

Internal distribution code:

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

**Datasheet for the decision
of 4 February 2021**

Case Number: T 1183/16 - 3.5.02

Application Number: 04817705.9

Publication Number: 1639609

IPC: H01B12/00, H01F6/00, H01L39/14

Language of the proceedings: EN

Title of invention:
Novel Superconducting Articles

Patent Proprietor:
Superpower, Inc.

Opponents:
Theva Dünnschichttechnik GmbH
BASF SE

Relevant legal provisions:
EPC Art. 83, 113(1)

Keyword:
Sufficiency of disclosure - (no)
Substantial procedural violation - violation of the right to
be heard (no)

Decisions cited:

T 0473/98



Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1183/16 - 3.5.02

D E C I S I O N
of Technical Board of Appeal 3.5.02
of 4 February 2021

Appellant: Superpower, Inc.
(Patent Proprietor) 450 Duane Avenue
Schenectady, NY 12304 (US)

Representative: Zimmermann & Partner
Patentanwälte mbB
Postfach 330 920
80069 München (DE)

Respondent: Theva Dünnschichttechnik GmbH
(Opponent 1) Rote-Kreuz-Str. 8
85737 Ismaning (DE)

Representative: Wegner, Hans
Bardehle Pagenberg Partnerschaft mbB
Patentanwälte, Rechtsanwälte
Postfach 86 06 20
81633 München (DE)

Respondent: BASF SE
(Opponent 2) 67056 Ludwigshafen (DE)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 16 March 2016
revoking European patent No. 1639609 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman R. Lord
Members: G. Flyng
 W. Ungler

Summary of Facts and Submissions

I. The patent proprietor is appealing against the decision of the opposition division revoking the European patent published as EP 1 639 609 B1. The opponents 1 and 2 are respondents to the appeal.

II. Claim 1 of the patent as granted reads as follows:

*"1. A high temperature superconducting tape comprising:
a substrate (10) having first and second opposite surfaces (11a, 11b);
a buffer layer (12a) overlying the first opposite surface of the substrate;
a high temperature superconductor layer (14a) overlying the buffer layer; and
first and second electroplated stabilizer layers (18a, 18b) respectively overlying the superconductor layer and the second opposite surface of the substrate and encapsulating the superconducting tape,
and wherein the first and second stabilizer layers include lateral bridging portions (20a, 20b) extending so as to define first and second side surfaces of the superconducting tape, and wherein the lateral bridging portions provide electrical connection to the substrate,
characterized in that the lateral bridging portions have a positive radius of curvature to form a convex contour along the side surfaces of the superconducting tape for reducing build up of electrical charge at high voltages."*

III. In the contested decision, the opposition division considered the proprietor's main request for rejection of the two oppositions and auxiliary requests I to IV filed with letter dated 10 December 2015 for maintenance of the patent in amended form.

In a section entitled "II. Reasons for the decision", the opposition division held that the patent as granted (main request) met the requirements of Article 123(2) EPC (see part 7), but that the patent as granted, and as proposed in accordance with auxiliary requests I to IV did not meet the requirements of Article 83 EPC (see parts 8 to 10). In essence, the opposition division found that the patent did not disclose how to electroplate lateral bridging portions (20a, 20b) that have "a positive radius of curvature to form a convex contour along the side surfaces of the superconducting tape for reducing build up of electrical charge at high voltages" as claimed in all requests, and as shown in figure 2 of the patent.

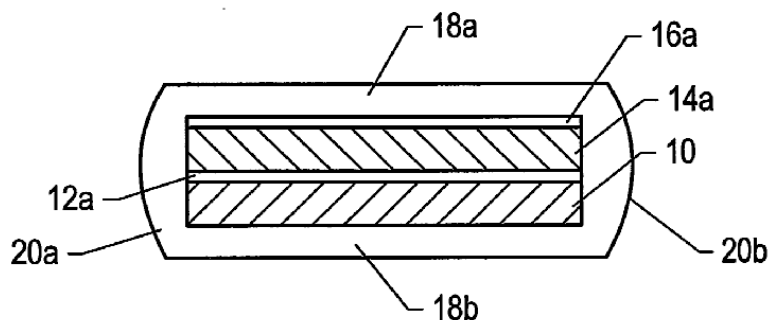


FIG. 2

In a section entitled "III. Decision" the opposition division stated: "For the above reasons the Opposition Division decides: The patent is revoked ..."

In a subsequent section entitled "IV. Further Remarks" the opposition division presented remarks on novelty and inventive step.

IV. With the statement setting out the grounds for appeal the appellant filed amended claim sets according to further auxiliary requests V to IX.

In respect of Article 83 EPC, the appellant argued in essence that whilst the patent itself did not disclose how to electroplate lateral bridging portions having the claimed convex contour along the side surfaces of the superconducting tape, the skilled person would be able to carry this out using the common general knowledge evidenced by the text book "Galvanotechnik", N Kanani, Hanser Verlag, 1st edition 2000.

The appellant referred to figure 4.27 on page 146 of "Galvanotechnik", which is reproduced below:

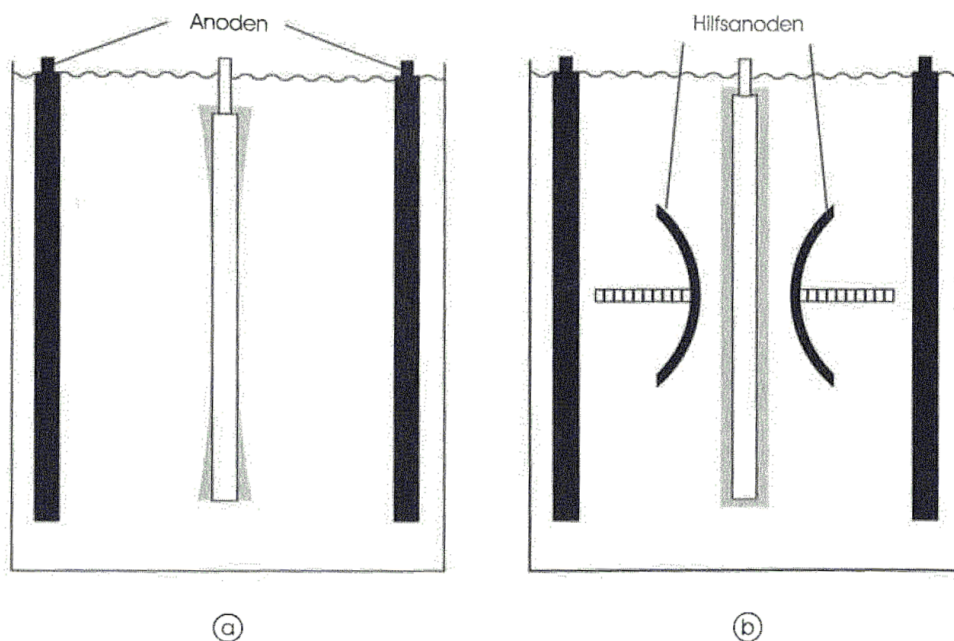


Abb. 4.27: Schichtdickenverteilung; a: ohne Hilfsanoden, b: mit zusätzlichen Anoden [4.5]

The appellant also referred to the corresponding text on page 145 of "Galvanotechnik", which states (translation by the Board):

The example in Fig. 4.27 shows how one can obtain a more favorable distribution of the layer thickness with the help of additional anodes (so-called auxiliary anodes).

This example shows that by using auxiliary anodes an increased deposition at the corners of the workpiece, the so-called "dog's bone" effect, can be effectively prevented.

The appellant submitted that having been told by the patent to make a superconducting tape with lateral bridging portions having a positive radius of curvature to form a convex contour along the side surfaces of the superconducting tape, the skilled person would have been enabled to do so by this common general knowledge disclosed in "Galvanotechnik".

The appellant submits furthermore that the "Further Remarks" on novelty and inventive step as set out in section IV of the contested decision constitute a fundamental violation of the right to be heard as set forth in Article 113(1) EPC. According to the appellant this was because novelty and inventive step were not discussed in the oral proceedings before the opposition and so they had no opportunity to present comments on these legal questions.

- V. In respect of Article 83 EPC, both respondents argued in essence that "Galvanotechnik" did not disclose how to electroplate lateral bridging portions with a convex contour. Furthermore, they argued that "Galvanotechnik" disclosed that auxiliary anodes could be used to improve the distribution of the layer thickness on geometrically simple components, but that the thin side edges of a superconducting tape were not geometrically simple.

Regarding the alleged substantial procedural violation respondent 1 (opponent 1) submitted that it was clearly stated in the decision that the opposed patent was revoked only for lack of disclosure pursuant to Article 83 EPC (see sections II. and III. of the decision). This topic was extensively discussed in the written and in the oral proceedings (see items 6 and 7 of the minutes). Therefore, the decision of the opposition division was only based on grounds or evidence on which the parties concerned had had an opportunity to present their comments as required by Article 113(1) EPC. Any "further remark" could not be considered as a procedural violation because the decision was clearly not based thereon.

- VI. The Board summoned the parties to oral proceedings. In a communication pursuant to Article 15(1) RPBA the Board set out their preliminary opinion that there did not seem to be sufficient disclosure in the sense of Article 83 EPC for the skilled person to carry out the features concerning electroplated lateral bridging portions with a convex contour on the side surfaces of a superconducting tape, as was claimed in the patent as granted and all auxiliary requests.

VII. Oral proceedings were held as scheduled, with only the appellant attending.

During the oral proceedings the Chairman of the Board informed the appellant of the Board's preliminary view that the opposition division had not committed a procedural violation. The appellant referred to the written submissions on the issue.

The appellant was heard on the issue of sufficiency of disclosure (Article 83 EPC), the submissions not going beyond what had been presented in the grounds for appeal.

As regards the objection under Article 83 EPC the Chairman informed the appellant of the Board's view that the conclusion on the main request would apply *mutatis mutandis* to all of the auxiliary requests, which the appellant did not contest.

The appellant (patent proprietor) requested finally that the decision under appeal be set aside and the patent be maintained as granted (main request), in the alternative that the patent be maintained in amended form on the basis of one of the auxiliary requests I to IX, auxiliary requests I to IV being as filed with the letter dated 10 December 2015 and auxiliary requests V to IX being as filed with the grounds of appeal.

The respondents (opponents 1 and 2) had requested in writing that the appeal be dismissed.

The order of this decision was announced at the end of the oral proceedings.

Reasons for the Decision

1. *Article 83 EPC*

- 1.1 The Board shares the opposition division's view that the disclosure of the textbook "Galvanotechnik" would not have enabled the skilled person to electroplate lateral bridging portions with a convex contour on the side surfaces of a superconducting tape as claimed.
- 1.2 "Galvanotechnik" discloses how to improve the distribution of the layer thickness (page 145, first paragraph) and smooth out irregularities on a substrate surface by depositing a smooth layer (page 144, last paragraph). Auxiliary anodes are proposed only to improve the distribution of the layer thickness on geometrically simple components. Figure 4.27 shows how auxiliary electrodes can be used to create a layer of even thickness on the flat major surfaces of a substrate. There is no disclosure of how auxiliary anodes could be used to create a layer that is thicker in the middle of the substrate than it is at the ends - i.e. a convex outer surface. Furthermore, there is no suggestion that auxiliary electrodes could be used effectively when electroplating the thin side edges of a superconducting tape of the type set out in claim 1 of the patent.
- 1.3 The features concerning electroplated lateral bridging portions with a convex contour on the side surfaces of a superconducting tape are claimed not only in the patent as granted, but also in all auxiliary requests. As there is no disclosure in the patent to enable the skilled person to carry out these features, and it has

not been demonstrated that this would be part of the common general knowledge of the person skilled in the art, the requirements of Article 83 EPC are not met. Hence, the appeal has to be dismissed.

2. *Alleged substantial procedural violation*

2.1 According to the decision under appeal (cf. points 8.7, 11 and 12 of the Reasons) the patent was revoked for non-compliance with Article 83 EPC. After having come to that conclusion the opposition division gave at the end of their decision under the heading "IV. Further Remarks" some further observations in the way of an obiter dictum on the grounds of opposition under Article 100(a) EPC. From the structure and the content of the decision it is absolutely clear that the tenor of the decision, i.e. the revocation of the patent, was only based on the ground of opposition under Article 100(b) EPC, not on the further remarks on novelty and inventive step of the subject-matter of claim 1 of the patent as granted.

2.2 Such obiter dicta are sometimes included in first instance decisions in order to avoid the remittal of the case. They serve overall procedural economy and effectiveness in that they provide the boards with reasons that might obviate remittals (see T 473/98, OJ EPO 2001, 231). Since they are not relevant for the outcome of the first instance proceedings they do not adversely affect any of the parties to the proceedings. Thus, the enclosure of such "further remarks" at the end of the written decision does not constitute a procedural violation.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



U. Bultmann

R. Lord

Decision electronically authenticated