

06-26-2001

RE



6.12.01

OMB No. 0651-0011 (exp. 4/94)

101760965

To the Commissioner of Patent and Trademarks:  
Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Joakim A. Carlborg  
Yun-Feng Chang  
Lawrence L. Murrell  
Robert E. Trubac  
Rudolf A. Overbeek  
Chuen Y. Yeh  
Lothar Schuh

Document ID No. 101655417

Additional name(s) of conveying party(ies) attached:

☐ Yes ☒ No

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

Name: ABB Lummus Global, Inc.

Internal Address:

Street Address: 1515 Broad Street

City: Bloomfield State: NJ Zip: 07003

Additional name(s) & address(es) attached: ☐ Yes ☒ No

3. Nature of conveyance:

- ☒ Assignment ☐ Merger  
☐ Security/Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

Execution Date: November 6, 2000

4. Application number(s):

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

A. Patent Application No.(s)

09/687,976

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: William Squire, Esq.

Internal Address: Carella, Byrne, Bain, Gilfillan, Cecchi,  
Stewart & Olstein

Street Address: 6 Becker Farm Road

City: Roseland State: New Jersey Zip: 07068

6. Total number of applications and patents involved: 1

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

- ☐ Enclosed  
☒ Additional fees, if any, authorized to be charged to deposit account

8. Deposit account number: 03-0678

(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.

William Squire

Name of Person Signing

Signature

June 15, 2001

Date

Total number of pages including cover sheet, attachments, and document: 7

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

# ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, each of the undersigned Joakim A. Carlborg, Yun-Feng Chang, Lawrence L. Murrell, Robert E. Trubac, Rudolf A. Overbeek, Verena R. Schmidt, Chuen Y. Yeh and Lothar Schuh hereby sells, assigns and transfers to **ABB Lummus Global, Inc.** ("Assignee"), having a place of business at **1515 Broad Street, Bloomfield, New Jersey 07003**, a Delaware corporation, its successors, assigns and legal representatives, his entire right, title and interest for the United States and all other countries, in and to the improvements(s) known as: **United States Application Serial No09/687,976 filed October 13, 2000 and/or executed on even date herewith and is entitled:**

## CONVERSION OF NITROGEN OXIDES IN THE PRESENCE OF A CATALYST SUPPORTED ON A MESH-LIKE STRUCTURE

and in and to said application and all divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent which have been or shall be filed in the United States and all other countries on any of said improvements, and in and to all original, re-examined and reissued patents and extensions thereof which have been or shall be issued in the United States and all other countries on said improvements (hereinafter collectively, the "Improvements").

The undersigned further agrees that said Assignee may apply for and receive Letters Patent for said Improvements in its own name; and, when requested, without charge to but at the expense of Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue and all other patent applications on all such Improvements; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives all facts known to the undersigned relating to said Improvements and the history thereof; and do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing and maintaining proper patent protection for said Improvements and for vesting title to said Improvements and all applications for patent and all patents on said improvements in Assignee, its successors, assigns and representatives.

The undersigned hereby represents and warrants to Assignee, its successors, assigns and representatives that no assignment, grant, mortgage, license or other right or agreement affecting the rights and property herein conveyed has been made to others by the undersigned and that full right to convey the same as expressed herein is possessed by the undersigned.

The undersigned hereby grants power to John N. Bain (Reg. No. 18,651); John G. Gilfillan, III (Reg. No. 22,746); Elliot M. Olstein (Reg. No. 24,025); Raymond J. Lillie (Reg. No. 31,778); William Squire (Reg. No. 25,378); Alan J. Grant (Reg. No. 33,389); Francis C. Hand (Reg. No. 22,280); and G. Glennon Troublefield (Reg. No. 39,050) to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document. Address correspondence and telephone calls to William Squire, Esq. c/o Carella, Byrne, Bain, Gilfillan, Cecchi, Stewart & Olstein, 6 Becker Farm Road, Roseland, New Jersey 07068.

IN WITNESS WHEREOF, this Assignment is executed by the undersigned on the date(s) opposite their signature(s):

Inventor's Signature: Joakim Carlborg Date: Nov. 13, 2000  
Joakim A. Carlborg

STATE OF VÄRMLAND COUNTY OF \_\_\_\_\_ SS.: SWEEDEN

Before me this 13 day of November, 2000 personally appeared the above named individual(s) to me known to be the person(s) who are described in and who executed the foregoing assignment instrument and acknowledged to me that they executed the same of their own free will for the purpose therein expressed.

[Signature]  
Notary Public

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_, 2000  
Yun-Feng Chang

STATE OF \_\_\_\_\_ COUNTY OF \_\_\_\_\_ SS.: \_\_\_\_\_

Before me this \_\_\_\_\_ day of \_\_\_\_\_, 2000 personally appeared the above named individual(s), to me known to be the person(s) who are described in and who executed the foregoing assignment instrument and acknowledged to me that they executed the same of their own free will for the purpose therein expressed.

\_\_\_\_\_  
Notary Public

# ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, each of the undersigned, Joakim A. Carlborg, Yun-Feng Chang, Lawrence L. Murrell, Robert E. Trubac, Rudolf A. Overbeek, Verena R. Schmidt, Chuen Y. Yeh and Lothar Schuh hereby sells, assigns and transfers to ABB Lummus Global, Inc. ("Assignee"), having a place of business at 1515 Broad Street, Bloomfield, New Jersey 07003, a Delaware corporation, its successors, assigns and legal representatives, his entire right, title and interest for the United States and all other countries, in and to the improvements(s) known as: United States Application Serial No. 09/687,976 filed October 13, 2000 and/or executed on even date herewith and is entitled:

## CONVERSION OF NITROGEN OXIDES IN THE PRESENCE OF A CATALYST SUPPORTED ON A MESH-LIKE STRUCTURE

and in and to said application and all divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent which have been or shall be filed in the United States and all other countries on any of said improvements, and in and to all original, re-examined and reissued patents and extensions thereof which have been or shall be issued in the United States and all other countries on said improvements (hereinafter collectively, the "Improvements").

The undersigned further agrees that said Assignee may apply for and receive Letters Patent for said Improvements in its own name; and, when requested, without charge to but at the expense of Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue and all other patent applications on all such Improvements; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives all facts known to the undersigned relating to said Improvements and the history thereof; and do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing and maintaining proper patent protection for said Improvements and for vesting title to said Improvements and all applications for patent and all patents on said improvements in Assignee, its successors, assigns and representatives.

The undersigned hereby represents and warrants to Assignee, its successors, assigns and representatives that no assignment, grant, mortgage, license or other right or agreement affecting the rights and property herein conveyed has been made to others by the undersigned and that full right to convey the same as expressed herein is possessed by the undersigned.

The undersigned hereby grants power to John N. Bain (Reg. No. 18,651); John G. Gilfillan, III (Reg. No. 22,746); Elliot M. Olstein (Reg. No. 24,025); Raymond J. Lillie (Reg. No. 31,778); William Squire (Reg. No. 25,378); Alan J. Grant (Reg. No. 33,389); Francis C. Hand (Reg. No. 22,280); and G. Glennon Troublefield (Reg. No. 39,050) to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document. Address correspondence and telephone calls to William Squire, Esq. c/o Carella, Byrne, Bain, Gilfillan, Cecchi, Stewart & Olstein, 6 Becker Farm Road, Roseland, New Jersey 07068.

IN WITNESS WHEREOF, this Assignment is executed by the undersigned on the date(s) opposite their signature(s):

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_, 2000  
Joakim A. Carlborg

STATE OF \_\_\_\_\_, COUNTY OF \_\_\_\_\_ SS.:

Before me this \_\_\_\_\_ day of \_\_\_\_\_, 2000 personally appeared the above named individual(s), to me known to be the person(s) who are described in and who executed the foregoing assignment instrument and acknowledged to me that they executed the same of their own free will for the purpose therein expressed.

\_\_\_\_\_  
Notary Public

Inventor's Signature: \_\_\_\_\_ Date: November 6 2000  
Yun-Feng Chang

STATE OF NEW JERSEY, COUNTY OF ESSEX SS.:

Before me this 6th day of NOVEMBER, 2000 personally appeared the above named individual(s), to me known to be the person(s) who are described in and who executed the foregoing assignment instrument and acknowledged to me that they executed the same of their own free will for the purpose therein expressed.

\_\_\_\_\_  
Notary Public

JAYME ANN INNES  
NOTARY PUBLIC OF NEW JERSEY  
MY COMMISSION EXPIRES JUNE 19, 2001

PATENT  
REEL: 011916 FRAME: 0605

Inventor's Signature: Lawrence Murrell Date: 11/6/, 2000  
Lawrence L. Murrell

STATE OF NEW JERSEY, COUNTY OF ESSEX SS.:

Before me this 6th day of NOVEMBER, 2000 personally appeared the above named individual(s), to me known to be the person(s) who are described in and who executed the foregoing assignment instrument and acknowledged to me that they executed the same of their own free will for the purpose therein expressed.

Jayne Ann Innes  
Notary Public

JAYME ANN INNES  
NOTARY PUBLIC OF NEW JERSEY  
MY COMMISSION EXPIRES JUNE 19, 2001

Inventor's Signature: Robert E. Trubac Date: Nov 6, 2000  
Robert E. Trubac

STATE OF NEW JERSEY, COUNTY OF ESSEX SS.:

Before me this 6th day of NOVEMBER, 2000 personally appeared the above named individual(s), to me known to be the person(s) who are described in and who executed the foregoing assignment instrument and acknowledged to me that they executed the same of their own free will for the purpose therein expressed.

Jayne Ann Innes  
Notary Public

JAYME ANN INNES  
NOTARY PUBLIC OF NEW JERSEY  
MY COMMISSION EXPIRES JUNE 19, 2001

Inventor's Signature: RA Date: November 6, 2000  
Rudolf A. Overbeek

STATE OF NEW JERSEY, COUNTY OF ESSEX SS.:

Before me this 6th day of NOVEMBER, 2000 personally appeared the above named individual(s), to me known to be the person(s) who are described in and who executed the foregoing assignment instrument and acknowledged to me that they executed the same of their own free will for the purpose therein expressed.

Jayne Ann Innes  
Notary Public

JAYME ANN INNES  
NOTARY PUBLIC OF NEW JERSEY  
MY COMMISSION EXPIRES JUNE 19, 2001

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_, 2000  
Verena R. Schmidt

STATE OF \_\_\_\_\_, COUNTY OF \_\_\_\_\_ SS.:

Before me this \_\_\_\_\_ day of \_\_\_\_\_, 2000 personally appeared the above named individual(s), to me known to be the person(s) who are described in and who executed the foregoing assignment instrument and acknowledged to me that they executed the same of their own free will for the purpose therein expressed.

\_\_\_\_\_  
Notary Public

Inventor's Signature: Chuen Y. Yeh Date: 11/18, 2000  
Chuen Y. Yeh

STATE OF New Jersey, COUNTY OF ESSEX SS.:

Before me this 6th day of NOVEMBER, 2000 personally appeared the above named individual(s), to me known to be the person(s) who are described in and who executed the foregoing assignment instrument and acknowledged to me that they executed the same of their own free will for the purpose therein expressed.

Jayne Ann Innes  
Notary Public

**JAYME ANN INNES**  
**NOTARY PUBLIC OF NEW JERSEY**  
**MY COMMISSION EXPIRES JUNE 19, 2001**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_, 2000  
Lothar Schuh

STATE OF \_\_\_\_\_, COUNTY OF \_\_\_\_\_ SS.:

Before me this \_\_\_\_\_ day of \_\_\_\_\_, 2000 personally appeared the above named individual(s), to me known to be the person(s) who are described in and who executed the foregoing assignment instrument and acknowledged to me that they executed the same of their own free will for the purpose therein expressed.

\_\_\_\_\_  
Notary Public

**CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI, STEWART & OLSTEIN**  
**6 Becker Farm Road - Roseland, NJ 07068 - (973) 994-1700**

Docket No. 415000-551  
#80525 v2

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_, 2000  
Chuen Y. Yeh

STATE OF \_\_\_\_\_, COUNTY OF \_\_\_\_\_ SS.: \_\_\_\_\_

Before me this \_\_\_\_\_ day of \_\_\_\_\_, 2000 personally appeared the above named individual(s), to me known to be the person(s) who are described in and who executed the foregoing assignment instrument and acknowledged to me that they executed the same of their own free will for the purpose therein expressed.

\_\_\_\_\_  
Notary Public

Inventor's Signature: \_\_\_\_\_ Date: 6.11., 2000  
Lothar Schuh

STATE OF \_\_\_\_\_, COUNTY OF \_\_\_\_\_ SS.: \_\_\_\_\_

Before me this \_\_\_\_\_ day of \_\_\_\_\_, 2000 personally appeared the above named individual(s), to me known to be the person(s) who are described in and who executed the foregoing assignment instrument and acknowledged to me that they executed the same of their own free will for the purpose therein expressed.

\_\_\_\_\_  
Notary Public

CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI, STEWART & OLSTEIN  
6 Becker Farm Road - Roseland, NJ 07068 - (973) 994-1700

Docket No. 415000-551  
#80525 v2

Kosten gemäß §§ 38, 145,  
45, 32 KostO auf Kopie erhoben.  
Heidelberg, den 16.11.2000  
Der Kostenbeamte: i. A. Sayat

### Unterschriftsbeglaubigung

Vorstehende, eigenhändig vor mir vollzogene Unterschrift des persönlich bekannten

Herr Dr. Lothar Herbert Schuh, geb. am 15.07.1956, wohnh. Handschuhsheimer Str. 13,  
68723 Plankstadt

handelnd für die Firma Asea Brown Boveri AG Forschungszentrum, Speyerer Str. 4, 69115  
Heidelberg,

wird hiermit als echt öffentlich beglaubigt.

Heidelberg, den 16.11.2000

Notariat 6, Heidelberg

Schmenger, Notar

