TRADEMARK ASSIGNMENT

Electronic Version v1.1
Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	MERGER
EFFECTIVE DATE:	08/01/2006

CONVEYING PARTY DATA

Name	Formerly	Execution Date	Entity Type
SHI-APD Cryogenics Inc.	FORMERLY IGC APD Cryogenics Inc.	07/17/2006	CORPORATION: PENNSYLVANIA

RECEIVING PARTY DATA

Name:	SUMITOMO (SHI) CRYOGENICS OF AMERICA, INC.
Street Address:	1833 Vultee Street
City:	Allentown
State/Country:	PENNSYLVANIA
Postal Code:	18103
Entity Type:	CORPORATION: ILLINOIS

PROPERTY NUMBERS Total: 1

Property Type	Number	Word Mark
Registration Number:	1864182	MARATHON

CH $40.00 1864182

CORRESPONDENCE DATA

Fax Number: 2129408986
Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.
Phone: 212 940-8800
Email: cheryl.blum@kattenlaw.com
Correspondent Name: Katten Muchin Rosenman LLP
Address Line 1: 575 Madison Avenue
Address Line 4: New York, NEW YORK 10022

ATTORNEY DOCKET NUMBER:	310010-00325 (SHI 10.834)
NAME OF SUBMITTER:	Cheryl Blum

Signature:	/Cheryl Blum/
Date:	12/12/2013

Total Attachments: 53
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Date Filed: 07/18/2006
Effective Date: 08/01/2006
Pedro A. Cortés
Secretary of the Commonwealth

PENNSYLVANIA DEPARTMENT OF STATE
CORPORATION BUREAU

Articles/Certificate of Merger

(15 Pa.C.S.)

- [x] Domestic Business Corporation (§ 1926)
- [ ] Domestic Nonprofit Corporation (§ 5926)
- [ ] Limited Partnership (§ 8547)

Corporation Service Company

W

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Commonwealth of Pennsylvania
ARTICLES OF MERGER-BUSINESS 53 Page(s)

T0620160023

Fee: $150 plus $40 additional for each Party in additional to two

In compliance with the requirements of the applicable provisions (relating to articles of merger or consolidation), the undersigned, desiring to effect a merger, hereby state that:

1. The name of the corporation/limited partnership surviving the merger is:
SHI-APD Cryogenics Inc.

2. *Check and complete one of the following:*

- [ ] The surviving corporation/limited partnership is a domestic business/nonprofit corporation/limited partnership and the (a) address of its current registered office in this Commonwealth or (b) name of its commercial registered office provider and the county of venue is (the Department is hereby authorized to correct the following information to conform to the records of the Department):

(a) Number and Street | City | State | Zip | County

(b) Name of Commercial Registered Office Provider | County
c/o CT Corporation System | Philadelphia

- [ ] The surviving corporation/limited partnership is a qualified foreign business/nonprofit corporation /limited partnership incorporated/formed under the laws of _____ and the (a) address of its current registered office in this Commonwealth or (b) name of its commercial registered office provider and the county of venue is (the Department is hereby authorized to correct the following information to conform to the records of the Department):

(a) Number and Street | City | State | Zip | County

(b) Name of Commercial Registered Office Provider | County
c/o

- [ ] The surviving corporation/limited partnership is a nonqualified foreign business/nonprofit corporation/limited partnership incorporated/formed under the laws of_____ and the address of its principal office under the laws of such domiciliary jurisdiction is:

Number and Street | City | State | Zip

PA DEPT. OF STATE
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3. The name and the address of the registered office in this Commonwealth or name of its commercial registered office provider and the county of venue of each other domestic business/nonprofit corporation/limited partnership and qualified foreign business/nonprofit corporation/limited partnership which is a party to the plan of merger are as follows:

Name	Registered Office Address	Commercial Registered Office Provider	County

4. *Check, and if appropriate complete, one of the following:*

☐ The plan of merger shall be effective upon filing these Articles/Certificate of Merger in the Department of State.

☑ The plan of merger shall be effective on: August 1, 2006 (Date) at 12:01 AM (EST) (Hour).

5. The manner in which the plan of merger was adopted by each domestic corporation/limited partnership is as follows:

Name	Manner of Adoption
SHI-APD Cryogenics Inc.	The Plan of Merger was adopted by the directors and shareholders of SHI-APD Cryogenics Inc. pursuant to 15 Pa.C.S. 1924(a).

6. *Strike out this paragraph if no foreign corporation/limited partnership is a party to the merger.* The plan was authorized, adopted or approved, as the case may be, by the foreign business/nonprofit corporation/limited partnership (or each of the foreign business/nonprofit corporations/limited partnerships) party to the plan in accordance with the laws of the jurisdiction in which it is incorporated/organized.

7. *Check, and if appropriate complete, one of the following:*

☑ The plan of merger is set forth in full in Exhibit A attached hereto and made a part hereof.

☐ Pursuant to 15 Pa.C.S. § 1901/§ 8547(b) (relating to omission of certain provisions from filed plans) the provisions, if any, of the plan of merger that amend or constitute the operative provisions of the Articles of Incorporation/Certificate of Limited Partnership of the surviving corporation/limited partnership as in effect subsequent to the effective date of the plan are set forth in full in Exhibit A attached hereto and made a party hereof. The full text of the plan of merger is on file at the principal place of business of the surviving corporation/limited partnership, the address of which is.

Number and street	City	State	Zip	County

DSCB: 15-1926/5926/8547-3

IN TESTIMONY WHEREOF, the undersigned corporation/limited partnership has caused these Articles/Certificate of Merger to be signed by a duly authorized officer thereof this

17 day of July

2006

SHI-APD Cryogenics Inc.

Name of Corporation/Limited Partnership

David Redman

Signature

President

Title

Sumitomo (SHI) Cryogenics of America, Inc.

Name of Corporation/Limited Partnership

Signature

PRESIDENT

Title

PLAN OF MERGER

MERGING

SUMITOMO (SHI) CRYOGENICS OF AMERICA, INC.
(an Illinois corporation)

WITH AND INTO

SHI-APD CRYOGENICS INC.
(a Pennsylvania corporation)

****

THIS PLAN OF MERGER is made and entered into as of July 17, 2006 (the "Agreement"), pursuant to the Illinois Business Corporation Act of 1983, as amended, and the Pennsylvania Business Corporation Law, as amended, by and between Sumitomo (SHI) Cryogenics of America, Inc., an Illinois corporation ("SCAI"), and SHI-APD Cryogenics Inc., a Pennsylvania corporation ("APD"). SCAI and APD are hereinafter sometimes referred to as the "Constituent Corporations."

W I T N E S S E T H:

WHEREAS, SCAI is a corporation duly organized and existing under the laws of the State of Illinois, having 1,000 shares of common stock, no par value per share, currently issued and outstanding ("SCAI Shares") and solely owned by Sumitomo Heavy Industries, LTD., a Japanese corporation ("Sumitomo Industries"); and

WHEREAS, APD is a corporation duly organized and existing under the laws of the State of Pennsylvania, having 1,000 shares of common stock, no par value per share, currently issued and outstanding ("APD Shares") and solely owned by Sumitomo Industries;

WHEREAS, the respective boards of directors and shareholders of each of SCAI and APD deem it advisable and in the best interests of such corporations that SCAI merge with and into APD upon the terms and conditions set forth herein and in accordance with the laws of the State of Illinois and the laws of the State of Pennsylvania (the "Merger").

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NOW, THEREFORE, the Constituent Corporations, as parties to this Agreement, in consideration of the mutual covenants, agreements and provisions hereinafter contained, do hereby prescribe the terms and conditions of said Merger and mode of carrying the same into effect as follows:

SECTION 1.

EFFECT OF THE MERGER; AUTHORIZATION; CANCELLATION AND CONTINUATION OF SHARES

a. Merger. At the Effective Time (as hereinafter defined), SCAI shall be merged with and into APD, the separate corporate existence of SCAI (except to the extent provided by the laws of the State of Illinois) shall cease, and APD shall continue as the surviving corporation under the name "Sumitomo (SHI) Cryogenics of America, Inc."

b. The Merger shall have the further effects set forth under the laws of the State of Illinois and the State of Pennsylvania. APD, in its capacity as the surviving corporation of the Merger, is hereinafter sometimes referred to as the "Surviving Corporation."

c. Assets and Liabilities of Surviving Corporation. The Surviving Corporation, as the resulting entity from the Merger, shall have vested in it, upon consummation of the Merger, all of the assets, rights, obligations and liabilities of both SCAI and APD pursuant to the provisions of the Pennsylvania Business Corporation Law, as amended ("PBCL"), and the Illinois Business Corporation Act of 1983, as amended ("BCA").

d. Authorization. The merger of SCAI with and into APD shall be authorized in the manner prescribed by the BCA and the PBCL, and this Plan of Merger herein made and approved shall be submitted to the board of directors and shareholders of each Constituent Corporation for their approval or rejection in the manner prescribed by the provisions of the BCA and PBCL.

e. SCAI Shares. At the Effective Time, the SCAI Shares issued and outstanding immediately prior to the Effective Time shall, by virtue of the Merger and without any action by the holder of such SCAI Shares or any other person, be cancelled without any consideration. Any share of capital stock of SCAI held in treasury shall be canceled, shall not convert and no payment shall be made in respect thereof.

f. APD Shares. At the Effective Time, APD Shares issued and outstanding immediately prior to the Effective Time shall, by virtue of the Merger and without any action by the holder of such APD Shares, remain outstanding and represent the issued and outstanding shares of the Surviving Corporation. Any share of capital stock of APD held in treasury shall remain unaffected by the Merger.

g. Certificates. After the Closing, the stock certificate formerly representing the SCAI Shares shall be deemed surrendered and cancelled and such holder shall promptly submit such certificate to the Surviving Corporation. After the Closing, the stock certificate representing the APD Shares shall continue to represent such number of shares of the Surviving

TRADEMARK
REEL: 005172 FRAME: 0605

Corporation; provided that such holder may submit such certificate to the Surviving Corporation in exchange for a new certificate for an equal number of shares of the Surviving Corporation.

SECTION 2.

ARTICLES OF MERGER; EFFECTIVE TIME

a. Articles of Merger. Following approval of the Merger by the respective boards of directors and shareholders of each of SCAI and APD, and provided that this Plan of Merger has not been abandoned pursuant to Section 4 hereof, SCAI and APD shall cause the appropriate Articles of Merger (the "Articles of Merger") to be executed, acknowledged and filed with the Secretary of State of Illinois and the Secretary of State of Pennsylvania. The board of directors and the officers of the Constituent Corporations are hereby authorized, empowered, and directed to do any and all acts and things, and to make, execute, deliver, file, and/or record any and all instruments, papers, and documents which shall be or become necessary, proper, or convenient to carry out or put into effect any of the provisions of this Plan of Merger or of the Merger herein provided for.

b. Effective Time. The Merger shall become effective as of August 1, 2006 after filing of such Articles of Merger with the Secretary of State of Illinois and the Secretary of State of Pennsylvania, respectively (the "Effective Time").

SECTION 3.

ARTICLES OF INCORPORATION; BY-LAWS; BOARD OF DIRECTORS AND OFFICERS

a. Articles of Incorporation. The Articles of Incorporation of APD, as amended, attached hereto as Exhibit A (and as amended by the Plan of Merger and Docketing Statement filed with the Pennsylvania Secretary of State as of the Effective Time to change the name of the Surviving Corporation to "Sumitomo (SHI) Cyrogenics of America, Inc.") will be the Articles of Incorporation of the Surviving Corporation until the same shall be amended in the manner provided therein and by the PBCL.

b. By-laws. The by-laws attached hereto as Exhibit B will be the by-laws of the Surviving Corporation (the "By-Laws") until the same shall be amended in accordance with the provisions thereof.

c. Board of Directors and Officers. The members of the board of directors of the Surviving Corporation following the Effective Time shall be composed of the following: Mr. Osamu Sekiya; Mr. Tsuneo Nagano; Mr. David Dedman; and Mr. Isamu Dekiya, with Mr. Nagano serving as Chairman of the Board, and they shall hold such positions until the expiration of their current terms pursuant to the By-laws, or their prior resignation, removal or death. At the Effective Time, the following persons shall hold the office or offices of the Surviving Corporation set opposite their respective names until the expiration of their current terms pursuant to the By-laws, or their prior resignation, removal or death:

Office	Name

TRADEMARK
REEL: 005172 FRAME: 0606

Chief Executive Officer	Mr. Tsuneo Nagano
President and Chief Operating Officer	Mr. David Dedman
Executive Vice President	Mr. Isamu Dekiya
Secretary and Treasurer	Mr. Ignacio Mercade

SECTION 4.

MISCELLANEOUS

a. Amendment. At any time prior to the filing of the Articles of Merger, this Plan of Merger may be amended in a written agreement executed by the parties hereto.

b. Abandonment. This Plan of Merger may be terminated and the Merger abandoned for any reason by a resolution adopted by the board of directors of either of SCAI or APD at any time prior to the filing of the Articles of Merger.

c. Further Assurances. If at any time the Surviving Corporation shall consider or be advised that any further assurances in law or any other agreements, documents, instruments, deeds, instruments of conveyance, tax returns or assignments are convenient, necessary or desirable to vest, perfect or confirm, of record or otherwise, in the Surviving Corporation the title to any property or rights of SCAI or APD or to comply with any provisions of the laws of the State of Illinois or the State of Pennsylvania or any contract to which SCAI or APD was a party, the officers and directors of SCAI or APD in office immediately prior to the Effective Time shall in the name of such company execute and deliver all such proper agreements, documents, instruments, deeds, instruments of conveyance, tax returns or assignments and assurances in law and do all things necessary and proper to vest, perfect or confirm title to such property or rights in the Surviving Corporation and otherwise carry out the provisions of this Agreement, and the officers and directors of the Surviving Corporation are authorized in the name of SCAI or APD to take any and all such action.

d. Representations and Warranties. Each Constituent Corporation represents and warrants to the other Constituent Corporation that: (i) such Constituent Corporation has all requisite corporate power and authority and has taken all corporate action necessary in order to execute, deliver and perform its obligations under this Plan of Merger and to consummate the Merger and (ii) this Plan of Merger has been duly executed and delivered by such Constituent Corporation and is a valid and binding agreement of the Constituent Corporation, enforceable against such Constituent Corporation in accordance with its terms.

[Signature Page Follows]

TRADEMARK
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IN WITNESS WHEREOF, this Plan of Merger is hereby executed on behalf of each of the Constituent Corporations.

SUMITOMO (SHI) CRYOGENICS OF AMERICA, INC.

By: _____
Name: ISAMU DEKIYA
Title: PRESIDENT

SHI-APD CRYOGENICS INC.

By: David Dedman
Name: David Dedman
Title: President

TRADEMARK
REEL: 005172 FRAME: 0608

EXHIBIT A

ARTICLES OF INCORPORATION OF THE SURVIVING CORPORATION, AS AMENDED

TRADEMARK
REEL: 005172 FRAME: 0609

EXHIBIT B

BY-LAWS OF THE SURVIVING CORPORATION

TRADEMARK
REEL: 005172 FRAME: 0610

Articles of Incorporation—Domestic Business Corporation

87191752

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF STATE
CORPORATION BUREAU

In compliance with the requirements of section 204 of the Business Corporation Law [illegible] (15 P.S. § 1204) the undersigned, desiring to be incorporated as a business corporation [illegible]

1. The name of the corporation is:

APD Cryogenics Inc

2. The location and post office address of the initial registered office of the corporation in this Commonwealth is:

c/o CT Corporation System
123 S. Broad Street
(NUMBER) (STREET)
Philadelphia Pennsylvania 19109
(CITY) (STATE) (ZIP CODE)

3. The corporation is incorporated under the Business Corporation Law of the Commonwealth of Pennsylvania for the following purpose or purposes:

The purpose or purposes for which the corporation is incorporated under the Business Corporation Law of the Commonwealth of Pennsylvania are to engage in, and to do any lawful act concerning, any or all lawful business for which corporations may be incorporated under said Business Corporation Law, including but not limited to, manufacturing, processing, owning, using and dealing in personal property of every class and description, engaging in research and development, furnishing services, and acquiring, owning, using and disposing of real property of any nature whatsoever.

4. The term for which the corporation is to exist is: Perpetual

5. The aggregate number of shares which the corporation shall have authority to issue is:

1,000 shares common stock of the par value of $1.00 per share.

form 4

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87191753

6. The name(s) and post office address(es) of each incorporator(s) and the number and class of shares subscribed by each incorporator(s) is (are):

NAME	ADDRESS (Including street and number, if any)	NUMBER AND CLASS OF SHARES
David R. King	Morgan, Lewis & Bockius 2000 One Logan Square Philadelphia, PA 19103	One (1) Share Common Stock

See Rider A attached hereto

IN TESTIMONY WHEREOF, the incorporator(s) has (have) signed and sealed these Articles of Incorporation this 26th day of February, 19 87.

David R. King (SEAL)

(SEAL)

(SEAL)

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DEPT OF STATE

INSTRUCTIONS FOR COMPLETION OF FORM:

A. For general instructions relating to the incorporation of business corporations see 19 Pa. Code Ch. 35 (relating to business corporations generally). These instructions relate to such matters as corporate name, stated purposes, term of existence, authorized share structure and related authority of the board of directors, inclusion of names of first directors in the Articles of Incorporation, optional provisions on cumulative voting for election of directors, etc.

B. One or more corporations or natural persons of full age may incorporate a business corporation.

C. Optional provisions required or authorized by law may be added as Paragraphs 7, 8, 9 . . . etc.

D. The following shall accompany this form:

(1) Three copies of Form DSCB:BCL-206 (Registry Statement Domestic or Foreign Business Corporation).

(2) Any necessary copies of Form DSCB:17.2 (Consent to Appropriation of Name) or Form DSCB:17.3 (Consent to Use of Similar Name).

(3) Any necessary governmental approvals.

E. BCL §205 (15 Pa. S. §1205) requires that the incorporators shall advertise their intention to file or the corporation shall advertise the filing of articles of incorporation. Proofs of publication of such advertising should not be delivered to the Department, but should be filed with the minutes of the corporation.

87191751

Rider A

7. The shareholders of the corporation shall not have the right to cumulate their votes for the election of directors of the corporation.

8. Any action which may be taken at a meeting of shareholders or of a class of shareholders may be taken without a meeting if a consent or consents in writing to such action, setting forth the action so taken, shall be signed by shareholders entitled to cast a majority (or such larger percentage as may at the time of such action be required by statute for the taking of action by shareholders without a meeting) of the votes which all such shareholders are authorized to cast thereon.

87191755

Commonwealth of Pennsylvania

Department of State

CERTIFICATE OF INCORPORATION

Office of the Secretary of the Commonwealth

To All to Whom These Presents Shall Come, Greeting:

Whereas, *Under the provisions of the Laws of the Commonwealth, the Secretary of the Commonwealth is authorized and required to issue a "Certificate of Incorporation" evidencing the incorporation of an entity.*

Whereas, *The stipulations and conditions of the Law have been fully complied with by*

APD CRYOGENICS INC.

Therefore, Know Ye, *That subject to the Constitution of this Commonwealth, and under the authority of the Laws thereof, I do by these presents, which I have caused to be sealed with the Great Seal of the Commonwealth, declare and certify the creation, erection and incorporation of the above in deed and in law by the name chosen hereinbefore specified.*

Such corporation shall have and enjoy and shall be subject to all the powers, duties, requirements, and restrictions, specified and enjoined in and by the applicable laws of this Commonwealth.

Given *under my Hand and the Great Seal of the Commonwealth, at the City of Harrisburg, this* 27th *day of* February *in the year of our Lord one thousand nine hundred and* eighty-seven *and of the Commonwealth the two hundred* eleventh

Secretary of the Commonwealth

0967260

MORGAN LEWIS & BOCKIUS ESQS
ATTN: CHERYL LEWIS
800 NORTH 3RD STREET
HARRISBURG, PA 17102

Microfilm Number 9046 99

Entity Number 967260

Filed with the Department of State on SEP 1 1990

Secretary of the Commonwealth

STATEMENT OF CHANGE OF REGISTERED OFFICE BY AGENT

DSCB: 15-106 (Rev 80)

In compliance with the requirements of 15 Pa. C.S. § 108 (relating to change in location or status of registered office provided by agent), the undersigned person who maintains the registered office of an association and who desires to change the following with respect to such agency hereby states that:

1. The name of the association represented by the undersigned person is:

   APD CRYOGENICS, INC.

2. The address of the present registered office in this Commonwealth of the above named association is:

123 South Broad Street	Philadelphia	Pa.	19109	Philadelphia
Number and Street	City	State	Zip	County

3. (If the registered office address is to be changed, complete the following):

   The address in the same county to which the registered office in this Commonwealth of the above named association is to be changed is:

1635 Market Street	Philadelphia	Pa.	19103	Philadelphia
Number and Street	City	State	Zip	County

4. The name of the person in care of the foregoing office is: C T CORPORATION SYSTEM

   The person named immediately above in this paragraph has been designated in fact as the agent in care of the registered office in the Commonwealth of Pennsylvania of the corporation named in paragraph 2 of this statement.

5. (Check one or more of the following, as appropriate):

   ___ This statement reflects a change in name of the agent.
   X The change in registered office set forth in this statement reflects the removal of the place of business of the agent to a new location within the county.
   ___ The status of the agent as the provider of the registered office of the above-named association has been terminated.

IN TESTIMONY WHEREOF, the undersigned person has caused this statement to be signed this 10th day of September 19 90.

C T CORPORATION SYSTEM
(Name)

BY: [signature]

TITLE: Assistant Secretary

Microfilm Number _____ Filed with the Department of State on SEP 1 3 1993

Entry Number _____

Secretary of the Commonwealth

ARTICLES OF AMENDMENT DOMESTIC BUSINESS CORPORATION

DSCB:15-1915 (Rev 90)

In compliance with the requirements of 15 Pa.C.S. § 1915 (relating to articles of amendment), the undersigned business corporation, desiring to amend its Articles, hereby states that:

1. The name of the corporation is: APD Cryogenics Inc.

2. The (a) address of this corporation's current registered office in this Commonwealth or (b) name of its commercial registered office provider and the county of venue is (the Department is hereby authorized to correct the following information to conform to the records of the Department):

(a) _____
Number and Street City State Zip County

(b) c/o: CT Corporation System Philadelphia
Name of Commercial Registered Office Provider County

For a corporation represented by a commercial registered office provider, the county in (b) shall be deemed the county in which the corporation is located for venue and official publication publication purposes.

3. The statute by or under which it was incorporated is: Business Corporation Law of 1933

4. The date of its incorporation is: February 21, 1987

5. (Check, and if appropriate complete, one of the following):

[X] The amendment shall be effective upon filing these Articles of Amendment in the Department of State.

[ ] The amendment shall be effective on _____ at _____
Date Hour

6. (Check one of the following):

[ ] The amendment was adopted by the shareholders (or members) pursuant to 15 Pa.C.S. § 1914(a) and (b).

[X] The amendment was adopted by the board of directors pursuant to 15 Pa.C.S. § 1914(c).

7. (Check, and if appropriate complete, one of the following):

[X] The amendment adopted by the corporation, set forth in full, is as follows:
First: The name of the Corporation is hereby changed to
"IGC APD CRYOGENICS INC."

[ ] The amendment adopted by the corporation is set forth in full in Exhibit A attached hereto and made a part hereof.

SEP -2 93

BY: _____

TITLE: Secretary

)SCB: 15-1915 (Rev 90)-3

2002011-924

PENNSYLVANIA DEPARTMENT OF STATE
CORPORATION BUREAU

Articles of Amendment-Domestic Corporation

(15 Pa.C.S.)

Entity Number
967260

X Business Corporation (§ 1915)
___ Nonprofit Corporation (§ 5915)

Name
Address CT CORP-COUNTER
City State Zip Code

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Fee: $52

Filed in the Department of State on FEB 06 2002

Secretary of the Commonwealth

In compliance with the requirements of the applicable provisions (relating to articles of amendment), the undersigned, desiring to amend its articles, hereby states that:

1. The name of the corporation is:
IGC-APD Cryogenics Inc.

2. The (a) address of this corporation's current registered office in this Commonwealth or (b) name of its commercial registered office provider and the county of venue is (the Department is hereby authorized to correct the following information to conform to the records of the Department):
(a) Number and Street City State Zip County

(b) Name of Commercial Registered Office Provider County
c/o CT Corporation System Philadelphia

3. The statute by or under which it was incorporated:
Business Corporation Law of 1933

4. The date of its incorporation:
February 27, 1987

5. *Check and if appropriate complete one of the following:*

X The amendment shall be effective upon filing these Articles of Amendment in the Department of State.

___ The amendment shall be effective on: _____ at _____
Date Hour

PA DEPT. OF STATE
FEB 06 2002

RECEIVED TIME FEB. 6. 4:37PM PRINT TIME FEB. 6. 4:42PM

DSCB:15-1915/5915-2

2002011-925

4. *Check one of the following:*

___ The amendment was adopted by the shareholders or members pursuant to 15 Pa.C.S. § 1914(a) and (b) or § 5914(a).

X The amendment was adopted by the board of directors pursuant to 15 Pa. C.S. § 1914(c) or § 5914(b).

7. *Check and if appropriate complete one of the following:*

___ The amendment adopted by the corporation, set forth in full, is as follows:

X The amendment adopted by the corporation is set forth in full in Exhibit A attached hereto and made a part hereof.

8. *Check if the amendment restates the Articles:*

___ The restated Articles of Incorporation supersede the original articles and all amendments thereto.

IN TESTIMONY WHEREOF, the undersigned corporation has caused these Articles of Amendment to be signed by a duly authorized officer thereof this

4th day of February, 2002.

IGC-APD Cryogenics Inc.
Name of Corporation

Signature

Secretary
Title

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Exhibit A

RESOLVED, that the Authorized Signatories be, and any one or more of them hereby are, authorized, empowered and directed, in the name of and on behalf of the Company, to have executed, delivered and filed Articles of Amendment to the Articles of Incorporation of the Company, which change the name of the Company to the following:

"SHI-APD Cryogenics Inc."

, with such changes therein, if any, as the Authorized Signatory executing the same shall deem necessary or appropriate, such determination to be conclusively evidenced by such officer's execution thereof; and further

BY-LAWS

OF

SUMITOMO (SHI) CRYOGENICS OF AMERICA, INC.

ARTICLE I

OFFICES AND REGISTERED AGENT

Section 1.1 Registered Office and Agent. The Corporation shall have and continuously maintain a registered office in Pennsylvania and a registered agent having a business office identical with such registered office.

Section 1.2 Other Offices. The Corporation may also have such other office or offices in Pennsylvania or elsewhere as the Board of Directors may determine or as the business of the Corporation may require.

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ARTICLE II

SHAREHOLDERS

Section 1.1 Section 2.1 Annual Meeting. An annual meeting of the shareholders shall be held on such date and at the time designated by the Board of Directors, for the purpose of electing directors and for the transaction of such other business as may come before the meeting. If the day fixed for the annual meeting shall be a legal holiday, such meeting shall be held on the next succeeding business day. If the directors shall not be elected at the annual meeting, or at any adjournment thereof, the Board of Directors shall cause the election to be held as soon thereafter as may be convenient.

Section 2.2 Special Meetings. Special meetings of the shareholders may be called at any time by the President, and shall be called by the President or Secretary at the request in writing of (a) a majority of the Board of Directors, or (b) the holders of not less than one-half of all the outstanding shares entitled to vote on the matter for which the meeting is called. Such request shall state the purpose or purposes of the proposed meeting.

Section 1.2 Section 2.3 Place of Meetings. Meetings of shareholders, whether annual or special, shall be held at such time and place as may be determined by the Board of Directors and designated in the call and notice or waiver of notice of such meeting; provided, that a waiver of notice signed by all shareholders may designate any time or place as the time and place for the holding of such meeting. If no designation is made, the place of meeting shall be at the Corporation's principal place of business.

Section 2.4 Notice of Meetings. Written or printed notice stating the place, date and hour of the meeting and, in case of a special meeting, the purpose or purposes for which the meeting is called, shall be delivered not less than ten nor more than sixty days before the date of

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the meeting, or in the case of a merger or consolidation, share exchange, dissolution or sale, lease or exchange of all or substantially all of the assets of the Corporation other than in the usual and regular course of business not less than twenty nor more than sixty days before the date of the meeting, either personally or by mail, by or at the direction of the President, the Secretary or the persons calling the meeting, to each shareholder of record entitled to vote at such meeting. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail, with postage thereon prepaid, addressed to the shareholder at his address as it appears on the records of the Corporation.

Section 2.5 Fixing of Record Date or Otherwise Determining Shareholders. For the purpose of determining shareholders entitled to notice of or to vote at any meeting of shareholders, or shareholders entitled to receive payment of any dividend, or in order to make a determination of shareholders for any other proper purpose, the Board of Directors may fix in advance a date as the record date for any such determination of shareholders, such date in any case to be not more than sixty days and, for a meeting of shareholders, not less than ten days, or in the case of a merger, consolidation, share exchange, dissolution or sale, lease or exchange of all or substantially all of the assets of the Corporation other than in the usual and regular course of business, not less than twenty days, immediately preceding such meeting. If no record date is fixed for the determination of shareholders entitled to notice of or to vote at a meeting of shareholders, or shareholders entitled to receive payment of a dividend, the date on which notice of the meeting is mailed or the date on which the resolution of the Board of Directors declaring such dividend is adopted, as the case may be, shall be the record date for such determination of shareholders. When a determination of shareholders entitled to vote at any meeting of

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shareholders has been made as provided in this Section, such determination shall apply to any adjournment thereof.

Section 2.6 Voting List. The Secretary or other officer or agent having charge of the share transfer books shall make, within twenty days after the record date for a meeting of shareholders or ten days before such meeting, whichever is earlier, a complete list of the shareholders entitled to vote at such meeting, arranged in alphabetical order, with the address of and the number of shares held by each, which list, for a period of ten days prior to such meeting, shall be kept on file at the registered office of the Corporation and shall be subject to inspection by any shareholder, and to copying at the shareholder's expense, at any time during usual business hours. Such list shall also be produced and kept open at the time and place of the meeting and shall be subject to the inspection of any shareholder during the whole time of the meeting. The original share transfer books, or a duplicate thereof kept in Pennsylvania, shall be prima facie evidence as to who are the shareholders entitled to examine such list or share transfer books or to vote at any meeting of shareholders.

Section 2.7 Quorum and Manner of Acting. Unless otherwise provided by the Articles of Incorporation, a majority of the outstanding shares of the Corporation, entitled to vote on a matter, represented in person or by proxy, shall constitute a quorum for consideration of such matter at any meeting of shareholders; provided, that if less than a majority of the outstanding shares entitled to vote on a matter is represented at said meeting, a majority of such shares so represented may adjourn the meeting from time to time without further notice. If a quorum is present, the affirmative vote of the majority of the shares represented at the meeting and entitled to vote shall be the act of the shareholders, unless the vote of a greater number or voting by classes is required by the Pennsylvania Business Corporation Law, as amended, the Articles of

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Incorporation or these By-laws. At any adjourned meeting at which a quorum shall be present any business may be transacted which might have been transacted at the original meeting. Withdrawal of shareholders from any meeting shall not cause failure of a duly constituted quorum at that meeting.

Section 2.8 Proxies. A shareholder may appoint a proxy to vote or otherwise act for him by signing an appointment form and delivering it to the person so appointed. No proxy shall be valid after the expiration of eleven months from the date thereof, unless otherwise provided in the proxy.

Section 2.9 Voting of Shares. Unless otherwise provided in the Articles of Incorporation, each outstanding share, regardless of class, shall be entitled to one vote on each matter submitted to a vote at a meeting of shareholders.

Section 2.10 Inspectors. At any meeting of shareholders, the chairman of the meeting may, or upon the request of any shareholder shall, appoint one or more persons as inspectors for such meeting. Such inspectors shall ascertain and report the number of shares represented at the meeting, based upon the voting list produced at the meeting in accordance with Section 2.6 hereof and upon their determination of the validity and effect of proxies, and they shall count all votes, report the results and do such other acts as are proper to conduct the election and voting with impartiality and fairness to all the shareholders. Each such report shall be in writing and signed by at least a majority of the inspectors, the report of a majority being the report of the inspectors, and such reports shall be prima facie evidence of the number of shares represented at the meeting and the result of a vote of the shareholders.

Section 2.11 Voting of Shares by Certain Holders. Shares of the Corporation held by the Corporation, unless held by it in a fiduciary capacity, shall not be voted, directly or indirectly, at

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any meeting, and shall not be counted in determining the total number of outstanding shares at any given time. Shares registered in the name of another corporation, domestic or foreign, may be voted by such officer, agent, proxy or other legal representative authorized to vote such shares under the law of incorporation of such corporation. Shares registered in the name of a deceased person, a minor ward or a person under legal disability may be voted by his administrator, executor or court appointed guardian, either in person or by proxy, without a transfer of such shares into the name of such administrator, executor or court appointed guardian. Shares registered in the name of a trustee may be voted by him, either in person or by proxy, but no trustee shall be entitled to vote shares held by him without a transfer of such shares into his name. Shares registered in the name of a receiver may be voted by such receiver, and shares held by or under the control of a receiver may be voted by such receiver without the transfer thereof into his name if authority so to do is contained in an appropriate order of the court by which such receiver was appointed. A shareholder whose shares are pledged shall be entitled to vote such shares until the shares have been transferred into the name of the pledgee, and thereafter the pledgee shall be entitled to vote the shares so transferred.

Section 2.12 Informal Action by Shareholders. Unless otherwise provided in the Articles of Incorporation, any action which is required by law or by these By-laws to be taken at a meeting of shareholders, or any other action which may be taken at such a meeting, may be taken without a meeting and without a vote if a consent in writing, setting forth the action so taken, shall be signed (i) if five days prior notice of the proposed action is given in writing to all of the shareholders entitled to vote with respect to the subject matter thereof, by the holders of outstanding shares having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were

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present and voting or (ii) by all of the shareholders entitled to vote with respect to the subject matter thereof. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given in writing to those shareholders who have not consented in writing.

Section 2.13 Cumulative Voting. No holder of shares of the corporation shall have any cumulative voting rights in the election of directors of the corporation or in any other circumstances.

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ARTICLE III

BOARD OF DIRECTORS

Section 3.1 General Powers. The business and affairs of the Corporation shall be managed by or under the direction of its Board of Directors.

Section 3.2 Number, Tenure and Qualifications. The number of directors shall be four (4). The number may be increased or decreased from time to time by amendment of this Section. Directors need not be shareholders or residents of Pennsylvania. Each director elected shall hold office until his successor is elected and qualified or until his earlier resignation or removal.

Section 3.3 Regular Meetings. A regular meeting of the Board of Directors shall be held, without other notice than this Section, immediately after and at the same place as the annual meeting of shareholders. The Board of Directors may provide, by resolution, the time and place, either within or without Pennsylvania, for the holding of additional regular meetings without other notice than such resolution.

Section 3.4 Special Meetings. Special meetings of the Board of Directors may be called at any time by the President or any director. The person or persons who call a special meeting of the Board of Directors may designate any place, either within or without Pennsylvania, as the place for holding such special meeting. In the absence of such a designation the place of meeting shall be the Corporation's principal place of business.

Section 3.5 Notice of Special Meetings. Notice stating the place, date and hour of a special meeting shall be mailed not less than five days before the date of the meeting, or shall be sent by telegram or be delivered personally or by telephone not less than two days before the date of the meeting, to each director, by or at the direction of the person or persons calling the meeting. Attendance of a director at any meeting shall constitute a waiver of notice of such

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meeting except where a director attends a meeting for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at nor the purpose of any meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

Section 3.6 Quorum and Manner of Acting. Unless otherwise provided in the Articles of Incorporation, a majority of the number of directors as fixed in Section 3.2 hereof shall constitute a quorum for the transaction of business at any meeting of the Board of Directors; provided, that if less than a majority of such number of directors are present at said meeting, a majority of the directors present may adjourn the meeting from time to time without further notice. The act of the majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors, unless otherwise provided in the Illinois Business Corporation Act of 1983, the Articles of Incorporation or these By-laws.

Section 3.7 Informal Action by Directors. Any action which is required by law or by these By-laws to be taken at a meeting of the Board of Directors, or any other action which may be taken at a meeting of the Board of Directors or any committee thereof, may be taken without a meeting if a consent in writing, setting forth the action so taken, shall be signed by all of the directors entitled to vote with respect to the subject matter thereof, or by all the members of such committee, as the case may be. The consent shall be evidenced by one or more written approvals, each of which sets forth the action taken and bears the signature of one or more directors. All approvals evidencing the consent shall be delivered to the Secretary to be filed in the corporate records. The action taken shall be effective when all the directors have approved the consent unless the consent specifies a different effective date. Such consent shall have the

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same force and effect as a unanimous vote of all of the directors or all of the members of any such committee, as the case may be, at a duly called meeting thereof.

Section 3.8 Telephonic Meetings. Unless specifically prohibited by the Articles of Incorporation, members of the Board of Directors or of any committee of the Board of Directors may participate in and act at any meeting of such Board or committee through the use of a conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other. Participation in such a meeting shall constitute attendance and presence in person at the meeting of the person or persons so participating.

Section 3.9 Resignations. Any director may resign at any time by giving written notice to the Board of Directors, the President, or the Secretary. Such resignation shall take effect at the time specified therein; and, unless tendered to take effect upon acceptance thereof, the acceptance of such resignation shall not be necessary to make it effective. Any pending vacancy may be filled before the effective date thereof, but the successor shall not take office until such effective date.

Section 3.10 Vacancies. Any vacancy occurring in the Board of Directors and any directorship to be filled by reason of an increase in the number of directors may be filled by election at an annual meeting or at a special meeting of the shareholders called for that purpose; provided, however, the Board of Directors may properly fill one or more vacancies arising between meetings of shareholders by reason of an increase in the number of directors or otherwise. A director elected by the shareholders to fill a vacancy shall hold office until the next annual meeting of shareholders or until his successor shall have been elected and qualified. A director appointed by the directors to fill a vacancy shall serve until the next meeting of

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shareholders at which directors are to be elected or until his successor shall have been elected and qualified.

Section 3.11 Compensation. The Board of Directors, by the affirmative vote of a majority of the directors then in office and irrespective of any personal interest of any of its members, shall have the authority to establish reasonable compensation of directors for services to the Corporation as directors, officers or otherwise. By resolution of the Board of Directors the directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors.

Section 3.12 Presumption of Assent. A director who is present at a meeting of the Board of Directors at which action on any corporate matter is taken shall be conclusively presumed to have assented to the action taken unless his dissent shall be entered in the minutes of the meeting or unless he shall file his written dissent to such action with the person acting as the secretary of the meeting before the adjournment thereof or shall forward such dissent by registered mail to the Secretary immediately after the adjournment of the meeting. Such right to dissent shall not apply to a director who voted in favor of such action.

Section 3.13 Directors Conflict of Interest. If a transaction is fair to the Corporation at the time it is authorized, approved or ratified, the fact that a director is directly or indirectly a party to the transaction is not grounds for invalidating the transaction. The presence of the director, who is directly or indirectly a party to such a transaction, or a director who is otherwise not disinterested, may be counted in determining whether a quorum is present but may not be counted when the Board of Directors or a committee thereof takes action on the transaction.

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ARTICLE IV

COMMITTEES

Section 4.1 Appointment and Powers. The Board of Directors, by resolution, may create one or more committees and appoint members of the Board to serve on the committee or committees. Each committee shall have two or more members, who shall serve at the pleasure of the Board. Unless the appointment by the Board of Directors requires a greater number, a majority of any committee shall constitute a quorum and a majority of a quorum is necessary for committee action. A committee may act by unanimous consent in writing without a meeting and, subject to the provisions of these By-laws or action by the Board of Directors, the committee by majority vote of its members shall determine the time and place of meetings and the notice required therefor. To the extent specified by the Board of Directors, each committee may exercise all the authority of the Board of Directors in the management of the Corporation, provided no such committee may authorize distributions; approve or recommend to shareholders any act the Illinois Business Corporation Act of 1983 requires to be approved by shareholders; fill vacancies on the Board of Directors or on any of its committees; elect or remove officers or fix the compensation of any member of the committee; adopt, amend or repeal these By-laws; approve a plan of merger not requiring shareholder approval; authorize or approve reacquisition of shares, except according to a general formula or method prescribed by the Board of Directors; authorize or approve the issuance or sale, or contract for sale of shares or determine the designation and relative rights, preferences, and limitations of a series of shares, except that the Board of Directors may direct a committee to fix the specific terms of the issuance or sale or contract for sale or the number of shares to be allocated to particular employees under an employee benefit plan; or amend, alter, repeal, or take action inconsistent with any resolution or

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action of the Board of Directors when the resolution or action of the Board of Directors provides by its terms that it shall not be amended, altered or repealed by action of a committee. Each committee shall keep regular minutes of its proceedings and report the same to the Board of Directors.

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ARTICLE V

OFFICERS

Section 5.1 Number and Titles. The officers of the Corporation shall be a President, a Treasurer and a Secretary. There shall be such other officers and assistant officers as the Board of Directors may from time to time deem necessary. Any two or more offices may be held by the same person.

Section 5.2 Election, Term of Office and Qualifications. The officers shall be elected annually by the Board of Directors at the first meeting of the Board of Directors held after the annual meeting of shareholders. If the election of officers is not held at such meeting, such election shall be held as soon thereafter as may be convenient. Vacancies may be filled or new offices created and filled at any meeting of the Board of Directors. Each officer shall be elected to hold office until his successor shall have been elected and qualified, or until his earlier death, resignation or removal. Election of an officer shall not of itself create contract rights.

Section 5.3 Removal. Any officer may be removed by the Board of Directors whenever in its judgment the best interests of the Corporation will be served thereby, but such removal shall be without prejudice to the contract rights, if any, of the person so removed.

Section 5.4 Resignation. Any officer may resign at any time by giving written notice to the Board of Directors, the President or the Secretary. Such resignation shall take effect at the time specified therein; and, unless tendered to take effect upon acceptance thereof, the acceptance of such resignation shall not be necessary to make it effective.

Section 5.5 Duties. In addition to and to the extent not inconsistent with the provisions in these By-laws, the officers shall have such authority, be subject to such restrictions and

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perform such duties in the management of the business, property and affairs of the Corporation as may be determined from time to time by the Board of Directors.

Section 5.6 President. The President shall be the chief executive officer of the Corporation. Subject to the control of the Board of Directors, he shall in general supervise the business and affairs of the Corporation and he shall see that resolutions and directions of the Board of Directors are carried into effect except when that responsibility is specifically assigned to some other person by the Board of Directors. Unless there is a Chairman of the Board who is present and who has the duty to preside, the President shall preside at all meetings of the shareholders and, if a director, at all meetings of the Board of Directors. Except in those instances in which the authority to execute is expressly delegated to another officer or agent of the Corporation or a different mode of execution is expressly prescribed by the Board of Directors or these By-laws or where otherwise required by law, the President may execute for the Corporation any contracts, deeds, mortgages, bonds or other instruments which the Board of Directors has authorized to be executed or the execution of which is in the ordinary course of the Corporation's business, and he may accomplish such execution either under or without the seal of the Corporation and either alone or with the Secretary, any Assistant Secretary, or any other officer thereunto authorized by the Board of Directors or these By-laws. In general, he shall perform all duties incident to the office of President and such other duties as from time to time may be prescribed by the Board of Directors.

Section 5.7 Vice Presidents. In the absence of the President or in the event of his inability or refusal to act, the Vice President (or in the event there is more than one Vice President, the Vice President designated Executive Vice President by the Board of Directors and thereafter, or in the absence of such designation, the Vice Presidents in the order otherwise

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designated by the Board of Directors, or in the absence of such other designation, in the order of their election) shall perform the duties of the President, and when so acting, shall have all the authority of and be subject to all the restrictions upon the President. Except in those instances in which the authority to execute is expressly delegated to another officer or agent of the Corporation or a different mode of execution is expressly prescribed by the Board of Directors or these By-laws or where otherwise required by law, the Vice President (or each of them if there are more than one) may execute for the Corporation any contracts, deeds, mortgages, bonds or other instruments which the Board of Directors has authorized to be executed, and he may accomplish such execution either under or without the seal of the Corporation and either alone or with the Secretary, any Assistant Secretary, or any other officer thereunto authorized by the Board of Directors or these By-laws. The Vice Presidents shall perform such other duties as from time to time may be prescribed by the President or the Board of Directors.

Section 5.8 Treasurer. The Treasurer shall be the principal financial and accounting officer of the Corporation, and shall (a) have charge and custody of, and be responsible for, all funds and securities of the Corporation; (b) keep or cause to be kept correct and complete books and records of account including a record of all receipts and disbursements; (c) deposit all funds and securities of the Corporation in such banks, trust companies or other depositaries as shall be selected in accordance with these By-laws; (d) from time to time prepare or cause to be prepared and render financial statements of the Corporation at the request of the President or the Board of Directors; and (e), in general, perform all duties incident to the office of Treasurer and such other duties as from time to time may be prescribed by the President or the Board of Directors. If required by the Board of Directors, the Treasurer shall give a bond for the faithful discharge of his duties in such sum and with such surety or sureties as the Board of Directors shall determine.

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Section 5.9 Secretary. The Secretary shall (a) keep the minutes of the proceedings of the shareholders and of the Board of Directors in one or more books provided for that purpose; (b) see that all notices are duly given in accordance with the provisions of these By-laws or as required by law; (c) be custodian of the corporate records and of the seal of the Corporation, if adopted, and see that the seal of the Corporation, if adopted, is affixed to all certificates representing shares prior to the issue thereof and to all documents the execution of which on behalf of the Corporation under its seal is necessary or appropriate; (d) keep or cause to be kept a register of the name and address of each shareholder, which shall be furnished to the Corporation by each such shareholder, and the number and class of shares held by each shareholder; (e) have general charge of the share transfer books; (f) have the authority to certify these By-laws, resolutions of the shareholders and Board of Directors and committees thereof, and other documents of the Corporation as true and correct copies thereof; and (g), in general, perform all duties incident to the office of Secretary and such other duties as from time to time may be prescribed by the President or the Board of Directors.

Section 5.10 Assistant Treasurers and Assistant Secretaries. In the absence of the Treasurer or Secretary or in the event of the inability or refusal of the Treasurer or Secretary to act, the Assistant Treasurer and the Assistant Secretary (or in the event there is more than one of either, in the order designated by the Board of Directors or in the absence of such designation, in the order of their election) shall perform the duties of the Treasurer or Secretary, respectively, and when so acting, shall have all the authority of and be subject to all the restrictions upon such office. The Assistant Treasurers and Assistant Secretaries shall also perform such duties as from time to time may be prescribed by the Treasurer or the Secretary, respectively, or by the President or the Board of Directors. If required by the Board of Directors, an Assistant Treasurer

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shall give a bond for the faithful discharge of his duties in such sum and with such surety or sureties as the Board of Directors shall determine.

Section 5.11 Salaries. The salaries and additional compensation, if any, of the officers shall be determined from time to time by the Board of Directors; provided, that if such officers are also directors such determination shall be made by a majority of the directors then in office.

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ARTICLE VI

CERTIFICATES AND THEIR TRANSFER

Section 6.1 Certificates Representing Shares. The issued shares of the Corporation shall be represented by certificates, and no class or series of shares of the Corporation shall be uncertificated shares. Certificates representing shares shall be in such form as determined by the Board of Directors and shall be signed by the President or a Vice President and the Treasurer or an Assistant Treasurer or the Secretary or an Assistant Secretary and sealed with the seal, or a facsimile of the seal, of the Corporation, if adopted. If a certificate is countersigned by a transfer agent or registrar, other than the Corporation itself or its employee, any other signatures or countersignatures on the certificate may be facsimiles. All certificates shall be numbered consecutively. No certificate shall be issued until each share represented thereby is fully paid. The name and address of the person to whom the shares represented by each certificate are issued, with the number of shares and date of issue, shall be entered on the stock transfer books of the Corporation.

Each certificate shall state:

(a) that the Corporation is organized under the laws of Illinois;

(b) the name of the person to whom it is issued;

(c) the number and class of shares and the designation of the series, if any, which it represents; and

(d) the par value of each share which it represents or that such shares are without par value, if applicable.

In addition, if the Corporation is authorized to issue shares of more than one class, each certificate shall set forth upon the face or back thereof a full summary or statement of all the

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designations, preferences, qualifications, limitations, restrictions and special or relative rights of the shares of each class authorized to be issued, and if the Corporation is authorized to issue any preferred or special class in series, the variations in the relative rights and preferences between the shares of each such series so far as the same have been fixed and determined and the authority of the Board of Directors to fix and determine the relative rights and preferences of subsequent series. Such statement may be omitted from the certificate if it shall be set forth upon the face or back of the certificate that such statement, in full, will be furnished by the Corporation to any shareholder upon request and without charge.

Section 6.2 Transfer of Shares. The shares of the Corporation shall be transferable. The Corporation shall have a duty to register any such transfer provided there is presented to the Corporation or its transfer agents (a) the certificate representing shares endorsed by the appropriate person or persons; and (b) reasonable assurance that such endorsement is genuine and effective; and, provided that the Corporation has no duty to inquire into adverse claims or has discharged any such duty; any applicable law relating to the collection of taxes has been complied with; and the transfer is in fact rightful or is to a bona fide purchaser. Upon registration of such transfer upon the share transfer books of the Corporation the certificates representing the shares transferred shall be cancelled and the new record holder, upon request, shall be entitled to a new certificate or certificates. The terms and conditions described in the foregoing provisions of this Section 6.2 shall be construed in accordance with the provisions of the Illinois Uniform Commercial Code. No new certificate shall be issued until the former certificate or certificates for a like number of shares shall have been surrendered and cancelled, except that in case of a lost, destroyed, wrongfully taken or mutilated certificate, a new one may be issued therefor upon such terms and indemnity to the Corporation as the Board of Directors or

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the President may prescribe consistent with the Illinois Uniform Commercial Code and other applicable law.

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ARTICLE VII

DISTRIBUTIONS

Section 7.1 Distributions. The Board of Directors may authorize, and the Corporation may make, distributions to its shareholders, subject to any restrictions in the Articles of Incorporation and the restrictions imposed by law.

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ARTICLE VIII

FISCAL YEAR

Section 8.1 Fiscal Year. The fiscal year of the Corporation shall be fixed by the Board of Directors.

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ARTICLE IX

SEAL

Section 9.1 Seal. If adopted by the Board of Directors, the corporate seal shall have inscribed thereon the name of the Corporation and the words "Corporate Seal" and "Illinois," and may be used by causing it or a facsimile thereof to be impressed or affixed or in any manner reproduced.

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ARTICLE X

WAIVER OF NOTICE

Section 10.1 Waiver of Notice. Whenever any notice is required to be given under these By-laws, the Articles of Incorporation or the Illinois Business Corporation Act of 1983, a waiver thereof in writing, signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice.

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ARTICLE XI

INDEMNIFICATION

Section 11.01 Third-Party Actions. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending, or completed action, suit, or proceeding, whether civil, criminal, administrative, or investigative, including all appeals (other than an action by or in the right of the Corporation) by reason of the fact that the person is or was a director, officer, employee, or agent of the Corporation, or is or was serving at the request of the Corporation as a director, trustee, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise, against expenses, including attorneys' fees, judgment, fines, and amounts paid in settlement actually and reasonably incurred by him or her in connection with the action, suit, or proceeding; if the person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. The termination of any action, suit, or proceeding by judgment, order, settlement, conviction, or on a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner that he or she reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal action or proceeding, had reasonable cause to believe that his or her conduct was unlawful.

Section 11.02 Derivative Actions. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending, or completed action or suit, including all appeals, by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that the person is or was a director, officer, employee, or agent of the

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Corporation, or is or was serving at the request of the Corporation as a director, trustee, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise, against expenses, including attorneys' fees, actually and reasonably incurred by the person in connection with the defense or settlement of the action or suit, if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Corporation. However, no indemnification shall be made in respect of any claim, issue, or matter as to which the person is adjudged to be liable for negligence or misconduct in the performance of his or her duty to the Corporation unless and only to the extent that the court of common pleas or the court in which the action or suit was brought determines on application that, despite the adjudication of liability but in view of all the circumstances of the case, the person is fairly and reasonably entitled to indemnity for expenses that the court of common pleas or other court shall deem proper.

Section 11.03 Rights After Successful Defense. To the extent that a director, trustee, officer, employee, or agent has been successful on the merits or otherwise in defense of any action, suit, or proceeding referred to in Paragraph 11.01 or 11.02, above, or in defense of any claim, issue, or matter in that action, suit, or proceeding, he or she shall be indemnified against expenses, including attorneys' fees, actually and reasonably incurred by him or her in connection with the action, suit, or proceeding.

Section 11.04 Other Determinations of Rights. Unless ordered by a court, any indemnification made under Paragraph 11.01 or 11.02, above, shall be made by the Corporation only as authorized in the specific case on a determination that indemnification of the director, trustee, officer, employee, or agent is proper in the circumstances because he or she has met the applicable standard of conduct set forth in Paragraph 11.01 or 11.02, above. The determination

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shall be made (a) by a majority vote of a quorum consisting of directors who were not and are not parties to or threatened with the action, suit, or proceeding; (b) if the described quorum is not obtainable or if a majority vote of a quorum of disinterested directors so directs, by independent legal counsel in a written opinion; (c) by the shareholders; or (d) by the court in which the action, suit, or proceeding was brought.

Section 11.05 Advances of Expenses. Expenses of each person seeking indemnification under Paragraph 11.01 or 11.02, above, may be paid by the Corporation as they are incurred, in advance of the final disposition of the action, suit, or proceeding, as authorized by the Board of Directors in the specific case, on receipt of an undertaking by or on behalf of the director, trustee, officer, employee, or agent to repay the amount if it is ultimately determined that he or she is not entitled to be indemnified by the Corporation.

Section 11.06 Nonexclusiveness; Heirs. The indemnification provided by this Article shall not be deemed exclusive of, and shall be in addition to, any other rights to which those seeking indemnification may be entitled as a matter of law or under the Articles, these By-Laws, any agreement, vote of shareholders, any insurance purchased by the Corporation, or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding that office, and shall continue as to a person who has ceased to be a director, trustee, officer, employee, or agent and shall inure to the benefit of the heirs, executors, and administrators of that person.

Section 11.07 Purchase of Insurance. The Corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee, or agent of the Corporation, or is or was serving at the request of the Corporation as a director, trustee, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise

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against any liability asserted against him or her and incurred by him or her in that capacity, or arising out of his or her status in that capacity, whether or not the Corporation would have the power to indemnify him or her against liability under the provisions of this Article of the laws of Illinois governing business corporations.

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ARTICLE XII

MISCELLANEOUS PROVISIONS

Section 12.1 Contracts. The Board of Directors may authorize any officer or agent to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporation, and the President may so authorize any officer or agent with respect to contracts or instruments in the usual and regular course of its business. Such authority may be general or confined to specific instances.

Section 12.2 Loans. No loan shall be contracted on behalf of the Corporation and no evidence of indebtedness shall be issued in its name unless authorized by the Board of Directors. Such authority may be general or confined to specific instances.

Section 12.3 Checks, Drafts, Etc. All checks, drafts or other orders for the payment of money, or notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or agent as shall from time to time be authorized by the Board of Directors.

Section 12.4 Deposits. The Board of Directors may select banks, trust companies or other depositaries for the funds of the Corporation.

Section 12.5 Shares of Other Corporations. Shares of any other corporation which may from time to time be held by the Corporation may be represented and voted by the President, or by any proxy appointed in writing by the President, or by any other person or persons thereunto authorized by the Board of Directors, at any meeting of shareholders of such corporation or by executing written consents with respect to such shares where shareholder action may be taken by written consent. Shares represented by certificates standing in the name of the Corporation may be endorsed for sale or transfer in the name of the Corporation by the President or by any other

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officer thereunto authorized by the Board of Directors. Shares belonging to the Corporation need not stand in the name of the Corporation, but may be held for the benefit of the Corporation in the name of any nominee designated for such purpose by the Board of Directors.

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ARTICLE XIII

AMENDMENT

Section 13.1 Procedure. Unless otherwise provided in the Articles of Incorporation, these By-laws may be altered, amended or repealed and new by-laws may be adopted by the Board of Directors or the shareholders.

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COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF STATE

November 30, 2007

TO ALL WHOM THESE PRESENTS SHALL COME, GREETING:

Sumito (SHI) Cryogenics of America, Inc.

I, Pedro A. Cortés, Secretary of the Commonwealth of Pennsylvania do hereby certify that the foregoing and annexed is a true and correct photocopy of Articles of Merger

which appear of record in this department

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Seal of the Secretary's Office to be affixed, the day and year above written.

Pedro A. Cortés

Secretary of the Commonwealth

dpos