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**Datasheet for the decision
of 22 July 2008**

Case Number: T 1451/05 - 3.5.02

Application Number: 00992096.8

Publication Number: 1247285

IPC: H01H 9/36

Language of the proceedings: EN

Title of invention:

Arc chamber for low-voltage circuit breakers

Patentee:

ABB Service S.r.l.

Opponent:

Siemens Aktiengesellschaft

Headword:

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Relevant legal provisions:

EPC Art. 54

Relevant legal provisions (EPC 1973):

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Keyword:

"Novelty (no)"

Decisions cited:

-

Catchword:

-



Case Number: T 1451/05 - 3.5.02

D E C I S I O N
of the Technical Board of Appeal 3.5.02
of 22 July 2008

Appellant: ABB Service S.r.l.
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Representative: Giavarini, Francesco
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Respondent: Siemens Aktiengesellschaft
(Opponent) Abteilung CT IP A & D
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Representative:

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 27 October 2005
revoking European patent No. 1247285 pursuant
to Article 102(1) EPC 1973.

Composition of the Board:

Chairman: M. Ruggiu
Members: J.-M. Cannard
P. Mühlens

Summary of Facts and Submissions

I. The proprietor appealed against the decision of the opposition division revoking European patent No. 1 247 285. The reason given for the revocation was that the subject-matter of claim 1 of the patent as granted lacked novelty (Articles 100, 52 and 54 EPC).

II. The document:

D1: US-A- 5 589 672,

considered during the proceedings before the opposition division, remains relevant to the present appeal.

III. Claim 1 of the patent in suit as granted (claim 1 of the current request) reads as follows:

"An arc chamber for low-voltage circuit breakers comprising:

multiple substantially U-shaped metallic plates (30); an enclosure (40) made of insulating material which is substantially shaped like a parallelepiped and comprises two side walls (41, 42), a top wall (44), said side walls (41, 42) having, on the inside, multiple mutually opposite slots (47) for the insertion of said metal plates (30), the top wall (44) having at least one opening (49) **characterised in that** a bottom wall (43) and a rear wall (46) is provided wherein the bottom wall (43) has at least one opening (48) and said enclosure (40) being open at the front."

- IV. Oral proceedings were held before the Board on 22 July 2008.
- V. The appellant (patentee) requested that the decision under appeal be set aside and that the patent be maintained unamended.
- VI. The respondent (opponent) requested that the appeal be dismissed.
- VII. The arguments of the appellant proprietor can be summarized as follows:

An enclosure of an arc chamber which was totally open at the front, as shown in the drawings and recited in claim 1 of the opposed patent, was not disclosed in document D1 because all the arc chambers disclosed in D1 had an enclosure 14 with a front face which comprised at its lower end a portion of a wall 14c, as appeared for instance from figures 7(A) and 7(B). It did not appear clearly from figure 7(B) that the enclosure 14 comprised a plate disposed at the lower part of a rear wall 14e and extending between the two side walls 14a. Said plate had no reference number in figure 7(B) and was not mentioned in the description of D1. Construing such a plate as a part of a bottom wall of the enclosure 14 was purely speculative. The enclosures described in D1 were totally open at the bottom and could not comprise any bottom wall because it would not allow the insertion of the magnetic drive core 13 into the arc chamber. The arc chamber according to claim 1 of the patent as granted, which differed from the prior art arc chamber disclosed in D1 by two features, i.e. an insulating enclosure open

at the front and a bottom wall with at least one opening, was novel in view of the prior art.

VIII. The arguments of the respondent opponent can be summarized as follows:

D1 disclosed an arc chamber which comprised all the features of the arc chamber according to claim 1 of the patent in suit. Claim 1, which did not specify that the front of the enclosure was totally open, covered an arc chamber where the front wall of the enclosure had an opening so as to allow the insertion of U-shaped plates. Such a front wall could not be distinguished over the front wall of the enclosure disclosed in D1 which had a portion of wall 14c at its lower part and allowed the insertion of plates at its highest part. Moreover, as could be seen on the sectional view of figure 7(B), a plate was disposed perpendicularly to the rear wall 14e of the enclosure 14 and connected the two side walls at their lower ends. The opening formed between said plate, which was a part of a bottom wall, and the portion 14c of the front wall of the enclosure allowed the passage of an arc quenching contact in the same way as the opening of the bottom wall specified in claim 1. The subject-matter of claim 1 thus lacked novelty.

Reasons for the Decision

1. The appeal is admissible.

Scope of claim 1 of the patent as granted

2. Claim 1 of the patent in suit as granted relates to an arc chamber which is described, *inter alia*, in paragraph [0017] and shown in figures 3, 5 and 6 of the patent. According to the proprietor, the various enclosures of an arc chamber shown in said figures 3, 5 and 6 have a front which is totally open. Paragraph [0017] however specifies in a more general way that the enclosure 40 of the arc chamber according to the first embodiment of the invention is "open at the front wall so as to allow the insertion of the plates 30". Said first embodiment is thus not necessarily restricted to an enclosure having a totally open front and there is no reason for giving the terms "said enclosure (40) being open at the front" in claim 1 a more restrictive meaning than that they have in a described embodiment on which claim 1 is based. Accordingly, the front of the enclosure in claim 1 is to be understood as being open so as to allow the insertion of the plates (30), and not necessarily as being completely open.

3. According to claim 1, the enclosure (40) comprises a bottom wall (43) which has at least one opening. However, neither the shape, nor the extent of said opening is specified in claim 1. According to paragraph [0017], the opening of the bottom wall (or the lower wall 43 in line 42 of column 3) is such that it allows "the passage of the arc quenching contact" (see column 3, lines 38 and 39). Therefore, the bottom wall in claim 1 can be understood as covering any plate disposed at the lower end of the side walls and the rear wall and arranged so as to allow the passage of an arc quenching contact.

Novelty

4. The proprietor has not disputed the view of the opposition division that the arc chamber described with reference to the figures 2, 7(A) and 7(B) of D1 comprises all the features which are specified in the pre-characterising part of claim 1. Furthermore, the enclosure 14 of D1 has a rear wall 14e. For the following reasons, the Board is of the opinion that the other features of claim 1 of the patent, i.e. "the bottom wall (43) has at least one opening (48) and said enclosure (40) being open at the front" are disclosed in D1.
 - 4.1 The enclosure 14 shown in figures 2 and 7(B) of D1 has a plate 14c connected at the lower end of its front face between the side walls 14a. However, an opening is provided in said front face between said plate 14c, the top wall 14b and the side walls 14a so as to allow the insertion of U-shaped metallic plates 2 into the enclosure. The open front of the claimed enclosure thus does not differ, at the level of generality that the terms "open at the front" have in claim 1, from the front face of the enclosure which is disclosed in D1.
 - 4.2 The longitudinal sectional view in figure 7(B) of D1 shows a hatched plate which is disposed perpendicular to the side walls 14a and to the rear wall 14e of the enclosure at a lower end of said rear wall. This plate allows the passage of the arc stationary contact member 5 shown in figure 1 of D1 and thus does not differ from the bottom wall having at least one opening which is specified in claim 1. Accordingly, D1 discloses an arc chamber which comprises all the features set out in

claim 1. The subject-matter of claim 1 lacks novelty (Article 54 EPC).

5. The Board concludes therefore that the grounds for opposition mentioned in Article 100 EPC prejudice the maintenance of the patent.

Order

For these reasons it is decided that :

The appeal is dismissed.

The registrar:

The Chairman:

A. Vottner

M. Ruggiu