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**Datasheet for the decision  
of 23 April 2026**

**Case Number:** T 1197/24 - 3.4.02

**Application Number:** 18728387.4

**Publication Number:** 3747100

**IPC:** H02H7/26, H02H9/04, H02J3/36

**Language of the proceedings:** EN

**Title of invention:**  
Surge arrester dimensioning in a DC power transmission system

**Patent Proprietor:**  
Hitachi Energy Ltd

**Opponent:**  
General Electric Technology GmbH

**Relevant legal provisions:**  
EPC Art. 100(b), 83  
RPBA 2020 Art. 13(2)

**Keyword:**  
Sufficiency of disclosure - main request and auxiliary requests (no)  
Amendment after summons - exceptional circumstances (no)



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**Chambres de recours**

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Case Number: T 1197/24 - 3.4.02

**D E C I S I O N**  
**of Technical Board of Appeal 3.4.02**  
**of 23 April 2026**

**Appellant:**  
(Patent Proprietor)

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**Respondent:**

(Opponent)

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**Representative:**

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**Decision under appeal:**

**Decision of the Opposition Division of the  
European Patent Office posted/electronically  
transmitted on 24 July 2024 revoking European  
patent No. 3747100 pursuant to Article 101(3) (b)  
EPC.**

**Composition of the Board:**

**Chairman**

H. Bronold

**Members:**

C.D. Vassoille

W. Ungler

## **Summary of Facts and Submissions**

- I. The appeal of the patent proprietor lies from the decision of the opposition division revoking European patent No. 3 747 100.
- II. In a communication under Article 15(1) RPBA, annexed to the summons to oral proceedings, the Board informed the parties, *inter alia*, that it considered "a group" of elements to consist of more than one element.
- III. Oral proceedings before the Board took place on 23 April 2026 in the format of a videoconference.

The appellant (patent proprietor) requested that the decision under appeal be set aside and the patent be maintained as granted (main request) or alternatively, that the patent be maintained in amended form according to one of the auxiliary requests 0.1 to 0.11, 1.0 to 1.11, 2.0 to 2.11, 3.0 to 3.11, 4.0 to 4.11 and 5.0 to 5.11, all submitted with the statement setting out the grounds of appeal. The appellant further requested that the patent be maintained in amended form on the basis of the claims of the additional auxiliary request filed during the oral proceedings before the Board.

The respondent (opponent) requested that the appeal be dismissed.

- IV. Claim 1 of the main request has the following wording (feature as indicated on pages 8 and 9 of the decision under appeal):

- 1A A neutral arrangement (NA) for a converter station of a direct current power transmission system comprising
- 1B a first converter (22),
- 1C said neutral arrangement (NA) comprising a first and second group of surge arrestors (SANB1, SANB2, SANB3, SANB4, SANB5, SANB6, SANL1, SANL2, SANLn)
- 1D and a group of neutral buses,
- 1E where each surge arrester is connected between a neutral bus (NB1, NB2, CNB) of the group of neutral buses and ground,
- 1F wherein a first insulation area of the neutral arrangement is a high voltage insulation zoom area (NZOOMH) comprising the first group of surge arrestors (SAA) and a second insulation area of the neutral arrangement is a low voltage insulation zoom area (NZOOML) comprising the second group of surge arrestors (SAB),
- 1G wherein the surge arrestors (SANB1, SANB2, SANB4, SANB5) in the first group (SAA) have a higher arrester reference voltage than the surge arrestors (SANB3, SANB6, SANL1, SANL2, SANLn) in the second group (SAB).

V. Claim 1 of each of the auxiliary requests 0.1 to 0.11, 1.0 to 1.11, 2.0 to 2.11, 3.0 to 3.11, 4.0 to 4.11 and 5.0 to 5.11 refers to a neutral arrangement for a converter station of a direct current power transmission system comprising only a first converter

in combination with a group of neutral buses as in claim 1 of the main request.

- VI. In view of the Board's decision not to admit the additional auxiliary request filed during the oral proceedings before the Board, it is not necessary to reproduce the wording of that request here.

## **Reasons for the Decision**

### **1. Interpretation of claim 1 ("a group of neutral buses")**

1.1 In the present case, the assessment of sufficiency of disclosure under Article 100(b) EPC hinged on the interpretation of the term "a group of neutral buses" in claim 1, specifically whether it encompasses a single neutral bus. The Board arrived at the conclusion that, in the context of claim 1, the expression "a group of" denotes a plurality of elements, as evidenced by the use of the plural forms "surge arrestors" and "neutral buses" in the claim language. The Board further considers that the Oxford English Dictionary definition cited by the respondent is not pertinent to the technical context of claim 1. Furthermore, the description does not provide support for construing "a group" as comprising only a single surge arrestor or neutral bus. Consequently, the Board concluded that, even under the broadest reasonable interpretation, a group within the meaning of claim 1 cannot consist of only a single element.

1.2 The respondent provided further arguments against this interpretation, which the Board duly considered but finds that they do not change the outcome reached above. Since the above interpretation adopted by the Board is decisive for the outcome of the assessment of the ground for opposition under Article 100(b) EPC and led to the objection being successful (see below), further discussion of the respondent's detailed arguments is not required for the present decision.

**2. Appellant's request not to admit the "monopole argument" (Article 13(2) RPBA)**

2.1 In its letter dated 27 March 2026, the respondent submitted on pages 17 and 18 that, if asymmetric monopole systems were encompassed by the scope of claim 1, the patent failed to disclose the invention in a manner sufficiently clear and complete for it to be carried out across the whole scope claimed. Specifically, the respondent argued that claim 1 required only a first converter in a converter station, but also required a plurality of neutral buses. The patent, however, did not sufficiently disclose the combination of only a first converter with a plurality of neutral buses.

2.2 The appellant argued that this line of argument constituted an amendment to the respondent's appeal case and requested that it not be admitted into the appeal proceedings pursuant to Article 13(2) RPBA.

2.3 While the letter of 27 March 2026 was in fact filed after the issuance of the communication under Article 15(1) RPBA, the Board does not consider the submission in question to be an amendment to the respondent's appeal case within the meaning of Article 13(2) RPBA. Rather, the Board regards it as a normal development of the respondent's appeal case and the arguments already presented in the reply to the appeal.

2.4 In particular, the reply to the appeal already raised the objection that the patent described the invention only in the context of a bipolar system, whereas claim 1 also covered asymmetric monopole systems and other configurations for which the patent did not contain an enabling disclosure (see in particular page

14 of the reply to the appeal). The reasoning in the letter of 27 March 2026 merely expanded on this objection, specifically addressing the embodiment covered by claim 1 involving multiple neutral buses, as discussed by the Board in points 22 and 23 of its communication under Article 15(1) RPBA.

2.5 For the reasons set out above, the Board decided to admit the respondent's line of argument under Article 13(2) RPBA.

**3. Main request - Sufficiency of disclosure (Article 100(b) EPC)**

3.1 The Board arrived at the conclusion that the patent does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

3.2 Specifically, the patent fails to provide adequate information enabling the person skilled in the art to implement a neutral arrangement suitable for use in a converter station of a direct current power transmission system comprising a first converter and a group of neutral buses, i.e. with more than one neutral bus.

The patent describes the claimed invention in detail only in the context of the embodiment shown in figure 4, which relates to a bipolar system including first and second converters and a group of neutral buses. It is not apparent how the system could be realised as a monopole system while still comprising multiple neutral buses.

3.3 The appellant referred to paragraph [0065] of the patent, which states that the invention may also be applicable to asymmetric monopole systems, in which case there was no second converter and no second neutral bus. The appellant further argued that, by following this instruction and removing the second converter and the second neutral bus from the system of figure 4, the person skilled in the art would recognise that the resulting monopole system includes a first converter and two neutral buses, namely the first neutral bus (NB1) and the common neutral bus (CNB).

The respondent, however, contended that such an arrangement was not technically feasible, and the Board agrees. In particular, the Board considers that removal of the second neutral bus (NB2) would not result in two distinct remaining neutral buses (NB1 and CNB), but rather in a single neutral bus connected to the converter station. The neutral buses NB1 and CNB would effectively constitute a single neutral bus after removal of the second neutral bus NB2. The appellant did not provide convincing arguments as to how a person skilled in the art could implement more than one neutral bus with only a single converter in a monopole system.

3.4 The appellant argued that the first converter was not part of the claimed neutral arrangement, but only part of the converter station to which the neutral arrangement is connected. The Board does not find this argument persuasive, since the neutral arrangement as claimed is "for a converter station [...] comprising: a first converter" and must therefore be suitable for connection to a converter station with only one converter, as defined in claim 1.

3.5 Furthermore, the Board is not convinced by the appellant's assertion that the monopole arrangement does not fall within the scope of claim 1, on the basis that the person skilled in the art would recognise the contradiction with the presence of multiple neutral buses and therefore exclude such an arrangement from claim 1.

In the Board's view, claim 1 is explicitly directed to the use of the neutral arrangement with a monopole system by explicitly defining in claim 1 the presence of only one first converter. It is therefore not reasonable to assume that the person skilled in the art would consider the use of the claimed neutral arrangement in a monopole system to be excluded from the claimed scope.

3.6 In light of the above considerations, the Board concluded that the ground for opposition under Article 100(b) EPC prejudices the maintenance of the patent as granted.

**4. Auxiliary requests 0.1 to 0.11, 1.0 to 1.11, 2.0 to 2.11, 3.0 to 3.11, 4.0 to 4.11 and 5.0 to 5.11 - Sufficiency of disclosure (Article 83 EPC)**

4.1 Claim 1 of each of the auxiliary requests 0.1 to 0.11, 1.0 to 1.11, 2.0 to 2.11, 3.0 to 3.11, 4.0 to 4.11 and 5.0 to 5.11 is limited only to a neutral arrangement for a converter station comprising a first converter in conjunction with a group of neutral buses. The Board's observations regarding the main request under Article 100(b) EPC therefore apply equally to each of the above mentioned auxiliary requests under Article 83 EPC. The appellant has not presented any further arguments in this regard.

4.2 Therefore, the Board concluded that none of the auxiliary requests 0.1 to 0.11, 1.0 to 1.11, 2.0 to 2.11, 3.0 to 3.11, 4.0 to 4.11 and 5.0 to 5.11 meets the requirement of Article 83 EPC.

**5. Additional auxiliary request - Admittance (Article 13(2) RPBA)**

5.1 During the oral proceedings before the Board, the appellant submitted an additional auxiliary request, the subject-matter of claim 1 of which was directed to a bipolar system and thus included, *inter alia*, a second converter.

5.2 Pursuant to Article 13(2) RPBA, any amendment to a party's appeal case made after notification of a communication under Article 15(1) RPBA shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

5.3 The Board considers that the additional auxiliary request submitted during the oral proceedings constitutes an amendment to the appellant's appeal case and not just a normal development of their case. The Board further finds that no exceptional circumstances within the meaning of Article 13(2) RPBA have been established.

5.4 The appellant argued that the additional auxiliary request was a response to a line of argument raised for the first time in the respondent's letter of 27 March 2026, shortly before the oral proceedings, and thus represented a normal development of their appeal case. The appellant contended that any response to this

letter could not reasonably have been filed earlier. Furthermore, they submitted that the original objection in the reply to the appeal was formulated in general terms, referring to monopole or other systems, and was not specifically directed to the technical feasibility of multiple neutral buses in an asymmetric monopole system.

- 5.5 The Board does not find these arguments persuasive. First, the Board notes that the appellant did not react at any stage of the written proceedings to the issues raised by the respondent in the reply to the appeal, nor to the observations made by the Board in its communication under Article 15(1) RPBA, nor to the respondent's letter of 27 March 2026. As noted in point 2. above, the specific issue of the sufficiency of disclosure for a monopole system with a plurality of neutral buses was only a further development of the general objection already contained in the reply to the appeal, which asserted that claim 1 encompasses systems (including monopole systems) not sufficiently disclosed in the patent, which describes only a bipolar system in detail.

The appellant could and should have addressed this issue earlier, for example by filing the auxiliary request in question limited to a bipolar system, which is, as noted already above, the only embodiment described in detail in the patent. Notably, none of the various auxiliary requests filed with the statement of grounds of appeal included a corresponding limitation of claim 1 to a bipolar system. Instead, the appellant remained silent throughout the written phase of the appeal proceedings.

5.6 In view of the above, the Board concluded that the circumstances presented are not exceptional and do not justify admittance of the additional auxiliary request under Article 13(2) RPBA.

## 6. Conclusion

Since none of the appellant's requests in the appeal proceedings met all requirements of the EPC, the appeal had to be dismissed.

## Order

### For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



L. Gabor

H. Bronold

Decision electronically authenticated