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File Number: T 75/91 - 3.2.3
Application No.: 86 902 679.9
Publication No.: WO 86/06007
Title of invention: Industrial exhaust ventilation system

Classification: B05C 3/02, B08B 15/02

D E C I S I O N
of 11 January 1993

Applicant: WJS World Limited

Headword:

EPC Article 56

Keyword: "Inventive step (yes, after limitation)"



Case Number : T 75/91 - 3.2.3

D E C I S I O N
of the Technical Board of Appeal 3.2.3
of 11 January 1993

Appellant : WJS World Limited
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Decision under appeal : Decision of the Examining Division 2.3.09.085 of
the European Patent Office dated 6 August 1990
refusing European patent application
No. 86 902 679.9 pursuant to Article 97(1) EPC.

Composition of the Board :

Chairman : C.T. Wilson
Members : F. Brösamle
L.C. Mancini

Summary of Facts and Submissions

I. International application PCT/US 86/00715 published on 23 October 1986 under International publication number WO 86/06007 now European patent application No. 86 902 679.9, was refused by a decision of the Examining Division dated 6 August 1990. That decision was based on the following documents:

(D1) DE-A-2 608 550, and

(D2) US-A-3 335 839

for lack of inventive step.

II. A notice of appeal against this decision was filed on 4 October 1990, whereby the appeal fee was paid on 5 October 1990. The Statement of Grounds of Appeal was filed on 7 December 1990 together with three sets of claims (main, first and secondary requests).

The Appellant also requested oral proceedings should none of these requests be allowed. He also requests the reimbursement of the appeal fee under Rule 67 EPC.

III. Following a communication of the Board pursuant to Article 110(2) EPC dated 6 May 1992, the Appellant filed new documents and requested that the impugned decision be set aside and that a patent be granted on the basis of the following documents:

Claims 1 to 9 filed with letter of 28.10.92, received on 31.10.92;

Description pages 1 to 4 and 7 to 21 as published;
pages 5 and 6c according to telecopy of 7.3.90;

pages 6, 6a and 22 filed with letter of
28.10.92, received on 31.10.92;

Drawings sheets "1/6" to "6/6" as published, whereby in
Fig. 5 "120b" is amended into "128b".

IV. The independent claims of the present set of claims read
as follows, whereby the obvious error in Claim 1
(repetition of the words "and for positioning said
workload over said structure (5)" is deleted):

"1. An industrial ventilation system comprising:
a tank structure (5) for receiving processing
solutions from which industrial exhaust gases emanate;
a cover assembly (27) comprising a cover (181) and
means (187) for moving said cover from an open position to
a closed position;
a first exhaust system (33) for providing an air
passageway for the exhaust gases from said structure;
an exhaust collector (39) communicating with said air
passageway for collecting said exhaust gases;
a workload enclosure (21) for conveying a workload to
and away from said structure (5) and for positioning said
workload over said structure (5); and
a hoist (8) for carrying said workload enclosure to
and away from said structure,
said workload enclosure (21) being movable directly
between said structure (5) and any other structure
containing another processing solution, said workload
enclosure (21) following the load during the transport
thereof between said structure (5) and said other
structure, characterised in that said load during its
transport is never exposed to the atmosphere of processing
solutions contained in any tank structure located between
said structure (5) and said other structure; and in that

said cover assembly (27) comprises an outer cover frame (63) for supporting said workload enclosure (21) and a reciprocating cover moving independently of said workload enclosure (21), said cover (181) sealingly enclosing the entire tank structure surface when said cover (181) is in said closed position so as to contain said exhaust gases when said workload enclosure (21) is disengaged from said cover assembly (27) and said workload enclosure (21) forming a sealed fume containment region with said cover assembly (27) when said cover (181) is in said open position, said cover assembly (27) thereby providing access to the solutions of said structure (5) when said cover (181) is in the open position and allowing controlled exhaustion of said exhaust gases by means of said first exhaust system (33),

said ventilation further comprising a second exhaust system for exhausting said exhaust gases from said workload enclosure when said workload enclosure forms said fume containment region, said second exhaust system being attached to said workload enclosure and communicating with the interior portions thereof."

and

"9. The use of a system as defined in Claim 1, in a chemical process generating environmentally harmful fumes and gases."

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is admissible.

2. Amendments (Article 123(2) EPC)

2.1 Claim 1 is based on originally filed Claims 1, 2 and 4 as well as on originally filed Figures 1, 2, 4 and 6 to 8.

2.2 Claims 2 to 8 cover features derivable from originally filed Claims 1, 2, 8, 4 and 5 and also from originally filed Figures 1, 2, 3, 8, 13 and 14.

2.3 Claim 9 as a use claim can be derived from originally filed Claims 4 and 5 and from originally filed page 1, paragraph 1.

2.4 Summarising, the present set of claims is not open to an objection under Article 123(2) EPC.

3. Novelty (Article 54 EPC)

Novelty was not disputed by the Examining Division and is recognised by the Board so that this issue needs no detailed argument. In (D1) for example only one exhaust system "11, 9, 21" is realised. Further, the cover is not movable independently of the conveying system so that as a consequence of these features gases from neighbouring tanks "2a, 2b, 2c" can mix. (D2) does not disclose a movable workload enclosure but a workload enclosure that covers all the tanks so that fumes emanating from neighbouring tanks can react. Moreover, a two-fold exhaust system is not present in the system according to (D2).

4. Inventive step (Article 56 EPC)

4.1 The nearest prior art document is (D1) from which document the features of the precharacterising clause of Claim 1 are known, Rule 29(1)(a) EPC.

- 4.2 In this patent application, there is described a cover mechanism enclosing the processing tanks of an industrial system. This mechanism is a reciprocating cover and is formed by a layer of rubber, displaced between processing tanks, and also co-operating with a workload enclosure. Therefore, as the workload enclosure moves from one tank to the other, the cover encompassing the processing tanks and the workload enclosure moves in concert with the workload enclosure and seals the processing tanks. However, in this mechanism, the fumes of one processing tank may react with the fumes of an adjacent processing tank when the workload enclosure is moving from one tank to the other. Furthermore, the workload enclosure necessarily moves in a linear sequence. The workload may also be subject to the fumes of each of the intermediate processing tanks, when the workload enclosure transfers the workload from one processing tank to another tank not adjacent thereto. Furthermore, the cover provided in this mechanism is fragile, prone to rupture, difficult to replace and to maintain.
- 4.3 Starting from (D1) as the nearest prior art the problem of the invention has to be seen in controlling and capturing emissions generated during the chemical processing of metals, or other multi-step chemical processes where mobility of the workpiece is required.
- 4.4 This problem is solved with the features set out in Claim 1, namely by the provision of two separate exhaust systems that interact in a manner that provides total control over the generated fumes, whereby the second system consists of a travelling exhaust workload enclosure that is mounted and travels with the hoist mechanism.
- 4.5 The industrial ventilation system defined in Claim 1 achieves that the load during its transport is never

exposed to the atmosphere of processing solutions contained in any tank structure located between neighbouring tanks, whereby any emissions generated during the chemical processing are controlled and captured and the processing solution and the workload are readily accessible as well as great mobility of the load and any sequence of transportation of the load from one tank to another tank including the seal integrity of each tank at each stage are maintained.

- 4.6 It has now to be assessed whether or not the solution to the objective problem of the invention is obvious within the meaning of Article 56 EPC.
- 4.6.1 Document (D1) teaches clearly away from the ventilation system defined in Claim 1, see paragraphs 3, 4.2 and 4.3 so that a skilled person would not be led to the claimed ventilation system.
- 4.6.2 The other document to be considered in this context is (D2). As already set out above under paragraph 3, (D2) does not disclose a movable workload enclosure but a workload enclosure that covers all the tanks. As a consequence thereof fumes emanating from neighbouring tanks can react. (D2) teaches therefore also away from Claim 1, since in addition no two-fold exhaust system is realised in (D2), though harmful gases and fumes cannot escape to the atmosphere.
- 4.6.3 In (D2) the performance of system maintenance by the end-user is problematic since the workload enclosure is of a more stationary type with limitations to the size of the tanks, the number of tanks and to the size and weight of the parts to be conceivable processed.

The known covers "238" of (D2) are pivotable and do not fall under the wording of Claim 1, namely "a reciprocating cover", so that this characterising feature of Claim 1 is also not directly derivable from (D2), since the linked advantages of reduced ceiling height and reduced volumes of gases and fumes to be captured and controlled by the ventilation system are not achieved in the known construction.

4.6.4 Following the principles laid down in the decision T 2/83 published in OJ EPO, 1984, 265 it is the Board's firm opinion that a skilled person confronted with the objective problem of the invention would not consider a combination of documents (D1) and (D2) though some characterising features of Claim 1 in principle are known from these documents.

4.6.5 It is moreover not supported by the facts that a skilled person when combining (D1) and (D2) would readily dispense, for instance, with the pivotable covers of (D2) or the cover "7" of (D1), since the cover "7" is the essential feature of Claim 1 of (D1) and when omitted would draw into question the teaching of (D1) completely. Such an approach to the assessment of inventive step is not free from inadmissible hindsight and has therefore not to be followed by the Board.

4.6.6 On page 13, last complete paragraph of the Appellant's Statement of Grounds of Appeal dated 4 December 1990, namely

"In the present case, simplification and efficiency have been accompanied with an improvement of the workload enclosure and of the cover of the tank structures. The workload enclosure is now completely independent from the closing and opening of the tank structures and defines a

fume seal containment region. Moreover, the tank structures are provided with a reciprocating cover that allows more ceiling room and permits the processing of large workpieces."

is a convincing summary of the invention defined in Claim 1 so that the differences to the prior art in the form of (D1) and (D2) either singly or in combination are clearly visible.

- 4.6.7 The Board is therefore convinced that Claim 1 defines a non-obvious ventilation system with respect to the prior art. It is therefore not necessary to rely on secondary considerations, such as unexpected advantage/commercial success/long-standing want, also brought forward by the Appellant.
- 4.6.8 As a consequence of the foregoing Claim 1 is allowable (Article 56 EPC).
- 4.6.9 Also allowable are the dependent claims and the use claim (Claim 9), which necessarily depends on allowable Claim 1 and depends on its fate.
- 5. The impugned decision has as a consequence of the foregoing findings to be set aside and the case has to be remitted to the first instance to grant a patent, since the documents of the Search Report marked with the symbol "A" could be disconsidered as irrelevant in the present case due to the fact that they do not come closer to the subject-matter claimed than documents (D1) and (D2) dealt with in detail above.
- 6. The documents according to paragraph III of "Facts and Submissions" require some minor amendments:

- Claim 1: repetition of the words "and for positioning said workload over said structure (5);" are deleted;
- page 15, line 5 "our" replaced by "out";
- Figure 5: reference sign "120b" replaced by "128b".

7. Reimbursement of the appeal fee (Rule 67 EPC)

The Appellant - without giving detailed arguments - has requested that the appeal fee be reimbursed.

In principle such reimbursement is due in cases in which the proceedings suffer from a substantial procedural violation.

The Board cannot recognise such a substantial procedural violation in the present case. The impugned decision and the preceding proceedings show that the Examining Division clearly has prepared its negative decision to the Appellant so that the requirements of Article 113(1) EPC are met. The impugned decision moreover enables the reader to follow a line of arguments for refusing the application. Whether these reasons are convincing and have to be followed by the Board or not is another question and has nothing to do with a substantial procedural violation.

The preconditions for a reimbursement of the appeal fee are therefore not fulfilled in the present case, so that the request in this respect has to be rejected, Article 67 EPC.

8. Since allowable documents enabling the grant of a patent could be agreed in the written procedure, oral proceedings had not to be carried out in the present case.

Order

For these reasons, it is decided that:

1. The impugned decision is set aside.
2. The case is remitted to the first instance with the order to grant a patent on the basis of documents set out above under paragraph III with the amendments according to above paragraph 6.
3. The request for reimbursement of the appeal fee is rejected.

The Registrar:



N. Maslin

The Chairman:



C.T. Wilson

SV
Rem. 11.2.92