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File Number: T 263/91 - 3.2.1
Application No.: 85 305 186.0
Publication No.: 0 169 723
Title of invention: Method and apparatus for treating a plurality of zones of a processing line

Classification: F16N 29/02, B65G 45/00

D E C I S I O N
of 4 December 1992

Proprietor of the patent: Diversey Engineering Ltd

Opponent: Ecolab Inc.

Headword:

EPC Articles 56, 84, 123(2) and Rule 67

Keyword: "Inventive step (main request: no)"
"Lack of support and/or clarity of the claims of the auxiliary requests"
"Substantial procedural error (no)"
"Refund of appeal fee (rejected)"

Catchword

The statement "The patent proprietors reserve the right to oral proceedings" is not to be construed as an actual request for oral proceedings.



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Boards of Appeal

Chambres de recours

Case Number : T 263/91 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 4 December 1992

Appellant : Diversey Engineering (Europe) Limited
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Representative : Silverman, Warren
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Decision under appeal : Decision of Opposition Division of the European
Patent Office dated 8 February 1991 revoking
European patent No. 0 169 723 pursuant to
Article 102(1) EPC.

Composition of the Board :

Chairman : F. Gumbel
Members : P. Alting van Geusau
W.M. Schar

Summary of Facts and Submissions

- I. The mention of the grant of European patent No. 0 169 723 based on patent application No. 85 305 186.0, filed on 22 July 1985 and claiming a priority of 24 July 1984 (GB-8 418 778), was published on 11 January 1989.

The granted independent Claims 1 and 9 read as follows:

"1. A method of treating a plurality of zones of a processing line with a liquid, the liquid comprising a treatment liquid and a carrier liquid, characterized in that the treatment liquid is introduced as discrete slugs into pipes conveying the carrier liquid to each zone, and that the volume of each slug is selectively variable or that the slugs are introduced into each pipe at a selectively variable frequency.

9. An apparatus for treating a plurality of zones in a processing line with a liquid, the liquid comprising a treatment liquid and a carrier liquid, the apparatus comprising:

a source of treatment liquid (1);
a source of carrier liquid (2);
a plurality of pipes (8) conveying the carrier liquid to each zone; and
means (19) for introducing the treatment liquid into each pipe in discrete slugs of a selectively variable volume or at a selectively variable frequency."

- II. The Respondent (Opponent) filed an Opposition on 11 October 1989 requesting the revocation of the patent for reasons of lack of novelty and lack of inventive step having regard to the disclosures of inter alia

- D1: EP-A-0 079 152
- D2: US-A-4 196 748
- D4: GB-A-2 026 729
- D7: ECO-VAC 1000, Chemical Dispensing System, Economics Laboratory Inc., Impressum 17075/3600/0185 (available to the public prior to July 1984 according to the statement by Mr Richard J. Mehus in the Affidavit of 26 November 1990 filed with letter of 6 December 1990).

- III. By a decision of 8 February 1991 the Opposition Division revoked the patent. The Opposition Division held that the subject-matter of the independent Claims 1 and 9 was novel but lacked an inventive step in view of the combination of the teachings derivable from D2 and D4.
- IV. An appeal was lodged against this decision on 27 March 1991, the appeal fee having been paid on 21 March 1991. The Statement of Grounds of Appeal was filed on 7 June 1991.
- V. In a communication issued together with the summons to oral proceedings as auxiliarily requested by both the Appellant and the Respondent, the Board expressed its provisional opinion according to which the teaching of D2 could not be interpreted as disclosing an introduction of treatment liquid in the form of discrete slugs such as defined in Claim 1 of the granted patent.

Moreover even having knowledge of D4 it would not appear to be likely that the skilled person would combine its teachings with those of D2 because D2 and D4 essentially relate to mixing in order to obtain a homogeneous solution whereas the patent in suit proposes to keep the treatment liquid concentrated as a "package" up to the end of the pipeline.

However, the Board questioned whether the claims clearly set out the essential features of the invention even taking into account proposed amendments in three then valid auxiliary requests which moreover did not appear to be supported by the original disclosure.

As regards an alleged substantial procedural violation for not granting requested oral proceedings, the Board was of the provisional opinion that the formulation "The patent proprietors reserve the right to oral proceedings" could not be held to be a request for oral proceedings in accordance with Article 116 EPC.

- VI. With the letter of 4 August 1992 the Appellant withdrew his request for oral proceedings and informed the Board that he would not be represented at the oral proceedings.

He formulated his definitive requests which read as follows:

1. Main request: maintenance of the patent in its granted form.
2. 1st auxiliary request (former 2nd auxiliary request):

Maintenance of the patent in its granted form with the amendment at line 6 of Claim 1 and line 10 of Claim 9: "which slugs remain at least partially discrete downstream of the introduction point".

3. 2nd auxiliary request (former 3rd auxiliary request):

Maintenance of the patent in its granted form with the introduction of the features: "the slugs, upon discharge at least at one zone, have a peak concentration substantially higher than the concentration of a homogeneous solution of the treatment liquid in the carrier liquid in the pipe" into the independent Claims 1 and 9.

4. 3rd auxiliary request (named 4th auxiliary request in the above letter):

Maintenance of the patent in its granted form with the introduction of the features: "the slugs, upon discharge at least at one zone, have a peak concentration substantially higher than the concentration of a homogeneous solution of the treatment liquid in the carrier liquid in the pipe" or by the incorporation of granted Claim 3 into the independent Claim 1, in either case the apparatus claims be cancelled.

5. Reimbursement of the appeal fee.

In support of his requests the Appellant essentially submitted the following arguments:

Document D2 can be seen as the closest prior art. The lubricant in D2 can be compared to the treatment liquid and the diluent can be compared to the carrier liquid in the claims of the patent in suit.

However, when the lubricant flows so does the diluent because it is intended that the lubricant be diluted. The valves 58, 72, 90 and 106 (Figure 3) are controlled to admit diluent at different rates thus providing for distribution of liquids of varying concentrations which

means liquids of different strengths rather than that in the pipe the concentration of the lubricant varies with time from strong to weak to strong to weak etc. Therefore, D2 contains no disclosure, either explicit or implicit of the introduction of diluent in "discrete slugs" as was alleged by the Opposition Division.

Because D2 does not disclose what the Opposition Division considered it discloses, the combination of D2 and D4 does not take away the inventive step of the subject-matter of Claims 1 and 9 as granted.

Moreover, D4 relates to mixing of gases which is substantially different from introducing discrete slugs into pipes conveying a carrier liquid to zones in a processing line.

The Appellant believes it to be implicit in Claims 1 and 9 as granted that the discrete slugs of treatment liquid which are introduced into the pipes conveying the carrier liquid remain discrete at least to some extent as they are conveyed with the carrier liquid towards the zones to be treated, but if the Appeal Board takes the view that this is not the case, then in order to even more clearly distinguish the invention from the prior art the auxiliary requests comprise clarifications of this point.

Referring to Article 116 EPC the Appellant submitted that if a party wants oral proceedings then oral proceedings shall take place. He was not aware of any rule or decision that states that unless the word "request" is used oral proceedings will not take place. His declaration to reserve the right to oral proceedings could only mean that the Patentee wanted oral proceedings should an adverse decision be contemplated. No other reasonable interpretation could be given to the words "reserve the

right". He therefore maintained that a substantial procedural violation occurred which requires refund of the appeal fee.

Moreover, the refusal by the Opposition Division to offer oral proceedings seemed not to be within the spirit of EPO Decision T 283/88 which indicated that if there was any doubt whether a communication amounted to a request for oral proceedings then clarification of the position should be sought. Incidentally, the present situation is to be distinguished from that in EPO Decision T 299/86 (OJ EPO 1988, 86) where the words "reserve my right to request oral proceedings" were used. As a matter of language, because of the use of the verb "reserve" in addition to the verb "request", this statement in itself could not be considered as a "request".

VII. Oral proceeding were held on 6 October 1992 at which only the Respondent was present, however represented by an agent not being authorised as his representative at the time. At the end of the oral proceedings the Chairman announced that the decision would be given in writing and that the agent representing the Respondent at the oral proceedings should file a sub-authorisation within a time limit of one month. The sub-authorisation was filed on 23 October 1992.

VIII. The Respondent requested that the appeal be dismissed. His arguments can be summarised as follows:

Although the "slug" concept of the patent in suit was stressed by the Appellant and also by the Board in its communication, Claim 1 as granted leaves it completely open whether the treatment liquid, introduced as discrete slugs, also arrives at the treatment zone in the form of such slugs. The prior art disclosed in D7 clearly teaches

the introduction of a treatment liquid as discrete slugs into pipes conveying it to the various treatment zones. Since Claim 1 as granted is perfectly silent on what happens later, the whole question of whether, and to what degree, later mixing occurs is immaterial.

The various auxiliary requests made would not remove this deficiency. It does not help to say that a slug of treatment liquid, i.e. a portion introduced into the carrier liquid "remains at least partially discrete downstream of the introduction point", as in the first auxiliary request, since this again leaves it perfectly open whether, in the actual treatment zone, there is a completely homogeneous mixture or a series of discrete slugs.

According to the second auxiliary request, the slugs should have a "substantially higher" peak concentration as compared to a homogeneous solution. "Substantially higher" obviously requires interpretation and is intended to cover a situation where it is not meaningful anymore to talk about slugs of treatment liquid "packaged" in a carrier liquid. Instead, this language just describes delivery of a lubricating liquid with a concentration varying more or less with time, i.e. everything that is not exactly a homogeneous constant mix. However such a situation is not different from what happens in the prior art disclosed in US-A-3 552 418 (D17) or when using the arrangement of D7.

In actual practice, i.e. in the operation of an actual processing line, it would neither be possible nor even desirable to transport discrete slugs of treatment liquid, packaged in the carrier liquid, to the treatment zone and eject such slugs there. This point is clearly set out in the affidavit of Richard J. Mehus (a signed original of which was submitted with letter of 10 September 1992).

It does not make any difference that in some prior art documents, homogeneity of the mix is assured by the provision of a mixing device, since in processing line apparatus, the pipework itself already provides the required mixing. In fact, one would in any case end up ejecting a fairly constantly concentrated mix, maybe with a minor residual concentration variation in time, but for all practical purposes a lubricant of constant concentration.

In order to avoid the prior art teachings, the Patentee would have to restrict the claims to discrete slugs of treatment liquid arriving in "packaged" form at the end of the pipe which would be undesirable. On the other hand, the proposed claim language which tries to adhere to the actual conditions encountered in reducing the assumed invention to practice, cannot differentiate over the prior art.

Moreover, as was also pointed out by the Board, the present proposed amendments to the claims (in actual auxiliary requests 1 and 2) are not squarely based on the original disclosure.

Additionally, the last alternative in the new third auxiliary request combining the granted Claims 1 and 3 is unclear and ambiguous and therefore also not suited for the maintenance of the patent.

Reasons for the Decision

1. The appeal complies with the requirements of Articles 106 to 108 and Rules 1(1) and 64 EPC. It is admissible.

2. Procedural questions: (right to be heard)

The Appellant is of the opinion that the final sentence in his observations dated 8 March 1990 reading "The patent proprietors reserve the right to oral proceedings" is to be construed as a request for oral proceedings. Therefore he considers the taking of the contested decision without oral proceedings to be a substantial procedural violation.

If the Appellant's conclusion were right this would indeed represent a severe violation of the right to be heard, which would render the decision under appeal void as from the outset (see: T 283/88, point 5). This in turn would lead to the remittal of the case to the Opposition Division for completion of proper proceedings and taking of a new decision (Article 10, Rules of the Procedure of the Boards of Appeal). Therefore the Board has to judge this allegation notwithstanding the fact that the Appellant did not seek remittal but only requested reimbursement of the appeal fee.

Although it is true that the question whether a request in the legal sense has been made does not merely depend upon the actual use of the word "request" the point made by the Appellant turns out to be unfounded. His allegation in point 16 of the Statement of Grounds of Appeal according to which the mentioned sentence "could only mean that the Patentee wanted oral proceedings should an adverse decision be contemplated" is a mere assertion. The Boards of Appeal have already decided in an earlier case that a statement reading "I reserve my right to request oral proceedings under Article 116 EPC" is not to be construed as an actual request (T 299/86). In contrast to the opinion expressed by the Appellant it appears that the

statement here in question is even more general and therefore even further away from an actual request. No circumstances can objectively be seen in this case which could lead to another conclusion. Contrary to the Appellant's allegations this situation is not to be compared to the one judged in T 283/88 where the facts were totally different. While in that case there was an indication of an actual intention to have oral proceedings, that meaning can objectively in no way be attributed to the statement of the Appellant. Instead, his "reservation" communicated to the Opposition Division and to the other party merely the information that he was aware of his rights and that he might sometime in the future decide to take action with regard to filing a request or oral proceedings. By using the word "reserve" he conveyed the message that for the moment he wanted to leave it at that and that he just did not want to take action at that time.

For these reasons the Board concludes that there was no procedural violation during the opposition proceedings.

3. Main request

3.1 Prior art

3.1.1 The nearest prior art is considered to be disclosed in D2. D2 relates to a multiple strength fluid distribution method and apparatus for treating a plurality of zones of a processing line with a liquid such as in sanitary chain conveyor systems. The apparatus comprises a liquid source of a treatment liquid and a diluent supply of a carrier liquid. The treatment liquid and carrier liquid are mixed at a T-joint in the pipeline and carried as a mixture to the zone of the processing line. This prior art thus discloses a method and apparatus comprising the

combination of precharacterising features of Claim 1 and Claim 9 of the granted patent.

3.1.2 D7 concerns a chemical dispensing system which provides automated intermittent feed of a quantity of chemical directly into the water line to showers for on-line felt or wire cleaning in the paper industry. By means of adjustable timers the quantity and rate of injection can be set in accordance with a wanted injection program.

3.1.3 D17 was cited by the Respondent after the nine-month period stipulated in Article 99(1) EPC, in his response of 19 December 1991 to the Statement of Grounds of Appeal. Because of its relevance with respect to introducing a treatment liquid by pulses into a diluent liquid and considering that this document was introduced in response to an argument presented by the Appellant in respect of pulsed introduction of treatment liquid, this document is allowed into the proceedings.

D17 discloses a proportional metering apparatus for mixing small amounts of a treatment liquid in a stream of water. D17 provides for the dilution of the concentrated treatment liquid by pulsing it into the flowing liquid diluent using a double ended piston pump. The double ended piston drives the pumping cycle and the piston travel controls the dilution ratio. The system disclosed further comprises electronics for changing the proportionality of a signal supplied to the piston control for adjusting the course of the piston drive.

3.2 Novelty

3.2.1 As follows from the above analysis, the documents considered do not disclose the combination of pre-characterising and characterising features of the

independent Claims 1 and 9 of the patent and therefore their subject-matter must be considered novel within the meaning of Article 54 EPC.

This was, in fact, not put into question any longer by the Respondent in the appeal proceedings.

3.3 Inventive step

- 3.3.1 Considering the prior art arrangement disclosed in D2 it is evident to the skilled person that this known system may cause problems with respect to accurate control of the strength of the mixture to be discharged at a particular point especially when low-concentration solutions are required or when solutions within strict limits must be produced.

The characterising features of Claims 1 or 9 of the patent in suit provide that the treatment liquid is introduced as discrete slugs into the pipes conveying the carrier liquid to each zone the volume of each slug being selectively variable or being introduced into each pipe at a selectively variable frequency.

The underlying technical problem to be solved by the patent is therefore to be seen in the improvement of the known system such that a proper amount of the lubricant or chemical to be mixed with the diluent is available at each treatment zone.

- 3.3.2 When looking for a solution to this problem the skilled person would, in the Board's opinion, certainly become aware of D7 and D17, since both publications concern mixing of chemicals or other treatment products with a diluent fluid.

In particular D17 discloses an obviously highly accurate mixing method which includes a metering injection pump comprising fine adjustment means for varying the proportionality of the amount of material injected in the carrier fluid (see column 5, lines 32 to 37) which is essentially what is proposed in the characterising parts of the independent Claims 1 and 9.

Having regard to the problem cited above it is, in the opinion of the Board, obvious to the skilled person to incorporate into the known system disclosed in D2 the metering device disclosed in D17 which adaptation is technically straight forward and requires no substantial alterations of the system disclosed in D2.

Furthermore, if different concentrations are necessary at different places of treatment evidently an additional pipeline and mixing equipment should be installed for each zone to be treated differently as would also be necessary in the arrangement of D2. This remaining feature of the independent Claims 1 and 9 cannot therefore be considered of any inventive significance.

- 3.3.3 The Appellant submitted that it was implicit from the granted independent claims that the treatment liquid, introduced as discrete slugs into the pipe, would remain at least partially discrete up to the discharge point and thus no mixing of the treatment and diluent liquid occurred in the pipe. This opinion cannot be accepted because the patent as published clearly envisages as one alternative mixing of the liquids (see page 1, lines 57, 58) and only preferred embodiments (see page 1, lines 59, 60 and Claims 3 to 6) relate to the idea of keeping the liquids separate.

3.3.4 It thus follows that, when starting from the known method and apparatus disclosed in D2, the disclosures of D17 give the skilled person a direct lead to arrive in an obvious manner at the method and apparatus claimed in Claim 1, respectively, Claim 9 of the patent. These claims are therefore not allowable for lack of inventive step of their subject-matter.

4. Auxiliary requests

4.1 Amendments

4.1.1 In accordance with the first and second auxiliary requests and first alternative of the third auxiliary request features were introduced into the independent claims which, apart from not having a clear counterpart in the application documents as filed, are moreover, in the Board's opinion, of undetermined scope as regards the terms "at least partially discrete" (first auxiliary request) and "a peak concentration substantially higher than" (second and third auxiliary requests). For this reason, the amended claims according to these requests do not comply with the requirement of clarity in the meaning of Article 84 EPC. Although lack of clarity (Article 84 EPC) is no ground for opposition, this article applies when amendments are carried out in the granted claims and therefore the Claims 1 and 9 of the first and second auxiliary requests and Claim 1 of the first alternative of the third auxiliary request cannot be allowed either (Article 102(3) EPC).

4.1.2 The second alternative of the third auxiliary request combines the features of the granted Claims 1 and 3. Here, the specification that the slugs, upon discharge at least at one zone, remain "substantially" concentrated also cannot, in the Board's opinion, be considered to have a

sufficiently clear meaning such that it would be possible to differentiate between prior art mixtures and the mixture defined in the claim under consideration.

In this respect the Board follows the opinion expressed by the Respondent that in view of the further limitations defined in Claim 4 the term "substantially concentrated" used in Claim 1 under consideration must be interpreted to include also a very low concentration of the slug which is considerably less than the peak concentration of the slug of at least twice the concentration of a homogeneous solution defined in Claim 4. However, since fluctuations in strength are normal in the mixing systems of the prior art a clear difference with respect to such known systems cannot be achieved by the present definition of "substantially concentrated".

Moreover, the features of Claim 3 introduced in granted Claim 1 solely relate to a desired result leaving it open how this result is achieved in the absence of further features. As was also submitted by the Respondent, the Board takes the view that mixing will inevitably occur in the pipelines to the discharge point because of the flow characteristics within pipes and the turbulences introduced by connecting pieces such as T-joints and bends. Therefore, in the Board's opinion, further essential features are necessary to arrive at the desired result which are however not specified in this independent claim.

For these reasons the second alternative of Claim 1 of the third auxiliary request is not acceptable for lack of clarity and lack of essential features for defining the invention contrary to the requirements of Article 84 EPC.

5. For the above reasons the Board comes to the conclusion that neither the independent claims of the patent as granted nor the amended independent claims according to the auxiliary requests can form the basis for maintenance of the patent as requested by the Appellant. As the Board is bound by the requests made by the Appellant it is not necessary to consider the merits of the subject-matter of the dependent claims.

6. Request for reimbursement of the appeal fee

The Appellant requests reimbursement of the appeal fee on the grounds of a substantial procedural violation (Rule 67 EPC). As set out in detail under point 2 the allegation that a procedural violation occurred is unfounded. Furthermore, reimbursement of an appeal fee is provided for in Rule 67 EPC only if the appeal is deemed to be allowable. This is also not the case here. Therefore the Appellant's request must be rejected.

Order

For these reasons, it is decided that:

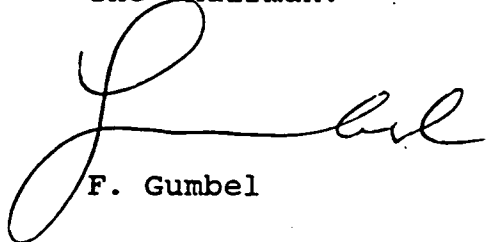
1. The appeal is dismissed.
2. The request for refund of the appeal fee is rejected.

The Registrar:



S. Fabiani

The Chairman:



F. Gumbel