

12.8.00

12-11-2000



FORM PTO-1594
(Rev 5-93)

101545903

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):
MEMBRANE TECHNOLOGY AND RESEARCH, INC.

Individual(s) citizenship:
Association:
General Partnership:
Limited Partnership:
Corporation - State: CALIFORNIA
Other:

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

3. Nature of Conveyance:
 Assignment Merger
 Security Agreement Change of Name
 Other

Execution Date: November 9, 2000

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

Name: COMERICA BANK-CALIFORNIA
Address: 75 E. TRIMBLE ROAD
City: SAN JOSE: CA Zip: 95131

Individual(s) citizenship:
Association:
General Partnership:
Limited Partnership:
Corporation - State:
Other:

If assignee is not domiciled in the United States, a domestic representative designation is attached: Yes No
(Designations must be a separate document from assignment)
Additional name(s) & address(es) attached? Yes No

4. Application number(s) or trademark number(s):
A. Trademark Application No.(s)

B. Trademark Registration No.(s)
2,253,696 1,818,866
1,877,519

Additional numbers attached? Yes No

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

Name: Evelyn G. Santiago
Internal Address: GRAY CARY WARE & FREIDENRICH
400 Hamilton Avenue
Palo Alto, California 94301

6 Total number of applications and registrations involved: 3

7. Total fee (37 CFR 3.41) \$ 90.00
 Enclosed
 Authorized to be charged to deposit account

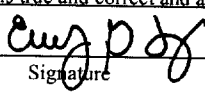
8. Deposit account number: _____

(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.

Evelyn G. Santiago  December 7, 2000
Name of Person Signing Signature Date

Total number of pages comprising cover sheet: [9]

Mail Documents to be recorded with required cover sheet information to:
U.S. Patent and Trademark Office, Office of Public Records
1213 Jefferson Davis Highway, 3rd Floor
Arlington, VA 22202

12/08/2000 DNGUYEN 00000227 2253696

C1 FC:481 40.00 DP
C2 FC:482 50.00 DP

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1030642-909600

TRADEMARK
REEL: 002192 FRAME: 0028



INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement (the "Agreement") is made as of November 9, 2000, by and between Membrane Technology and Research, Inc. ("Grantor"), and COMERICA BANK-CALIFORNIA, ("Secured Party").

RECITALS

A. Secured Party has agreed to lend to Grantor, certain funds (the "Loan"), and Grantor desires to borrow such funds from Secured Party pursuant to the terms of a Loan & Security Agreement dated December 29, 1997 and a Variable Rate-Installment Note dated January 8, 1999, a Variable Rate-Single Payment Note dated December 29, 1997 and a Master Revolving Note dated December 29, 1997, (collectively the "Loan Documents"). All capitalized terms used herein without definition shall have the meanings ascribed to them in the Loan Documents.

B. In order to induce Secured Party to make the Loan, Grantor has agreed to assign certain intangible property to Secured Party for purposes of securing the obligations of Grantor to Secured Party.

NOW, THEREFORE, THE PARTIES HERETO AGREE AS FOLLOWS:

1. Grant of Security Interest. As collateral security for the prompt and complete payment and performance of all of Grantor's present or future indebtedness, obligations and liabilities to Secured Party, Grantor hereby grants a security interest and mortgage to Secured Party, as security, in and to Grantor's entire right, title and interest in, to and under the following (all of which shall collectively be called the "Collateral"):

(a) Any and all copyright rights, copyright applications, copyright registrations and like protections in each work or authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held, including without limitation those set forth on Exhibit A attached hereto (collectively, the "Copyrights");

(b) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

(c) Any and all design rights which may be available to Grantor now or hereafter existing, created, acquired or held;

(d) All patents, patent applications and like protections including, without limitation, improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same, including without limitation the patents and patent applications set forth on Exhibit B attached hereto (collectively, the "Patents");

(e) Any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Grantor connected with and symbolized by such trademarks, including without limitation those set forth on Exhibit C attached hereto (collectively, the "Trademarks");

(f) Any and all claims for damages by way of past, present and future infringement of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(g) All licenses or other rights to use any of the Copyrights, Patents or Trademarks, and all license fees and royalties arising from such use to the extent permitted by such license or rights; and

(h) All amendments, extensions, renewals and extensions of any of the Copyrights, Trademarks or Patents; and

(i) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

2. Authorization and Request. Grantor authorizes and requests that the Register of Copyrights and the Commissioner of Patents and Trademarks record this security agreement.

3. Covenants and Warranties. Grantor represents, warrants, covenants and agrees as follows:

(a) Grantor is now the sole owner of the Collateral, except for non-exclusive licenses granted by Grantor to its customers in the ordinary course of business;

(b) Performance of this Agreement does not conflict with or result in a breach of any agreement to which Grantor is party or by which Grantor is bound, except to the extent that certain intellectual property agreements prohibit the assignment of the rights thereunder to a third party without the licensor's or other party's consent and this Agreement constitutes an assignment;

(c) During the term of this Agreement, Grantor will not transfer or otherwise encumber any interest in the Collateral, except for non-exclusive licenses granted by Grantor in the ordinary course of business, or as set forth in this Agreement;

(d) Each of the Patents is valid and enforceable, and no part of the Collateral has been judged invalid or unenforceable, in whole or in part, and no claim has been made that any part of the Collateral violates the rights of any third party;

(e) Grantor shall deliver to Secured Party within thirty (30) days of the last day of each fiscal quarter, a report signed by Grantor, in form reasonably acceptable to Secured Party, listing any applications or registrations that Grantor has made or filed in respect of any patents, copyrights or trademarks and the status of any outstanding applications or registrations. Grantor shall promptly advise Secured Party of any material change in the composition of the Collateral, including but not limited to any subsequent ownership right of the Grantor in or to any Trademark, Patent or Copyright not specified in this Agreement;

(f) Grantor shall (i) protect, defend and maintain the validity and enforceability of the Trademarks, Patents and Copyrights, (ii) use its best efforts to detect infringements of the Trademarks, Patents and Copyrights and promptly advise Secured Party in writing of material infringements detected and (iii) not allow any Trademarks, Patents or Copyrights to be abandoned, forfeited or dedicated to the public without the written consent of Secured Party, which shall not be unreasonably withheld, unless Grantor determines that reasonable business practices suggest that abandonment is appropriate;

(g) Grantor shall register or cause to be registered (to the extent not already registered) with the United States Patent and Trademark Office or the United States Copyright Office, as applicable, those intellectual property rights listed on Exhibits A, B and C hereto within thirty (30) days of the date of this Agreement. Grantor shall register or cause to be registered with the United States Patent and Trademark Office or the United States Copyright Office, as applicable, those additional intellectual property rights developed or acquired by Grantor from time to time in connection with any product prior to the sale or licensing of such product to any third party (including without limitation revisions or additions to the intellectual property rights listed on such Exhibits A, B and C). Grantor shall, from time to time, execute and file such other instruments, and take such further actions as Secured Party may reasonably request from time to time to perfect or continue the perfection of Secured Party's interest in the Collateral;

(h) This Agreement creates, and in the case of after acquired Collateral, this Agreement will create at the time Grantor first has rights in such after acquired Collateral, in favor of Secured Party a valid and perfected first priority security interest in the Collateral in the United States securing the payment and performance of the obligations evidenced by the Loan Documents upon making the filings referred to in clause (i) below;

(i) Except for, and upon, the filing with the United States Patent and Trademark office with respect to the Patents and Trademarks and the Register of Copyrights with respect to the Copyrights necessary to perfect the security interests created hereunder, and, except as has been already made or obtained, no authorization, approval or other action by, and no notice to or filing with, any U.S. governmental authority or U.S. regulatory body is required either (i) for the grant by Grantor of the security interest granted hereby or for the execution, delivery or performance of this Agreement by Grantor in the U.S. or (ii) for the perfection in the United States or the exercise by Secured Party of its rights and remedies hereunder;

(j) All information heretofore, herein or hereafter supplied to Secured Party by or on behalf of Grantor with respect to the Collateral is accurate and complete in all material respects.

(k) Grantor shall not enter into any agreement that would materially impair or conflict with Grantor's obligations hereunder without Secured Party's prior written consent, which consent shall not be unreasonably withheld. Grantor shall not permit the inclusion in any material contract to which it becomes a party of any provisions that could or might in any way prevent the creation of a security interest in Grantor's rights and interests in any property included within the definition of the Collateral acquired under such contracts, except that certain contracts may contain anti-assignment provisions that could in effect prohibit the creation of a security interest in such contracts if Grantor is required, in its commercially reasonable judgment to accept such provisions; and

(l) Upon any executive officer of Grantor obtaining knowledge thereof, Grantor will promptly notify Secured Party in writing of any event that materially adversely affects the value of any of the Collateral, the ability of Grantor to dispose of any Collateral or the rights and remedies of Secured Party in relation thereto, including the levy of any legal process against any of the Collateral.

4. Secured Party's Rights. Secured Party shall have the right, but not the obligation, to take, at Grantor's sole expense, any actions that Grantor is required under this Agreement to take but which Grantor fails

to take, after fifteen (15) days' notice to Grantor. Grantor shall reimburse and indemnify Secured Party for all reasonable costs and expenses incurred in the reasonable exercise of its rights under this section 4.

5. Inspection Rights. Grantor hereby grants to Secured Party and its employees, representatives and agents the right to visit, during reasonable hours upon prior reasonable written notice to Grantor, any of Grantor's plants and facilities that manufacture, install or store products (or that have done so during the prior six-month period) that are sold utilizing any of the Collateral, and to inspect the products and quality control records relating thereto upon reasonable notice to Grantor and as often as may be reasonably requested.

6. Further Assurances; Attorney in Fact.

(a) On a continuing basis, Grantor will make, execute, acknowledge and deliver, and file and record in the proper filing and recording places in the United States, all such instruments, including, appropriate financing and continuation statements and collateral agreements and filings with the United States Patent and Trademark Office and the Register of Copyrights, and take all such action as may reasonably be deemed necessary or advisable, or as requested by Secured Party, to perfect Secured Party's security interest in all Copyrights, Patents and Trademarks and otherwise to carry out the intent and purposes of this Agreement, or for assuring and confirming to Secured Party the grant or perfection of a security interest in all Collateral.

(b) Grantor hereby irrevocably appoints Secured Party as Grantor's attorney-in-fact, with full authority in the place and stead of Grantor and in the name of Grantor, from time to time in Secured Party's discretion, to take any action and to execute any instrument which Secured Party may deem necessary or advisable to accomplish the purposes of this Agreement, including:

(i) To modify, in its sole discretion, this Agreement without first obtaining Grantor's approval or signature to such modification by amending Exhibit A, Exhibit B and Exhibit C, hereof, as appropriate, to include reference to any right, title or interest in any Copyrights, Patents or Trademarks acquired by Grantor after the execution hereof or to delete any reference to any right, title or interest in any Copyrights, Patents or Trademarks in which Grantor no longer has or claims any right, title or interest;

(ii) To file, in its sole discretion, one or more financing or continuation statements and amendments thereto, relative to any of the Collateral without the signature of Grantor where permitted by law; and

(iii) After the occurrence of an Event of Default, to transfer the Collateral into the name of Secured Party or a third party to the extent permitted under the California Uniform Commercial Code.

7. Events of Default. The occurrence of any of the following shall constitute an Event of Default under this Agreement:

(a) An Event of Default occurs under the Loan Documents; or

(b) Grantor breaches any warranty or agreement made by Grantor in this Agreement and, as to any breach that is capable of cure, Grantor fails to cure such breach within five (5) days of the occurrence of such breach.

8. Remedies. Upon the occurrence of an Event of Default, Secured Party shall have the right to exercise all the remedies of a secured party under the California Uniform Commercial Code, including without limitation the right to require Grantor to assemble the Collateral and any tangible property in which Secured Party has a security interest and to make it available to Secured Party at a place designated by Secured Party. Secured Party shall have a nonexclusive, royalty free license to use the Copyrights, Patents and Trademarks to the extent reasonably necessary to permit Secured Party to exercise its rights and remedies upon the occurrence of an Event of Default. Grantor will pay any expenses (including attorneys' fees) incurred by Secured Party in connection with the exercise of any of Secured Party's rights hereunder, including without limitation any expense incurred in disposing of the Collateral. All of Secured Party's rights and remedies with respect to the Collateral shall be cumulative.

9. Indemnity. Grantor agrees to defend, indemnify and hold harmless Secured Party and its officers, employees, and agents against: (a) all obligations, demands, claims, and liabilities claimed or asserted by any other party in connection with the transactions contemplated by this Agreement, and (b) all losses or expenses in any way suffered, incurred, or paid by Secured Party as a result of or in any way arising out of, following or consequential to transactions between Secured Party and Grantor, whether under this Agreement or otherwise (including without limitation attorneys fees and expenses), except for losses arising from or out of Secured Party's gross negligence or willful misconduct.

10. Course of Dealing. No course of dealing, nor any failure to exercise, nor any delay in exercising any right, power or privilege hereunder shall operate as a waiver thereof.

11. Attorneys Fees. If any action relating to this Agreement is brought by either party hereto against the other party, the prevailing party shall be entitled to recover reasonable attorneys fees, costs and disbursements.

12. Amendments. This Agreement may be amended only by a written instrument signed by both parties hereto.

13. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute the same instrument.

14. California Law and Jurisdiction; Jury Waiver. This Agreement shall be governed by the laws of the State of California, without regard for choice of law provisions. Grantor and Secured Party consent to the exclusive jurisdiction of any state or federal court located in Santa Clara County, California. GRANTOR AND SECURED PARTY EACH WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THE LOAN DOCUMENTS, THIS AGREEMENT, OR ANY OF THE TRANSACTIONS CONTEMPLATED HEREIN, INCLUDING CONTRACT CLAIMS, TORT CLAIMS, BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW OR STATUTORY CLAIMS.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first above written.

Address of Grantor:

1360 Willow Road
Menlo Park, California 94025

GRANTOR:

Membrane Technology and Research, Inc. _____

By:  _____

Richard Baker

Title: _____
President

Address of Secured Party:

75 E. Trimble Road
San Jose, CA. 95131

SECURED PARTY:

Comerica Bank-California, a California
Banking corporation

By:  _____

Charles Yun

Title: _____
Vice President

EXHIBIT A

List of Copyrights

None


Initials

EXHIBIT B

List of Patents

Name	Patent No.	Issued date
Membrane-Augmented Power Generation	6,035,641	03-14-2000
Fuel Gas Conditioning Process	6,053,965	04-25-2000*
Membrane Process And Apparatus for Argon Purging From Oxidation Reactors	6,018,060	01-25-2000
Membrane-Based Conditioning For Adsorption System Feed Gases	6,011,192	01-04-2000
Hydrogen Recovery Process	5,980,609	11-09-1999
Natural Gas Treatment Train	5,964,923	10-12-1999
Ethylene/Nitrogen Separation Process	5,879,431	03-09-1999
Chlorine Separation Process Combining Condensation, Membrane Separation And Flash Evaporation	5,861,049	01-19-1999
Membrane Process For Argon Purging From Ethylene Oxide Reactors	5,817,841	10-06-1998
Steam Cracker Gas Separation Process	5,785,739	07-28-1998
Process For Recovering Semiconductor Industry Cleaning Compounds	5,779,763	07-14-1998*
Membrane Hybrid Process For Treating Low-Organic-Concentration Gas Streams	5,772,734	06-30-1998*
Natural Gas Liquids (NGL) Stabilization Process	5,772,733	06-30-1998
Monomer Recovery Process	5,769,927	06-23-1998
Membrane Separation Of Associated Gas	5,769,926	06-23-1998
Membrane Expansion Process For Organic Component Recovery From Gases	5,762,685	06-09-1998
Separation Process Combining Condensation, Membrane Separation And Flash Evaporation	5,755,855	05-26-1998
Gas Separation Membrane Module And Process	5,711,882	01-27-1998*
Substituted Polyacetylene Separation Membrane	5,707,423	01-13-1998*
Separation of Low-Boiling Gases Using Super-Glassy Membranes	5,688,307	11-18-1997*
Olefin Separation Membrane And Process	5,670,051	09-23-1997*
Methane/Nitrogen Separation Process	5,669,958	09-23-1997*
Membrane-Augmented Cryogenic Methane/Nitrogen Separation	5,647,227	07-15-1997*
Process For Restoring Membrane Permeation Properties	5,630,970	05-20-1997*
Vapor Recovery Process Using Baffled Membrane Module	5,611,841	03-18-1997*
Acid Gas Fractionation Process	5,558,698	09-24-1996
Acid Gas Fractionation Process For Fossil Fuel Gasifiers	5,556,449	09-17-1996
Pervaporation Apparatus And Process	5,538,640	07-23-1996
Membrane Process For Treatment of Chlorine-Containing Gas Streams	5,538,535	07-23-1996
Natural Gas Treatment Process Using PTMSP Membrane	5,501,722	03-26-1996*
Pervaporation Apparatus And Process	5,417,847	05-23-1995
Process For Removing Inorganic Components From Water	5,415,681	05-16-1995
Sour Gas Treatment Process	5,407,467	04-18-1995
Sour Gas Treatment Process Including Membrane And Non-Membrane Treatment Steps	5,407,466	04-18-1995
Sour Gas Treatment Process Including Dehydration Of The Gas Stream	5,401,300	03-28-1995
Process For Removal Of Components From Liquids In Batch Mode	5,389,126	02-14-1995
Process For Removing Condensable Components From Gas Streams	5,374,300	12-20-1994
Pervaporation Process And Use In Treating Waste Stream From Glycol Dehydrator	5,350,519	09-27-1994
Membrane Module Assembly	5,294,345	03-15-1994*

Exhibit "B" List of Patents continued:

Gas-Separation Process	5,281,255	01-25-1994*
Process For Removing An Organic Compound From Water	5,273,572	12-28-1993*
Process For Recovering Organic Components From Liquid Streams	5,226,206	11-30-1993
Membrane Process And Apparatus For Removing A Component From A Fluid Stream	5,256,296	10-26-1993
Two-Stage Membrane Process And Apparatus	5,256,295	10-26-1993
Process For Recovering Organic Components From Liquid Streams	5,169,533	12-08-1992
Membrane Process And Apparatus For Removing A Component From A Fluid Stream	5,147,550	09-15-1992*
Membrane Gas Separation Process And Apparatus	5,129,921	07-14-1992
Membrane Process For Treating Pump Exhausts	5,127,926	07-07-1992
Composite Membranes For Fluid Separations	5,085,776	02-04-1992*
Life Support System For Personnel Shelter	5,082,471	01-21-1992*
Membrane Process And Apparatus For Removing Vapors From Gas Streams	5,071,451	12-10-1991
Membrane Module	5,069,793	12-03-1991
Multilayer Interfacial Composite Membrane	5,049,167	09-17-1991*
Refrigeration Process With Purge And Recovery Of Refrigerant	5,044,166	09-03-1991
Membrane Fractionation Process	5,032,148	07-16-1991
Process For Recovering Organic Components From Liquid Streams	5,030,356	07-09-1991*
Protective Clothing Material [Fabric Coated With Sorbent Layer and Ultrathin Permselective Membrane]	5,024,594	06-18-1991*
Composite Membranes For Fluid Separations [Calibrating Thickness Of Permselective Layer; High Performance]	4,990,255	02-05-1991
Composite Membrane, Method Of Preparation And Use [Microporous Support Membrane Coated With Permselective]		
Treatment Of Evaporator Condensates By Pervaporation [Using Permselective Membrane; Controlling Vapor Pressure]	4,952,751	08-28-1990
Multilayer Composite Protective Fabric Material And Use In Protective Clothing [Microporous And Permselective Membranes, Coating]	4,943,475	07-24-1990*
Composite Membranes For Fluid Separations	4,931,181	06-05-1990*
Membrane Process For Treatment Of Fluorinated Hydrocarbon-Laden Gas Streams	4,906,256	03-06-1990*
Ultrathin Composite Metal Membranes [Gas Separation membrane]	4,857,080	08-15-1989*
Process For Separating Higher Hydrocarbons From Natural Or Produced Gas Streams	4,857,078	08-15-1989
Process For Recovering Organic Vapors From Air [Semipermeable membrane]	4,553,983	11-19-1985

* Subject to Government rights in this invention.

Initials

EXHIBIT C

List of Trademarks

Name	Serial No.	Date of Registration	Registration No.
MTR	75-494,104	June 15, 1999	2,253,696
PERVAP	74-320,628	February 1, 1994	1,818,866
VAPORSEP	74-320,415	February 7, 1995	1,877,519

Initials