

3/23/05



Attorney's Docket No. 004501-809

To the Director of the United States Patent and Trademark Office

102971908

the attached original documents or copy thereof.

1. Name of conveying party(ies):

- 1) Hansjoerg GRAMESPACHER
- 2) Michael HAGEMEISTER
- 3) Petra KLUGE-WEISS
- 4) Felix GREUTER
- 5) Lise DONZEL
- 6) Reto KESSLER

Additional name(s) of conveying party(ies) attached? Yes No

3. Nature of conveyance:

- Assignment
- Security Agreement
- Other
- Merger
- Change of Name

Execution Date: March 17, 2005

2. Name and address of receiving party(ies):

Name: ABB Research Ltd.

Address:
Affolternstrasse 52
CH-8050 Zurich
Switzerland

112949 U.S. PTO
11/086907



032305

Additional name(s) & addresses attached? Yes No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: March 17, 2005

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Patrick C. Keane

Address:

Burns, Doane, Swecker & Mathis, L.L.P.
Customer Number 2 1 8 3 9
P.O. Box 1404
Alexandria, Virginia 22313-1404

6. Total number of applications and patents involved:

7. Total fee (37 CFR 3.41).....\$ \$40.00 (8021)

- Enclosed
- Authorized to be charged to deposit account
- Credit card. Form PTO-2038 is attached.

8. Deposit account number:

02-4800

(Attach duplicate copy of this page if paying by deposit account.)

DO NOT USE THIS SPACE

9. Statement and Signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Patrick C. Keane

Name of Person Signing

32,858

Reg. No.

Patrick C. Keane Reg. No. 35,333

Signature

March 23, 2005

Date

Total number of pages including cover sheet, attachments, and documents:

Mail documents to be recorded with required cover sheet information to:

Director of the United States Patent and Trademark Office / Mail Stop Assignment Recordation Services
P.O. Box 1450 / Alexandria, VA 22313-1450

03/25/2005 HTECKLU1 00000052 11086907

04 FC:8021

40.00 OP

ASSIGNMENT

(JOINT)

THIS ASSIGNMENT, by Hansjoerg Gramespacher, Michael Hagemeister, Petra Kluge-Weiss, Felix Greuter, Lise Donzel and Reto Kessler residing at Loorenstrasse 27, CH-5443 Niederrohrdorf, Switzerland, Weinbergstrasse 168, CH-8006 Zürich, Switzerland, Pilgerstrasse 75, CH-5405 Dättwil, Switzerland, Im Bettliacher 8, CH-5406 Rütihof, Switzerland, Landstrasse 82, CH-5430 Wettingen, Switzerland and Hildastrasse 7, CH-8004 Zürich, Switzerland, (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in Nonlinear electrical material for high and medium voltage applications set forth in an application for Letters Patent of the United States, which is a

- (1) which is a provisional application
- (a) bearing Application No. _____, and filed on _____;
- (b) to be filed herewith; or
- (2) which is a non-provisional application
- (a) bearing Application No. _____, and filed on _____;
- (b) having an oath or declaration executed on even date herewith prior to filing of application;
- (c) having an oath or declaration executed on a different date than this Assignment; and

WHEREAS, ABB Research Ltd, a corporation duly organized under and pursuant to the laws of Switzerland and having a principal place of business at Affolternstrasse 52, CH-8050 Zürich, Switzerland (hereinafter referred to as "the Assignee"), is desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignee, for its own use and behoof and the use and behoof of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are

unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

AND the Assignors hereby authorize and request the attorneys of Burns, Doane, Swecker & Mathis, L.L.P., of Alexandria, Virginia, to insert in the spaces provided above the filing date, application number, and attorney's docket number of said application when known.

AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignee as the Assignee of said inventions, the Letters Patent to be issued for the sole use and behoof of the Assignee, its successors, legal representatives, and assigns.

DATE 17. März 2005 Signature of Assignor *Hansjörg Gramspacher*
Hansjörg Gramspacher

DATE _____ Signature of Assignor _____
Michael Hagemeister

DATE _____ Signature of Assignor _____
Petra-Kluge-Weiss

DATE _____ Signature of Assignor _____
Lise Donzel

DATE _____ Signature of Assignor _____
Reto Kessler

Date _____ Signature of Assignor _____
Felix Greuter

unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

AND the Assignors hereby authorize and request the attorneys of Burns, Doane, Swecker & Mathis, L.L.P., of Alexandria, Virginia, to insert in the spaces provided above the filing date, application number, and attorney's docket number of said application when known.

AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignee as the Assignee of said inventions, the Letters Patent to be issued for the sole use and behoof of the Assignee, its successors, legal representatives, and assigns.

DATE _____ Signature of Assignor Hansjoerg Gramespacher
 DATE 17. März 2005 Signature of Assignor Michael Hagemeister
 Michael Hagemeister
 DATE 17. März 2005 Signature of Assignor Petra Kluge-Weiss
 Petra-Kluge-Weiss
 DATE 17. März 2005 Signature of Assignor Lise Donzel
 Lise Donzel
 DATE 17. März 2005 Signature of Assignor Reto Kessler
 Reto Kessler
 Date 17. März 2005 Signature of Assignor Felix Greuter
 Felix Greuter