

Internal distribution code:

- (A) [] Publication in OJ
(B) [] To Chairmen and Members
(C) [] To Chairmen
(D) [X] No distribution

**Datasheet for the decision
of 10 May 2007**

Case Number: T 0916/05 - 3.5.02

Application Number: 99940057.5

Publication Number: 1108261

IPC: H01H 33/36

Language of the proceedings: EN

Title of invention:

Actuation and control device for high- and medium-voltage
circuit breakers

Patentee:

ABB TRASMISSIONE & DISTRIBUZIONE SpA

Opponent:

ALSTOM

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56, 104 (1), 116

Keyword:

"Novelty - main request (no)"
"Inventive step - auxiliary request (no)"
"Apportionment of costs (no)"

Decisions cited:

-

Catchword:

-



Case Number: T 0916/05 - 3.5.02

D E C I S I O N
of the Technical Board of Appeal 3.5.02
of 10 May 2007

Appellant: ABB TRASMISSIONE & DISTRIBUZIONE SpA
(Patent proprietor) P. le Lodi, 3
I-20137 Milano (IT)

Representative: Giavarini, Francesco
Zanoli & Giavarini S.r.l.
Via Melchiorre Gioia, 64
I-20125 Milano (IT)

Respondent: ALSTOM
(Opponent) 25, avenue Kléber
F-75116 Paris (FR)

Representative: Moutard, Pascal Jean
BREVATOME
22, Avenue du Doyen Louis Weil
B. P. 1506
F-38025 Grenoble Cedex 1 (FR)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 13 May 2005
revoking European Patent No. 1108261 pursuant
to Article 102 (1) EPC.

Composition of the Board:

Chairman: M. Ruggiu
Members: M. Rognoni
E. Lachacinski

Summary of Facts and Submissions

- I. The patent proprietor (appellant) appealed against the decision of the opposition division revoking European patent No. 1 108 261.
- II. In the decision under appeal, the opposition division held that the subject-matter of claim 1 of the patent in suit lacked novelty within the meaning of Article 54 EPC, having regard to the following document:
- D1: WO-A-96/36982.
- III. Of all the further documents referred to by the parties in the appeal proceedings the following ones are relevant to the present decision:
- D4: DE-A-32 24 165,
D11: US-A-4 359 616.
- IV. Oral proceedings were held on 10 May 2007.
- V. The appellant (patentee) requested that the decision under appeal be set aside and that the patent be maintained as granted, or if that was not possible, that the patent be maintained in amended form on the basis of claims 1 to 13 of the auxiliary request filed in the oral proceedings.

The respondent (opponent) requested that the appeal be dismissed and that the costs for the appeal procedure, or at least for the oral proceedings before the Board, be apportioned.

VI. Claim 1 of the patent as granted (main request) reads as follows:

"An actuation and control device for opening and closing high- and medium-voltage circuit breakers having at least one fixed contact (37) and at least one moving contact (33), said device comprising actuation means which are operatively connected to the moving contact (33) and supply the energy for performing the opening/closure movement, **characterized in that** said actuation means comprise a servomotor (31, 60), an electronic control and power supply unit (30), and elements (32) for transmitting motion, and **in that** said actuation means and optionally the coupling (36) between the fixed contact (37) and the moving contact (33) are such as to achieve a desired speed of the moving contact (33) at the instant in which it separates from the fixed contact (37)."

Claim 1 according to the auxiliary request differs from claim 1 of the main request in that:

- the expression "high- and medium-voltage circuit breakers" is replaced by "high voltage circuit breakers",
- the term "rotary" is inserted before "servomotor" and
- the term "optionally" in the expression "said actuation means and optionally the coupling (36)" is deleted.

VII. The arguments of the appellant concerning documents D1, D4 and D11 may be summarised as follows:

The actuation and control device for opening and closing high- and medium-voltage circuit breakers according to claim 1 of the patent in suit involved features which were not disclosed in document D1.

D1 related to a device for opening and closing circuit breakers which comprised a voice coil actuator acting directly on the operating rod of a moving contact in order to open or close the current interrupter. As pointed out in the description and shown for instance in Figure 8, the voice coil actuator was operated in such a way as to obtain a velocity profile comprising an initial section with constant acceleration followed by a section with constant velocity and a final section with linearly decreasing velocity. Thus, in the device according to D1, the speed of the moving contact was zero at the beginning of the closing or opening procedure and, in particular, at the instant of physical separation of the contacts. Furthermore, D1 consistently distinguished between a motor and a voice coil, and, in fact, highlighted the drawbacks of using electric motors in conjunction with circuit breakers. Hence, a person skilled in the art, reading D1 in the light of the common general knowledge available before the priority date of the contested patent, would have regarded a voice coil as inherently different from a motor, in particular from a servomotor as specified in the contested patent which had internal feedback means.

It was evident to a person skilled in the art that the gist of the present invention consisted in controlling

the opening of the contacts, and thus the arc forming between them, by setting the speed of the moving contact at the instant of physical separation from the fixed contact. A velocity different from zero at the instant of separation could however not be achieved with the flat contact surfaces shown in D1. A device according to claim 1 thus implied for the person skilled in the art an appropriate coupling between the contacts. An example of such coupling was shown in Figure 12 of the patent in suit.

In summary, the subject-matter of claim 1 as granted was new within the meaning of Article 54 EPC, since it involved features which were not known from D1.

Claim 1 according to the auxiliary request differed from claim 1 of the granted patent in that the servomotor was a rotary servomotor and the "desired speed" specified in the last feature of the claim was achieved by the actuation means and the coupling between the fixed contact and the moving contact. The latter amendment clarified that the coupling between the contacts was also directly responsible for achieving the desired speed of the moving contact.

As pointed out above, the device according to D1 comprised a voice coil actuator and this document in fact taught away from using a servomotor in a circuit breaker, in particular a rotary servomotor. A person skilled in the art starting from D1 would have had no incentive to replace the voice coil actuator known from D1 and its direct link to the moving contact with a rotary servomotor comprising means for translating the rotary movement of the motor into a linear movement of

the moving contact. Furthermore, the fact that both the actuation means and the coupling between the two contacts were involved in achieving a desired speed implied that the latter had to be different from zero. In the device known from D1, however, the speed of separation could only be zero.

D4 showed circuit breakers comprising either a linear motor or a rotary motor for driving the moving contact. However, they were presented as separate embodiments and D4 did not suggest that a rotary motor could advantageously replace a linear motor. Even if some of the embodiments of D4 involved a sliding contact between the fixed contact and the moving contact, this was only in combination with a linear motor. Furthermore, D4 did not hint at the possibility of employing sliding contacts in order to achieve a desired speed of separation of the two contacts.

As to D11, this document showed indeed a tulip-like contact. However, D11 did not teach that such a contact in combination with a rotary servomotor could be used to control the separation of the two contacts and, ultimately, the arc which occurred during the opening of the circuit breaker. Furthermore, D11 did not disclose controlling the speed of the movable contact, so that the corresponding device did not offer the possibility of achieving a desired speed of the moving contact at the instant in which it separated from the fixed contact. In summary, the subject-matter of claim 1 according to the auxiliary request did not result from an obvious combination of any of the cited prior art documents and hence involved an inventive step within the meaning of Article 56 EPC.

The respondent's request for an apportionment of costs was not justified. The patentee had the right to withdraw a previous request for oral proceedings, to file an appeal against the opposition division's decision to revoke the patent and to present all the arguments that were deemed necessary to defend its patent before the second instance. Throughout the opposition and appeal proceedings, the patentee's behaviour had been in compliance with the EPC and had not caused any additional costs to the opponent.

VIII. The respondent's arguments relating to D1, D4 and D11 may be summarised as follows:

The subject-matter of claim 1 of the patent in suit was not new, because D1 disclosed a device comprising all the claimed features. In fact, there was no doubt that a voice coil shown in D1, which converted electromagnetic energy into mechanical energy and had its position controlled by a sensor, was a motor, in particular, a servomotor. Furthermore, the contested patent did not specify any particular kind of servomotor and implied that the latter was simply a motor controlled by some electronic circuitry. As to the last feature of the claim, its wording was very broad and did not exclude the possibility that the "desired speed" of the moving contact could be zero, as was the initial speed of the voice coil in the device according to D1. As the device known from D1 comprised all the features recited in claim 1 of the contested patent, the subject-matter of this claim was not new (Article 54 EPC).

As to claim 1 according to the auxiliary request, it was evident to a person skilled in the art that the linear motor shown in D1 could be replaced by a rotary motor and some mechanical link which would translate the rotary motion into the linear motion required to separate the contacts. In fact, D4 clearly implied that linear and rotary motors were equivalent solutions to the problem of driving the moving contact of a circuit breaker.

As to the last feature of the claim, it was still not clear how the claimed effect, namely the "desired speed", was achieved and which role was to be attributed to the actuation means and the coupling, in particular because the patent in suit related to alleged embodiments of the invention which did not define any coupling between the moving and fixed contacts. Even if it were assumed that the actuation means acted together with the contacts so as to achieve an initial speed of contact separation different from zero, and that the wording of the claim thus implied contacts with some sliding surfaces as shown by the tulip-like structure according to Figure 12 of the patent in suit, it was already known from D4 to use sliding surfaces for coupling the contacts of a circuit breaker. Furthermore, a tulip-like coupling between the contacts of a circuit breaker was known from D11.

As the subject-matter of claim 1 according to the auxiliary request was based on a straightforward combination of the teachings of D1 and D4 or D1 and D11, it did not involve an inventive step within the meaning of Article 56 EPC.

The patentee had decided not to attend the oral proceedings before the opposition division shortly before their scheduled date and then based the appeal on new arguments in support of the patent which could have been presented in oral proceedings before the opposition division. The patentee's behaviour caused additional costs to the opponent, who had to make unnecessary preparations for the oral proceedings which were later cancelled. Hence, in the present case, an apportionment of costs under Article 104 EPC was justified.

Reasons for the Decision

1. The appeal is admissible.

Appellant's main request

- 2.1 It is uncontested that document D1 (see Figures 1, 2 and 3) discloses an actuation and control device for opening and closing high- and medium-voltage breakers which comprises the following features recited in claim 1 of the contested patent:
 - one fixed contact 72 and one moving contact 71;
 - actuation means 6, 8 and 12 which are operatively connected to the moving contact 71 and supply the energy for performing the opening/closure movement,
 - whereby the actuation means comprise an electronic control and power supply unit 12 and elements 6 for transmitting motion.

In the device according to D1 the operating rod 6 is coupled to an actuator, such as a voice coil actuator 8 which directly acts upon the operating rod 6 in order to open or close the contacts of the current interrupter (see D1, page 6, lines 17 to 21).

- 2.2 According to the appellant, the voice coil used in D1 could not be considered as a servomotor as specified in claim 1 of the patent in suit. D1 made a clear distinction between a voice coil and actuators such as solenoids, motors or hydraulic devices, which were relatively slow and had poor response times in comparison with the inherent speed requirements of an interrupter. Thus, the person skilled in the art reading D1 would not equate a voice coil with the servomotor of the present invention.

Furthermore, the device known from D1 did not allow a desired speed of the moving contact to be achieved at the instant in which the contacts separated, because the instant of contact separation coincided with the beginning of the rod's movement and the speed of contact separation was zero.

- 2.3 Hence, according to the appellant, the following features would distinguish the subject-matter of claim 1 of the present application from D1:

- (a) the servomotor according to claim 1 is a motor "which is inherently controlled by dedicated electronic means" (cf. statement of grounds of appeal: page 2/5, second paragraph);

(b) the device of the present invention is designed to achieve "*a desired speed*" of the moving contact at the instant of separation (see last feature of claim 1).

2.4 As to feature (a), the contested patent merely specifies that the "*term servomotor is generally used to define motors having a feedback control system*" (patent specification, column 3, lines 54 to 55).

Figure 1 of D1 shows a current interrupter comprising a movable contact connected to one end of an operating rod 6. "*The other end of the operating rod 6 is operatively coupled to an actuator, such as a voice coil actuator 8. The voice coil actuator 8 directly acts upon the operating rod 6 in order to open or close the contacts of the current interrupter 4*" (D1, page 6, lines 17 to 21).

The current passing through the voice coil winding is controlled by a "*control mechanism*" 12 which may be coupled to a feedback device for providing the position of the operating rod (D1, page 7, lines 3 to 10). In other words, the device known from D1 comprises a voice coil, *i.e.* a linear motor, control means and feedback means for the voice coil. Insofar as it is used to operate the moving contact of the interrupter 4 according to a predetermined "*motion profile*" (D1, page 13, lines 2 to 10), the voice coil of the known device constitutes a "*servomotor*" as specified in the contested patent.

2.5 As to feature (b), it is noted that its wording covers a first alternative, whereby "*a desired speed*" is

achieved by the actuation means, and a second alternative, whereby the same effect is achieved by the actuation means and the coupling means. As specified in the claim, the actuation means comprise "a servomotor", "an electronic control and power supply unit" and "elements (32) for transmitting motion". According to the wording of the claim, the combination of these three components of the actuation means should be such as to achieve a "desired speed" of the moving contact at the instant of contact separation.

Figures 5 to 11 show several examples of embodiments of elements for transmitting motion between the motor and the moving contact according to the present invention. In particular, Figures 5 and 6 relate to elements which essentially comprise a sleeve or a slot inside which a rod can move freely, so that, for an initial period after the opening command, the movement applied by the servomotor to the rod is not transmitted to the moving contact. It is only after the rod has reached the bottom end of the slot or the lower edge of the sleeve, that the moving contact starts separating from the fixed contact. As acknowledged by the appellant, the movement imparted by these elements to the moving contact begins with zero velocity. If physical separation of the two contacts occurs as soon as the moving contact is moved away from the fixed contact, the speed at the instant of separation can only be zero.

The other embodiments of elements for transmitting motion between the motor and the moving contact shown in Figures 7 to 11 aim at providing a variable motion transmission by means of a cam 71 (Figure 8), a rotating crank 62 (Figure 7), a pinion 81 and gear 78

(Figures 9 and 10) and a shaft with a helical groove (Figure 11). All these elements aim to convert the rotary motion of the servomotor into a longitudinal motion of the moving contact. If the translation of the moving contact and thus the physical separation of the contacts start as soon as the motor's rotation begins, the speed at the instant of separation can only be the initial speed of the longitudinal movement of the contact, namely zero. In other words, the different elements for transmitting motion specified in the contested patent account for different ratios between the longitudinal displacement of the moving contact and the angular displacement of the axle of the servomotor and thus for different transmission ratios and acceleration profiles. In all cases, however, the initial velocity can only be zero.

As it has to be assumed that the effect specified in the last feature of claim 1 is to be achieved by actuation means including one of the examples of elements for transmitting motion between the servomotor and the moving contact presented in the contested patent as embodiments of the invention and that the speed of the moving contact achieved by means of such elements at the instant of the separation can only be zero, it must be concluded that the "*desired speed*" of the moving contact recited in the claim could also be zero.

2.6 Feature (b) of claim 1 covers therefore the operation of an actuation and control device according to D1 in which the physical separation of the planar surfaces of the moving and fixed contacts begins as soon as the voice coil is energized and thus when the velocity at

the instant of physical separation of the contacts is zero.

- 2.7 Since D1 shows an actuation and control device which comprises also features (a) and (b) and thus falls within the terms of claim 1 of the contested patent, the subject-matter of this claim is not new within the terms of Article 54 EPC.

Appellant's auxiliary request

- 3.1 Claim 1 according to the auxiliary request differs from claim 1 according to the main request in that:

- (i) the claimed actuation and control device is for opening and closing high voltage circuit breakers,
- (ii) the actuation means comprise a "*rotary servomotor*", and
- (iii) said actuation means and the coupling between the fixed contact and the moving contact are such as to achieve a desired speed of the moving contact at the instant in which it separates from the fixed contact.

Hence, the subject-matter of claim 1 is now limited to an actuation and control device which comprises a rotary servomotor and a combination of actuation means and coupling means such as to achieve a desired speed of the moving contact at the instant of contact separation.

- 3.2 As pointed out above, D1 discloses an actuation and control device for opening and closing high voltage

circuit breakers (feature (i)) comprising a servomotor which is constituted by a voice coil. Thus, D1 does not show an actuation and control device comprising a rotary servomotor (feature (ii)), as specified in claim 1 according to the auxiliary request.

- 4.1 Document D4 (Figure 2) relates to an actuation and control device for opening and closing high voltage circuit breakers having fixed contacts 38 and 39 and a moving contact 44. This device comprises actuation means 41, 42, 43 and 54 which are operatively connected to the moving contact 44 and supply the energy for performing the opening/closure movement. The moving contact 44 is coaxial with the rotor 43 and is provided on the side removed from the fixed contacts 38 and 39 with a threaded surface which engages with a threaded hole of a support element 46. As the rotor turns, the threaded part of the contact rod 44 rotates within the threaded hole of the element 46 and, according to the direction of rotation, moves towards or away from the fixed contacts. The movement is controlled by a control and switch unit 54 which supplies current to the winding of the stator. As specified in D4 (page 14, line 33 to page 15, line 5), the motor is switched off at the end of travel of the contact by means of position switches. D4 also suggests using a mechanical or optoelectronic rotation counter. This control of the rotation of the motor of D4 can be regarded as a kind of servo control in the sense that the motor is switched off when the moving contact has travelled a certain distance or the motor has made a certain number of turns. D4 thus shows actuation means comprising an electronic control and power supply unit.

In the circuit breaker according to Figure 4 of D4, the contact rod is moved along its axis by means of a linear motor comprising a cylindrical element of magnetic material which moves within the electromagnetic field generated by a "special inductive unit" ("*einer speziellen induktiven Einheit*") 78. Another embodiment shown in Figure 3 of D4 uses a stroke magnet as linear drive for the contact rod.

- 4.2 Hence, D4 teaches, *inter alia*, that the longitudinal movement of one of the contacts of a circuit breaker can be effected either directly by means of a linear motor or indirectly by means of a rotary motor coupled with appropriate elements for converting the rotary motion of the rotor into a linear motion of the contact.

In the light of D4, it would be obvious to the skilled person to consider the possibility of replacing the voice coil shown in D1 with actuation means comprising a rotary motor as shown in Figure 2 of D4.

- 5.1 As to feature (iii), the description of the patent specification (column 4, lines 54, 55) points out that the moving contact 33 is coupled to a fixed contact 37 by means of "*a suitable coupling system 36*". By virtue of the action of the motor and of the structure of the motion transmission elements and/or of the coupling, it is possible to achieve a chosen speed of the moving contact at the instant in which it separates from the fixed contact during the opening movement (patent specification, column 4, line 57 to column 5, line 4). The use of motion transmission elements which have an appropriate structure and/or the adoption of a suitable coupling between the moving contact and the fixed

contact allow the chosen speed of the moving contact during the opening movement to be achieved without requiring an excessive power on the part of the servomotor (patent specification, column 5, lines 15 to 24). According to the description (column 6, lines 3 to 10), the embodiment of Figure 5 has the advantage that during the opening of the circuit breaker the moving contact begins its separation from the fixed contact with an initial speed different from zero. If the geometry of the moving contact and of the fixed contact is known, it is possible to set the dimensions of the gap 45 so that the moving contact has a preset speed at the instant in which it separate from the fixed contact. The same considerations apply to the embodiments of Figures 7 and 8. The patent in suit therefore implies that the elements which translate the rotary motion into a linear motion are such as to impart an initial acceleration to the moving contact and thus, depending on the contact surfaces, a certain velocity to the moving contact before the latter is physically separated from the fixed contact. This is essentially achieved by combining actuation means for imparting a linear movement to the moving contact with sliding contact surfaces which remain in physical contact after the moving contact has started its travel.

- 5.2 In other words, it is clear from all the embodiments of the contested patent that the only way to achieve a desired speed of the moving contact at the instant of separation is to delay the actual separation of the two contacts with respect to the inception of the translation of the moving contact. When the contacts of Figure 12 are used, this delay and thus "*a desired speed*" different from zero can be achieved. Hence, the

only solution proposed in the patent in suit to the problem of achieving a certain speed at the moment of separation is by coupling the moving and the fixed contacts so that their contact surfaces slide with respect of each other and remain in physical contact for a certain time after the translation of the moving contact has started.

5.3 A coupling between the fixed and the moving contacts of a circuit breaker which involves sliding surfaces is known for instance from D4. As shown in Figures 3 and 4, the fixed contact of these embodiments comprises two blades 56, 57 and 76, 75 which are in contact with the moving rod, when the circuit breaker is closed, and slide along the side of the rod before separating from it, when the circuit is opened. The coupling shown in Figures 3 and 4 in combination with the actuation means used for translating the rod achieves the same effect as the coupling shown in Figure 12 of the patent in suit in the sense that separation between the moving contact and the fixed contact occurs with a velocity different from zero at the instant of physical separation of the contacts. It is clear that the motor can be controlled so as to determine the velocity profile of the moving contact and thus achieve a desired speed at the instant of contact separation.

5.4 Similarly, document D11 (see Figures 11 to 16) shows a number of couplings between fixed and moving contacts of a self-extinguishing switch, in which the coupling is such that there is a certain delay between the instant at which the moving contact starts moving and the instant in which it is actually separated from the fixed contact. It is self-evident that taking into

account the acceleration of the moving contact and the time required by the coupling for achieving a complete physical separation of the contacts a desired speed of the moving contact at the instant of separation can be achieved.

- 5.5 In summary, both D4 and D11 relate to activation and control devices for opening and closing circuit breakers comprising actuation means and a coupling between the fixed contact and the moving contact which are such as to achieve a desired speed of the moving contact at the instant in which it separates from the fixed contact, as specified in the last clause of the claim according to the auxiliary request (see feature (iii) above).

In the opinion of the Board, a person skilled in art, starting from a device according to D1 and wishing to increase the speed of the moving contact in order to reduce the arc formation during opening of the circuit breaker, would consider the possibility of applying the teaching of D4 or D11 concerning the coupling between the fixed and moving contacts to a device according to D1.

- 6.1 In the result, the Board finds that it would be obvious to a person skilled in the art to combine the teachings of D1 and D4 and thus arrive at a device falling within the terms of claim 1 of the auxiliary request. Hence, the subject-matter of this claim does not involve an inventive step within the meaning of Article 56 EPC.

- 6.2 As none of the appellant's requests meets the requirements of the EPC, the appeal has to be dismissed.

Apportionment of costs

- 7.1 Under Article 104(1) EPC, each party to opposition proceedings must, as a rule, meet the costs it has incurred. However, the opposition division or board of appeal may, for reasons of equity, order a different apportionment of costs incurred during taking of evidence or in oral proceedings.
- 7.2 In the present case, the respondent has supported its request for a reimbursement of the costs incurred in the preparation for the appeal procedure and, in particular, for the oral proceedings before the Board by arguing that the appellant had essentially tried to delay the outcome of the opposition by not taking part in the oral proceedings before the opposition division and then by substantiating its appeal with arguments which could have been presented during the opposition proceedings.
- 7.3 As it appears from the opposition file, the opponent filed an auxiliary request for oral proceedings with the statement of grounds of opposition dated 18 June 2003. In its reply dated 4 March 2004, the patent proprietor also requested that oral proceedings be arranged in the event that the opposition division intended revoking the patent. With a letter dated 11 October 2004, the opponent confirmed its auxiliary request for oral proceedings. With a letter dated 22 March 2005 the patentee informed the opposition division that it would not be attending the oral proceedings scheduled for 5 April 2005 and withdrew its request for oral proceedings. By fax dated

24 March 2005 the opposition division informed the opponent that the oral proceedings were cancelled and that the procedure would be continued in writing.

- 7.4 As stipulated by Article 116 EPC, oral proceedings shall take place either at the instance of the European Patent Office if it considers this to be expedient or at the request of any party to the proceedings. In the present case, following the patentee's withdrawal of its request for oral proceedings, the opposition division found that a decision to revoke the patent according to the opponent's request could be issued without holding oral proceedings.

Since the patent proprietor was adversely affected by the decision of the opposition division, it was entitled to file an appeal and submit any arguments which, in its view, might be of use in defending its patent before the second instance. The fact that some of the arguments had not been presented before and could have been filed in oral proceedings before the opposition division, had such proceedings taken place, is in the Board's opinion irrelevant and cannot be regarded as an abuse of procedure. In fact, an appellant cannot be prevented from choosing a different line of arguments when making its case before a board of appeal.

Hence, the Board finds that the behaviour of the patent proprietor both in the opposition proceedings and in the appeal proceedings was in compliance with the requirements of the EPC and the Rules of Procedure of the Boards of Appeal.

7.5 In the result, the Board comes to the conclusion that the circumstances of the present case do not justify an apportionment of costs.

Order

For the above reasons it is decided that:

1. The appeal is dismissed.
2. The request for apportionment of costs is refused.

The Registrar:

The Chairman:

U. Bultmann

M. Ruggiu