

Internal distribution code:

- (A) Publication in OJ
(B) To Chairmen and Members
(C) To Chairmen

D E C I S I O N
of 11 February 2000

Case Number: T 1110/98 - 3.2.4

Application Number: 92911908.9

Publication Number: WO 92/22353

IPC: A62C 35/00

Language of the proceedings: EN

Title of invention:

Method and equipment for fire fighting

Patentee:

SUNDHOLM, Göran

Opponent:

FogTec Brandschutz GmbH

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56, 123

Keyword:

"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:

-

Catchword:

-



Europäisches
Patentamt

European
Patent Office

Office européen
des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Case Number: T 1110/98 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 11 February 2000

Appellant: FogTec Brandschutz GmbH
(Opponent) Salinger Feld 10
D-58454 Witten-Annen (DE)

Representative: Thielmann, Andreas
Cohausz & Florack
Patentanwälte
Postfach 33 02 29
D-40435 Düsseldorf (DE)

Respondent: SUNDHOLM, Göran
(Proprietor of the patent) Ilmari Kiannon kuja 3
SF-04310 Tuusula (FI)

Representative: Jenkins, Peter David
PAGE WHITE & FARRER
54 Doughty Street
London WC1N 2LS (GB)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 29 September 1998
rejecting the opposition filed against European
patent No. 0 589 956 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: C. A. J. Andries
Members: R. E. Gryc
R. E. Teschemacher

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal, received at the EPO on 1 December 1998, against the decision of the Opposition Division, dispatched on 29 September 1998, rejecting the opposition against the European patent EP-B-0 589 956. The appeal fee was paid simultaneously and the statement setting out the grounds of appeal was received at the EPO on 1 February 1999.

II. The opposition was filed against the European patent as a whole on the ground of lack of inventive step (Article 100(a) EPC) of its subject-matter mainly in view of the following prior art documents:

D1: US-A-3 684 019,

D2: DD-B-148 858,

D4: WO-A-91/ 07 208,

D5: DE-A-38 25 078 and

D6: EP-A-0 129 629.

III. In his statement setting out the grounds of appeal, the appellant contended that, at the priority date, the skilled person would learn from D1 that it is necessary to fight a fire in two steps i.e. at first to attack the fire directly and later to cool the environment of the fire. In his opinion, the skilled person would learn from this document that a stream of large droplets of extinguishant should be directed towards the fire so that droplets having a high kinetic energy

would reach the burning surfaces and, subsequently, a fog-like spray of finely divided droplets of extinguishant having a low kinetic energy should be spread in order to cool the environment of the fire. D1 would teach the skilled person that the quantity of extinguishing fluid could be reduced by the combined use of coarse and fine fog sprays.

Therefore, according to the appellant, for the skilled person starting from the state of the art disclosed by D1, the objective problem to be solved could only be to embody the teaching of D1 in a system placing a stored pressure charged energy at disposal. He was of the opinion that solving this problem would not involve an inventive step for the skilled person who was aware of the disclosure of D2 since D2 taught how to produce with a single nozzle at first a directed stream and, subsequently, a fine mist of extinguishing means, independently of the sort of extinguishing means being used provided that it was a fluid. Moreover, D2 also taught that a concentrated jet would be produced by high pressure whereas lower pressures produced fine pulverized fog sprays.

In order to illustrate the technologic background and the common general knowledge of the skilled person at the priority date, the appellant filed also in particular the following additional documents:

D7: "Wasser als Löschmittel", Dr.-Ing. O. Herterich, Dr. Alfred Hüthig Verlag GmbH, Heidelberg, 1960, pages 103 to 105, 177, 178, 210, 211, 218 and 219.

D9: "Automatischer Brand- und Explosionsschutz",

A.I. Wesselow, L.M. Meschman, Staatsverlag der DDR, Berlin 1979, page 60.

He contended also that to extinguish a fire with a fine pulverisated water spray or with a water fog was known before the earliest priority date in particular from D4 and D6 and also from D5 which taught to use a pressure of 180 bar, and he took the view that every extinguishing system working with a pressure accumulator would necessarily operate in several steps i.e. at first, with a concentrated spray from which, afterwards, a spread fog-like spray necessarily develops during the progress of the extinguishing operation. Moreover, he emphasized that the teaching of D2 was not limited to the use of halon but can apply also to water as extinguishing means and that, for the skilled person who knew the teaching of D2 and who starts from the state of the art according to D9, it was not inventive to arrive at the invention.

The respondent (patentee) disagreed and argued that D2 did not relate to a fog-type fire extinguisher and described neither spraying of concentrated fog sprays nor spraying of spread fog-like sprays; also, D2 taught neither the use of a spray to absorb heat and to control a fire nor the use of a plurality of spray heads. According to the respondent, the jets formed according to the present invention differ from the jets of both D1 and D2 and D1 did not teach to utilise the same sprinklers and nozzles for the coarse sprays and for the finer sprays. Also, instead of using a concentrate fog spray to penetrate the fire as according to the invention, D1 taught to use large droplets at an operating pressure much lower than the

pressure used in the invention. The respondent was of the opinion that the skilled person would not reasonably combine the teachings of D1 and D2 and even if he did that, he would not arrive at the invention since none of said publications disclosed concentrated fog sprayings with strong penetrating power.

IV. Oral proceedings took place on 11 February 2000.

The appellant pointed out that neither the description of the invention nor the claims defined clearly and precisely the limits of the protection conferred by the patent in suit. He did not dispute novelty and considered that D1 disclosed the closest state of the art. In his opinion, D2 gave the solution to the problem of implementing the method taught by D1 since, according to the method of D2, the change from a concentrated fog spray to a spread fog-like spray occurred automatically. Also the appellant pointed out that the subject-matter of the claims was not limited to a fixed installation, that no specific difference was made between the sprays, that no clear definition of what should be understood under "high operating pressure" and "concentrated fog sprays" was given and that the limits of the protection conferred by the claims were not clearly defined.

The appellant contended that D2 taught how to put into practice the method of D1 with a single spray head and how to change automatically from a high pressure and a concentrated spray to a lower pressure and a spread spray. Also he took the view that, at the priority date, it was already known in particular from D7 (see the end of page 218) and D9 to use a concentrated spray

for extinguishing a fire.

- V. At the end of the oral proceedings, the appellant requested that the decision under appeal be set aside and that the European patent No. 0 589 956 be revoked.

The respondent requested that the patent be maintained as granted with the amendment to Claim 1 and column 1 of the description as submitted during the oral proceedings. In case the Board considered the evidence submitted by the opponent with letter dated 2 February 2000 (i.e. documents D7 to D9) to be detrimental to the maintenance of the patent, he requested to remit the case to the first instance and to order an apportionment of costs.

- VI. Method claim 1 as filed during the oral proceedings reads as follows:

"A method for fire fighting, especially in engine rooms and similar spaces, characterized by the combination of the following steps: delivering extinguishing liquid by using pressure charged energy; spraying extinguishing liquid in the form of concentrated fog sprays with strong penetrating power via spray heads (1; 13; 21, 22, 23; 43, 44, 45; 81) using a high operating pressure in order to at least press down or suppress a fire which has broken out; and subsequently spraying liquid in the form of spread fog-like sprays via said spray heads (1; 13; 21, 22, 23; 43, 44, 45; 81) using an operating pressure that is lower than said high operating pressure in order to effect effective heat absorption and control of the fire."

Independent apparatus claim 4 as granted reads as follows:

"Fire fighting equipment comprising at least one spray head (1; 13; 21, 22, 23; 43, 44, 45; 81) and at least one hydraulic accumulator (2; 10; 26, 27; 41, 41 a; 60) for supplying via an outlet line (3; 11; 25; 42) said at least one spray head (1; 13; 21, 22, 23; 43, 44, 45; 81) with extinguishing liquid, characterized in that

said at least one hydraulic accumulator (2; 10; 26, 27; 41, 41a; 60) is a high pressure accumulator charged to high pressure, the pressure of which accumulator (2; 10; 26, 27; 41, 41a; 60) gradually decreases upon release, and

said at least one spray head (1; 13; 21, 22, 23; 43, 44, 45; 81) is of the type providing a concentrated fog pattern at a high operating pressure and a wider spread fog-like liquid spray at a pressure lower than said high operating pressure."

Reasons for the Decision

1. Admissibility of the appeal.

The appeal is admissible.

2. *Claim 1 (method claim filed during the oral proceedings)*

- 2.1 Amendments (Article 123 EPC)

Claim 1 as filed during the oral proceedings differs from Claim 1 as granted solely in that the following step of the claimed method: "and spraying liquid" (see column 8, lines 38 and 39 of the specification) has been modified in order to read: "and subsequently spraying liquid".

A corresponding modification has been made in the description (see the specification: column 1, line 31).

A support for this modification can be found in the original application (WO-A-92/22353) for example on page 2, from line 19 onwards and on page 12, lines 2 to 8 and lines 26 to 32 and the addition of this feature reduces the extent of the protection conferred by Claim 1. Therefore, all the requirements of Article 123 EPC are fulfilled and the modification is allowable.

2.2 Interpretation of claim 1

2.2.1 In view of the description, the following expressions of claim 1 should be interpreted accordingly:

- "pressure charged energy" (see column 8, line 33 of the patent specification): this expression means that the energy for delivering and spraying the extinguishing liquid is accumulated in the form of stored pressure (see column 1, lines 50 to 53) and is not produced by any other source like, for example, a chemical or pyrotechnic gas source as in D4. This also implies that during functioning ie upon release, the charged pressure decreases.

- "concentrated fog sprays" (see column 8, lines 34 to 35): this has to be interpreted as designating fog sprays which are directly and initially created by a high operating pressure through the nozzles of the spray heads, that means that a fog is already present at the nozzle-opening, and not sprays resulting from the division of solid streams or jets of liquid (see column 2, lines 36 to 38; column 4, lines 11 to 13) and which fog has, due to high operating pressure, still a penetrating power.

- "high operating pressure" (see column 8, line 37): according to the description, such an operating pressure should be of about 100 bar and above (see in the description: column 3, lines 47 to 48; column 4, lines 29 to 30; column 6, lines 52 to 56; column 7, lines 11 to 13 and claims 2 and 6) so that it is clear for a person skilled in the art which pressure range is involved.

- According to the respondent there is no difference between the expressions "fog" and "fog-like", both implying a fog.

2.2.2 Moreover, it is implicit from Claim 1 that the invention is concerned with a method to be implemented in a stationary installation since the extinguishing liquid has to be "delivered by using pressure charged energy" (see column 8, line 32) to the place where the fire breaks out, said extinguishing liquid being then sprayed via several "spray heads" (see column 8, lines 36 and 40) using a "high pressure" which, according to the meaning to be given to this expression

(see section 2.2.1 above), should be at least 100 bar.

2.3 Novelty (Article 54 EPC)

The board is satisfied that none of the documents D1, D2, D4 to D7 and D9 taken into consideration discloses a method for fire fighting comprising in combination all the features described in Claim 1. Since this has not been disputed by the appellant, there is no need for further detailed substantiation and the subject-matter as set forth in claim 1 is considered as novel within the meaning of Article 54 EPC.

2.4 The state of the art closest to the invention

2.4.1 Among all the cited prior art documents D1 is the sole document relating to a method for fighting a fire in a stationary installation, wherein the extinguishing liquid is discharged in two different forms. Therefore, the Board considers that the disclosure of D1 represents the state of the art closest to the invention.

2.4.2 The general teaching of D1 is that two different forms of the extinguishing liquid are used, one being a fine spray consisting of droplets almost entirely in a diameter range which is such that the droplets completely evaporate to cool the ambient atmosphere (see Figure 2: from 10 to dc and claim 2: less than 1 mm), the other being a coarse spray consisting of droplets of a sufficiently large diameter (having thereby enough kinetic energy) to penetrate the plume of combustion products and to reach the burning surface thereunder to extinguish the fire (see Figure 2: da

upwards; and claim 2: larger than approximately 2 mm) (cf. column 2, lines 32 to 40).

In accordance with this known method, when the extinguishing liquid is delivered under pressure to dual nozzle sprinkler heads (see D1: from line 37 of column 4 to line 48 of column 5 and Figures 3 to 5), the liquid is sprayed in the form of two spread sprays, the fine spray resulting either from the collision of two opposed jets of a standard opposed jet nozzle 10 (see Figures 3 and 5) or from the spraying of the **fog** nozzles 38 (see Figure 4), and the coarse spray resulting from the collision of a jet against the distributor plate 20 of the pendant nozzle 17 (see Figures 3 to 5). The formation of concentrated fog sprays with strong penetrating power, which would be able to at least press down or suppress a fire, is thus even not suggested by D1.

D1 discloses (column 4, lines 59 to 62 and claims 5 and 12) that the pressure used for the coarse spray is reduced with respect to the pressure used for the fine spray.

Moreover, D1 teaches that the respective nozzles may be actuated at different temperatures (see column 2, lines 47 to 49) with the fine spray nozzle serving to cool the ambient atmosphere being equipped with a low temperature release whereas the coarse spray nozzle used for extinguishing the fire being equipped with a high temperature release (see column 2, lines 49 to 55). Therefore, with such an equipment, the action of cooling starts necessarily before the operation of extinguishing the fire starting at an higher

temperature (see also from column 4, line 63 to column 5, line 9 and claim 3 in combination with claim 1), whereafter both actions (cooling and extinguishing) proceed simultaneously.

Alternatively, both nozzles may be actuated by a common release device (see column 2: lines 55 to 57 and column 5, lines 24 to 34) so that the cooling and extinguishing operations can take place simultaneously from the start (see claim 4). However, in the embodiments according to Figures 3 to 5 of D1, cooling the environment is, in no case, foreseen after the starting of the extinction of the fire.

The appellant heavily relied on the description relating to the embodiment according to Figures 6 and 7, particularly on lines 12 and 13 of column 6 ("In the meanwhile..."), to state that D1 also foresaw the possibility of spraying coarse droplets first and fine droplets afterwards.

However it is stated in column 6, lines 4 to 6, that the operation of the system shown in Figures 6 and 7 is essentially similar to that at the dual nozzle sprinkler heads described in the Figures 3 to 5. Furthermore, the action of the fine spray heads is said to result in the fact that "only those coarse nozzle sprinkler heads 50 which are required to extinguish the fire 63 will be activated" (see column 6, lines 15 to 20 and claim 9), so that it cannot be stated that the follow-up of actions in the embodiments according to the Figures 6 and 7 can be compared to the claimed follow-up. This is also confirmed by the claims of D1, wherein the discharge of the "one" stream (see claim 3,

column 7, line 1 and claim 1, column 6, line 55) is either in advance of (claim 3) or simultaneous with (claim 4) the "other" stream (see claim 3: column 7, line 2 and claim 1: column 6, line 58). There is no disclosure of something else. Even in claim 9, corresponding to the functioning of the embodiment according to the Figures 6 and 7, there is no indication of the follow-up suggested by the appellant.

Even if it is true that due to the wording "In the meanwhile..." there may be some unclear hint towards an actuation of the coarse spray heads 50 before the fine spray heads 60, it should however be emphasized that the Figures 6 and 7 show a system with separate independent water supply pipes, which can have different line pressures, so that after opening of the nozzles, both kind of nozzles are functioning simultaneously, so that there is no follow-up in the meaning of the present invention, let alone a follow-up in the same spray heads.

2.4.3 Therefore, the method claimed in Claim 1 differs from the closest state of the art described in D1 in that:

- the operation of extinguishing the fire starts and ends before the cooling phase instead of a simultaneous action of both cooling and extinguishing

- the sprays used to suppress the fire are concentrated and not spread;

- the high operating pressure used for spraying the extinguishing liquid is, as interpreted in section 2.2.1 above, much higher than the "normal" pressures used in D1, and in that
- the pressure to be used to spray the cooling liquid is lower than the pressure used to spray the liquid for extinguishing the fire and not the contrary as in D1.

2.5 Problem and solution

Starting from the said closest state of the art and taking into account the above-mentioned differences, the Board sees the problem as being to improve the method known from D1 so that it be capable, with a small amount of liquid, of effective extinguishing of fires difficult to suppress (see the patent specification: column 1, lines 19 to 22 and 39 to 40).

Prima facie, the Board has no reason to doubt that the invention as claimed in Claim 1 solves effectively this problem.

2.6 Inventive step (Article 56 EPC)

- 2.6.1 When assessing inventive step, the question to be answered remains thus whether the prior art seen in the light of his general common knowledge would provide the person skilled in the art starting from the method for fire fighting according to D1 with enough information and hints to lead him to the solution proposed in Claim 1.

2.6.2 D2, which appears to be the most relevant document after D1, is concerned with a fire extinguisher having upon actuation an automatic extinguishing system projecting the extinguishing liquid at first in the form of a full liquid jet and thereafter in the form of a coarse spray. The full liquid jet is projected at high pressure in order to fight the fire at a safe distance with a large quantity of extinguishing liquid in a very short time and to obtain a rapid mixing between the burning and the extinguishing liquids (see D2: page 3, lines 15 to 21). Then, after a short time, the form of the projection of extinguishing fluid changes automatically from the full liquid jet to a coarse spray, the function of which is not to cool the environment of the fire but to realize the proper extinction of the fire by means of larger droplets having still enough kinetic energy to penetrate the fire and to reach the burning surfaces so that the products of decomposition of the extinguishing fluid affect the chain-reaction of the combustion (see page 3, lines 22 to 28).

Therefore, with the method of D2, the fire attack does not start with the projection of a concentrated fog intended for suppressing the fire, as claimed in Claim 1, but starts with the projection of a large quantity of extinguishing liquid in a very short time in the form of a full fluid jet, such a jet serving to bring the fire under control so that the proper extinguishing can take place thereafter through the action on the burning surfaces of the large droplets of a subsequent coarse spray. Also, in this known method, no cooling step is foreseen in order to absorb heat and to control the fire after it has been pressed down or

suppressed.

Consequently, even if the skilled person were to combine the teachings of D1 and D2, the extinguishing of the fire could never be the result from the action of concentrated fog sprays since the sprays would still not be concentrated, and furthermore there would be no reason why the cooling action should be postponed after the fire extinction and carried out at the lowest operating pressure contrarily to the teaching of D1 since D2 does not give any instruction about cooling, let alone any contradictory indication. Therefore, the skilled person would not arrive at the invention in any case.

2.6.3 D4 is concerned with water spray systems and disclosed indeed that a fire can be extinguished with a fine pulverisated water spray. However, such a teaching, either taken alone or in combination with the teaching of D1, does not provide more information in direction to the invention, neither as regards the use of concentrated fog sprays with high operating pressure in the meaning of the invention (see section 2.2.1 above), nor regarding the order of the processing steps. Consequently, a combination of the teachings of D1 and D4 would also not lead the skilled person to the subject-matter of Claim 1.

2.6.4 D5 describes a method for fighting a fire with a fog spray concentrated at a high operating pressure, between 80 to 180 bar, used in order to blow the fire out. However, in this known method, no subsequent cooling step is foreseen.

A priori the skilled person has no reason to combine the teachings of D1 and D5 based on quite different basic fire extinguishing concepts, the one (D1) recommending the use of coarse sprays of large drops which can only be produced at relatively low pressures and the other (D5) using concentrated fine sprays produced necessarily at relatively high operating pressures.

If, nevertheless, the combination of these teachings were done so that the coarse low pressure extinguishing spray of D1 would be replaced by the high pressure spray of D5, the cooling action would still happen before the extinguishing step as taught by D1 and not after the fire has been pressed down. Furthermore irrespective of the sequence of action, after a while, both the extinguishing and the cooling are used simultaneously. Therefore, the skilled person would still not arrive at the invention, in any case. Also, since the cooling spray would operate at a pressure of about 2,8 bar according to D1 whereas the pressure used for the extinguishing spray would be between 80 and 180 bar according to D5, it is questionable whether these sprays both could be sprayed via the same spray heads.

- 2.6.5 D6 describes a system for fighting fires of little importance (see the title and page 4, line 27), delivering water as extinguishing liquid to conventional sprinklers by using pressure charged energy provided by a low power compressor (see D6: page 3, line 17).

Since D6 gives absolutely no indication about the

nature of the sprays and also a cooling action is even not mentioned, a combination of the teaching of D6 with the teaching of anyone of the other cited document would not particularly lead the skilled person to the claimed invention.

2.6.6 The reading of D9 (see D9: page 60, from the middle of the left hand column to the end of the 1st paragraph of the right column) gives the skilled person a clear definition of the terms "Vollstrahl" (droplets diameter larger than 0,4 mm) and "Sprühstrahl" (droplets diameters between 0,2 and 0,4 mm) used in D2 and confirms the common general knowledge cited in D1 (see column 1, lines 30 to 41 and Figure 2) according to which the size of the droplets in the sprays has a large influence on the efficiency of both the extinguishing and the cooling effects. In D9 it is stated however that a compromise between small and large droplet diameters has to be found, so that an optimised droplet diameter should be used (Die optimale Tropfengröße wird ermittelt). Therefore, a combination of the teachings of D2 and D9 does not bring anything more than what has already been stated in section 2.6.2 above.

2.6.7 Consequently, for the afore-mentioned reasons, the Board considers that to modify the method of D1 in order to arrive at the subject-matter described in Claim 1 does not follow plainly and logically from the state of the art disclosed in the documents cited during the proceedings.

3. *Claim 4 (apparatus claim as granted)*

3.1 Interpretation of Claim 4

The meaning to be given to the following expressions:

- "concentrated fog pattern" (see column 9 of the specification, line 10);
- "high pressure" (see column 9, lines 5 and 6) and
- "high operating pressure" (see column 9, lines 11 to 13) is the same as the interpretation given in section 2.2.1 above respectively to the expressions "concentrated fog sprays" and "high operating pressure".

Furthermore, there is no difference between the expressions "fog" and "fog-like".

3.2 Novelty (Article 54 EPC)

For the same reasons as those given in section 2.3 above in relation to the method, the fire fighting equipment as set forth in claim 4 must be considered as novel within the meaning of Article 54 EPC.

3.3 The state of the art closest to the invention

- #### 3.3.1
- The Board considers that the disclosure of D2 represents the state of the art closest to the invention since the equipment disclosed therein comprises, as according to the equipment claimed in Claim 4, at least one spray head supplied with extinguishing liquid by at least one hydraulic accumulator, the pressure of which gradually decreases

upon release.

3.3.2 The subject-matter of Claim 4 differs from the said closest state of the art in that:

- the spray head(s) is (are) supplied with extinguishing liquid via an outlet line, - the hydraulic accumulator(s) is (are) (a) high pressure accumulator(s) charged to high pressure, and
- the spray head(s) is (are) of the type providing a concentrated fog pattern at a high operating pressure and a wider spread fog-like liquid spray at a pressure lower than said high operating pressure.

3.4 Problem and solution

The problem appears to be to improve the equipment of D2 so that, by using it with a small amount of liquid, it would be able to extinguish fires difficult to suppress (see the patent specification: column 1, lines 19 to 22 and 39 to 40).

Also, the Board has no reason to doubt that the invention as claimed in Claim 4 solves effectively this problem.

3.5 Inventive step (Article 56 EPC)

As already stated in section 2.6.2 above, the functioning of the equipment disclosed in D2 is based (see page 3, lines 15 to 28) on the concept of having,

at first, the fire brought under control by the action of a rapid mixing of the extinguishing fluid with the burning liquids and, subsequently, a proper extinguishing of the fire by means of the droplets of optimal size of a coarse spray being capable to reach the burning surfaces.

Since, as regards the proper extinction of fires, an analogue conception is also developed in D1 (see Section 2.4.2 above) the skilled person would have a priori no reason to equip the fire fighting equipment of D2 with a high pressure accumulator charged to a high pressure within the meaning of the invention and with specific spray heads of the type providing a concentrated fog pattern at said high operating pressure and a wider spread fog-like liquid spray at a pressure lower than said high operating pressure.

Consequently, the Board also considers that to modify the equipment of D2 in order to arrive at an equipment as described in Claim 4 does not follow plainly and logically from the state of the art and thus implies an inventive step within the meaning of Article 56 EPC.

4. *Conclusion*

The invention as described and claimed in the version filed during the oral proceedings meets the requirements of the EPC and the patent can be maintained on the basis of said version.

5. *Conditional remittal to the first instance*

The evidence submitted by the opponent with letter

dated 2 February 2000 have indeed been taken into consideration.

However, since they were not detrimental to the maintenance of the patent, the conditional respondent's requests to remit the case to the first instance and to order an apportionment of costs need not to be further considered.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent with the following documents:

Claims: Claim 1 as submitted during the oral proceedings,
Claims 2 to 28 as granted,

Description: column 1 as submitted during the oral proceedings,
columns 2 to 8 as granted,

Drawings: Figures 1 to 11 as granted.

The Registrar:

The Chairman:

G. Magouliotis

C. Andries