the town of Cavaglià (Italy) published by the A.S.A.R.B. S.p.A. (Waste Disposal Company of the Biella Area)

A3dt: English translation of A3d

A6: EP-A-0040147

A8: EP-A-0065495

III. The opposition division held that the patent as amended according to the auxiliary request filed during the oral proceedings before the opposition division met the requirements of the EPC.

IV. The opponent (now appellant) filed an appeal against this decision.

- V. The parties were summoned to oral proceedings, which took place on 16 December 2014.
- VI. The patentee (respondent) filed four auxiliary requests.
- VII. The appellant informed the board that it would not attend the oral proceedings.
- VIII. Independent claims 1 and 14 of the respondent's main claim request, which corresponds to the request the opposition division found to comply with the requirements of the EPC, read as follows:

"1. A method for the aerobic treatment of materials having a highly fermentescible organic component in a plant comprising an enclosed building (19) defining an inner space for containing at least one pile (20) of wastes and provided with a ventilated paving (23) on which the wastes to be treated during a phase (3) of fermentation/bio-oxidation performed through forced air are laid in and through which passing air flows are provided, and a plenum (27) defined below said ventilated paving (23) to equalise the pressure formed underneath, said ventilated paving (23) being subdivided in a number of independent sections (A...N), each of said sections being equipped with means (11) for generating a corresponding independent air flow, said method comprising the steps of:

- introducing at least one pile (20) of wastes to be treated into said enclosed building (19) and making said wastes laying on said ventilated paving (23);
- subjecting said at least one pile (20) of wastes to said phase (3) of fermentation/bio-oxidation through forced air by means of separate and independent air flows passing through said sections (A...N) of said

ventilated paving (23);

said method being characterized in that said air flows alternates in two opposite directions by blowing according to a down-top direction and aspirating according to a top-down direction;

said phase (3) of fermentation/bio-oxidation being carried out by making flow a series of air flows (9,10) through said at least one waste pile (20), said air flows being directed along substantially parallel directions, some of said flows in one direction (9) and the other ones in the opposite direction (10); some of said air flows (9,10) being top-down directed and some others being bottom-up directed with respect to said at least one pile (20)."

"14. A plant for the aerobic treatment of materials having a highly fermentescible organic component by means of a phase (3) of fermentation/bio-oxidation performed through forced air, said plant comprising an enclosed building (19) defining an inner space for containing at least one pile (20) of wastes and provided with a ventilated paving (23) on which the wastes to be treated during said phase (3) of fermentation/bio-oxidation are laid in and through which passing air flows are provided, and a plenum (27) defined below said ventilated paving (23) to equalise the pressure formed underneath, said ventilated paving (23) being subdivided in a number of independent sections (A...N) and each of said sections being equipped with means (11) for generating a corresponding independent air flow, whereby said at least one pile (20) of wastes is subjected to said phase (3) of fermentation/bio-oxidation through forced air by means of separate and independent air flows passing through said sections (A...N) of said ventilated paving (23);  
said plant being characterized in that said air

flows alternate in two opposite directions by blowing according to a down-top direction and aspirating according to a top-down direction;

said means (11) being arranged for carrying out said phase (3) of fermentation/bio-oxidation by making flow a series of air flows (9,10) through said at least one waste pile (20), said air flows being directed along substantially parallel directions, some of said flows in one direction (9) and the other ones in the opposite direction (10); some of said air flows (9,10) being top-down directed and some others being bottom-up directed with respect to said at least one pile (20);

wherein said means for generating a corresponding independent air flow comprise at least one fan (11), a pair of by-passes (31,33) and a pair of three-ways valves (55,57) so that the air flow generated by said at least one fan (11) can be directed in two opposite directions (9,10) without interruption of said fans (11) operation."

IX. Claims 2 to 13 and 15 to 21 concern particular embodiments of the method of claim 1 and the plant of claim 14, respectively.

X. The appellant's arguments are summarised as follows:

When running a plant according to the method of claim 1, no improvement was observed. The experiments carried out by the appellant showed that the subject-matter of the independent claims did not solve the problems posed in the patent in suit. Therefore, the patent and the invention to which it related did not meet the requirements of Article 83 EPC.

The subject-matter of claims 1 and 14 of the main request did not involve an inventive step in view of a

combination of documents A3dt and A6 or A3dt and A8.

A3dt did not disclose that the air flows were alternating in two opposite directions by blowing according to a down-top direction and aspirating according to a top-down direction.

A6 related to an apparatus and a method for treating organic waste in which a blower performed an alternating circulation of air. A6 taught to alternate the air flow in order to improve uniformity of fermentation and a better control of temperature. A8 taught that a better control of the amount of oxygen was achieved by reversing the circulation of the air in the fermentation zone. In view of the problem stated in the patent in suit, the skilled person, starting from A3dt and considering the teachings of A6 and A8, would have arrived at the subject-matter of claims 1 and 14 of the main request without inventive skill.

XI. The respondent's arguments are summarised as follows:

Lack of sufficiency of disclosure was not a ground for opposition raised in the proceedings before the opposition division. This ground for opposition was therefore a fresh ground, which could be examined during appeal proceedings only with the consent of the patent proprietor as established by G 10/91. Such consent had not been given. This ground for opposition was therefore inadmissible.

The wording of the characterising portion of the independent claims required that at least two of the series of air flows were in one direction, i.e. blowing, and at least two of them were in the other one, i.e. aspirating, all working at the same time. It



was not required that the air flow alternated within one section over time, i.e. that there were alternating blowing and aspirating phases within one single section. This was optional.

The effect cited in paragraph [0040] of the patent in suit was due to the bags-breaker and sieves referred to in particular in claims 4 to 6.

In A6 and A8 there was only one fan which was not capable of working in two directions at the same time. Combining the small unit of A8 with each and every section of A3dt did not mean that the fans would work in different directions at one given time. Also, there was no hint in either A6 or A8 to solve the problem stated in the patent in suit. Thus, the method according to claim 1 involved an inventive step. Similar reasoning applied to the plant according to claim 14. Moreover, no document cited by the appellant showed a fan having a pair of by-passes.

## XII. Requests

The appellant requested that the patent be revoked.

The respondent requested that the appeal be dismissed and, in the alternative, that the patent be maintained on the basis of one of the four auxiliary requests filed under cover of its letter dated 11 November 2014.

## **Reasons for the Decision**

### 1. Sufficiency of disclosure

- 1.1 The ground of lack of sufficiency of disclosure (Article 100(b) EPC) was neither raised in the notice

of opposition nor introduced during the proceedings before the opposition division. This ground for opposition was raised for the first time in the statement setting out the grounds of appeal. The objection of lack of sufficiency of disclosure therefore amounts to a fresh ground for opposition which may be considered in appeal proceedings only with the approval of the patentee (G 10/91, reasons 18).

1.2 Since the respondent did not give its approval to considering this ground of opposition, the board is not empowered to examine compliance with the requirement of sufficiency of disclosure. This objection is therefore rejected as inadmissible.

1.3 The board notes that the arguments provided by the appellant in support of the alleged lack of sufficient disclosure rather relate to the requirement of inventive step. The board deals with these arguments below at 2.5.1.

2. Main request - inventive step

2.1 The invention concerns a method and a plant for the aerobic treatment of materials having a highly fermentable organic component.

2.2 The closest prior art is A3d/A3dt. It is undisputed that A3dt discloses a method according to the preamble of claim 1 (see the Figure of A3d). A3dt discloses in particular that the piles of waste are subjected to the phase of fermentation/bio-oxidation through forced air by means of separate and independent air flows passing through the sections of the ventilated paving (see page 31 of A3dt, first paragraph).

- 2.3 According to the patent in suit, the problem was to provide a method (and a plant) allowing a homogeneous reaction of the organic material existing in the waste pile (paragraph [0038]), having "low consumption and economical management" (paragraph [0039]), allowing "better elimination of the unwanted materials during the aerobic treatment phase, so to permit to obtain in said aerobic treatment phase final products having high levels of homogeneity" (paragraph [0040]), and "allowing to maintain a constant conformity of the product obtained... independently from the seasonal factors" (paragraph [0041]).
- 2.4 As a solution to this problem, the patent in suit according to claim 1 of the main request proposes a method for the aerobic treatment of materials having a highly fermentescible organic compound, that method being characterised in particular in that the air flows alternate in two opposite directions by blowing according to a down-top direction and aspirating according to a top-down direction; some of said flows being in one direction and the other ones in the opposite direction; some of said air flows being top-down directed and some others being bottom-up directed with respect to said at least one pile.
- 2.5 As to the success of the proposed solution, the board is not convinced that the problems mentioned above are credibly solved.
- 2.5.1 In view of A6 and A8, the board considers it established that alternating the air flows between aspirating and blowing within one section over time, i.e. alternating aspirating phases and blowing phases, a more speedy and more homogeneous fermentation is achieved (cf. A6, page 30, lines 6 to 22; A8, page 3,

lines 2 to 6).

As submitted by the respondent, however, claim 1 does not require that aspirating phases alternate with blowing phases in one section.

In this context, the board agrees with the respondent that claim 1 requires that at least two of the series of air flows are in one direction, i.e. blowing, and at least two of them are in the opposite direction, i.e. aspirating, all at the same time.

In view of the fact that claim 1 does not require a timewise alternation of aspirating and blowing phases within one section, which would be necessary in order to have more homogeneous fermentation as evidenced by A6 and A8, the board concludes that it is not credible that the problem of allowing a homogeneous reaction is successfully solved.

These findings are confirmed by the submissions of the appellant who, when carrying out comparative tests, did not observe any improvement in the method according to claim 1 over the one disclosed in A3dt.

2.5.2 It is also not credible that the problem of achieving "low consumption and economical management" is successfully solved since this will depend on a number of factors such as the composition of the material to be fermented, those factors not being specified in claim 1.

2.5.3 The problem of "better elimination of the unwanted materials during the aerobic treatment phase, so to permit to obtain in said aerobic treatment phase final products having high levels of homogeneity" as stated

in paragraph [0040] is also not credibly solved.

This problem is solved by the bag-breaker devices and sieves recited in claims 4 to 6, as submitted by the respondent at the oral proceedings before the board. As these features are absent from claim 1, it is not credible that the above problem is solved over the whole scope claimed.

2.5.4 There is no evidence on file that the problem of "allowing to maintain a constant conformity of the product obtained... independently from the seasonal factors" as mentioned in paragraph [0041] of the patent in suit is successfully solved by the method of claim 1.

2.5.5 Hence, the problem to be solved needs to be reformulated. In the light of A3dt, the problem was to provide a further method for the aerobic treatment of materials having a highly fermentescible organic component. This problem is effectively solved.

2.6 It needs to be assessed whether it was obvious to arrive at the proposed solution in view of the cited prior art.

2.6.1 A6 discloses three sections (see Fig. 4), each of them being equipped with a device (see Fig. 10) capable of either blowing air into the section or aspirating air from the section (cf. page 33, line 3, to page 34, line 27). A6 also discloses an arrangement in which air aspirated through one section is blown into another section (see page 26, lines 7 to 12). A6 does not, however, disclose a series of air flows where at least two are directed in one direction and, at the same time, at least two other flows are directed in the

opposite direction.

- 2.6.2 A8 discloses (see in particular Fig. 2) a method whereby air is either blown into or aspirated through a pile of compost via four parallel tubes (12) connected to a device (14 to 20) capable of either aspirating or blowing air. A8 does not disclose a series of air flows where at least two are directed in one direction and, at the same time, at least two other flows are directed in the opposite direction.
- 2.6.3 Both A6 and A8 teach a system of alternating blowing phases and aspirating phases which is beneficial in that it leads to more uniform fermentation and to an accelerated process of fermenting (see A6, page 30, lines 6 to 22; A8, page 2, line 32, to page 3, line 6).
- 2.6.4 In view of this, the skilled person would certainly have applied the teaching of either A6 or A8 and would have arrived at a method whereby blowing phases alternate with aspirating phases within each section. This, however, does not necessarily imply that at a given point in time at least two flows are top-down directed and at least two other flows are bottom-up directed. The skilled person would thus not have arrived at the subject-matter of claim 1 even when combining the teachings of A3dt with A6 or A8.
- 2.6.5 The method of claim 1 was therefore not obvious in view of the cited prior art.

The subject-matter of claim 1 meets the requirements of inventive step (Article 56 EPC).

- 2.7 The same reasoning applies *mutatis mutandis* to the subject-matter of independent claim 14 directed to a

plant. Moreover, the board notes that claim 14 requires the presence of two by-passes. Neither A6 nor A8 disclose two by-passes.

The plant according to claim 14 was therefore not obvious in view of the cited prior art.

The requirements of Article 56 EPC are met.

3. As the respondent's main request is allowable, there is no need to deal with the auxiliary requests.

## Order

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

The appeal is dismissed.

The Registrar:

The Chairman:



C. Vodz

G. Rath

Decision electronically authenticated