### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4645049

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

### **CONVEYING PARTY DATA**

Name	Execution Date
HUDSON TECHNOLOGIES, INC.	10/10/2017

### **RECEIVING PARTY DATA**

Name:	PNC BANK, NATIONAL ASSOCIATION
Street Address:	COMMERCIAL LOAN SERVICE CENTER/DCC
Internal Address:	500 FIRST AVENUE
City:	PITTSBURGH
State/Country:	PENNSYLVANIA
Postal Code:	15219

### **PROPERTY NUMBERS Total: 27**

Property Type	Number
Patent Number:	5802859
Patent Number:	5377499
Patent Number:	5502974
Patent Number:	6141977
Patent Number:	6164080
Patent Number:	6357240
Patent Number:	6290778
Patent Number:	6505475
Patent Number:	7059143
Patent Number:	7086240
Patent Number:	7533536
Patent Number:	7805952
Patent Number:	8327653
Patent Number:	9222712
Patent Number:	7599759
Patent Number:	8046107
Patent Number:	8463441
Patent Number:	9423165
Patent Number:	8205462

PATENT REEL: 043887 FRAME: 0250

504598337

Property Type	Number
Patent Number:	8544287
Patent Number:	8695364
Patent Number:	9519891
Patent Number:	9435575
Application Number:	14980962
Application Number:	15243701
Application Number:	14744776
Application Number:	15255826

#### **CORRESPONDENCE DATA**

**Fax Number:** (215)832-5619

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

**Phone:** 215-569-5619

Email: PECSENYE@BLANKROME.COM

Correspondent Name: TIMOTHY D. PECSENYE

Address Line 1: BLANK ROME LLP
Address Line 2: ONE LOGAN SQUARE

Address Line 4: PHILADELPHIA, PENNSYLVANIA 19103

ATTORNEY DOCKET NUMBER:	074658-17042
NAME OF SUBMITTER:	TIMOTHY D. PECSENYE
SIGNATURE:	/Timothy D. Pecsenye/
DATE SIGNED:	10/17/2017

#### **Total Attachments: 17**

source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page1.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page2.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page3.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page4.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page5.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page6.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page7.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page8.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page9.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page10.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page11.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page12.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page13.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC\_Hudson)#page14.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC\_Hudson)#page15.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page16.tif source=07 - A&R IP Security Agreement - Hudson Technologies, Inc. (PNC Hudson)#page17.tif

### AMENDED AND RESTATED PATENTS, TRADEMARKS AND COPYRIGHTS SECURITY AGREEMENT HUDSON TECHNOLOGIES, INC.

THIS AMENDED AND RESTATED PATENTS, TRADEMARKS AND COPYRIGHTS SECURITY AGREEMENT (this "Agreement") is made on the 10th day of October, 2017 between HUDSON TECHNOLOGIES, INC., a corporation organized under the laws of the State of New York (the "Assignor"), and PNC BANK, NATIONAL ASSOCIATION ("PNC"), as collateral agent and administrative agent for the Lenders (as defined below) (PNC, in such capacities, the "Agent"). Capitalized terms not defined herein shall have the meanings ascribed to them in the Loan Agreement (as defined below).

#### WITNESSETH:

WHEREAS, the Assignor has executed that certain Amended and Restated Guaranty and Suretyship Agreement dated the date hereof, in favor of Agent for its benefit and for the ratable benefit of each Lender, in connection with (i) that certain Amended and Restated Revolving Credit and Security Agreement, dated the date hereof, entered into by and among Hudson Technologies Company, a corporation organized under the laws of the State of Tennessee ("Hudson Technologies"), Hudson Holdings, Inc., a corporation organized under the laws of the State of Nevada ("Holdings"), Airgas-Refrigerants, Inc., a corporation organized under the laws of the State of Delaware ("ARI" and, together with Hudson Technologies, Hudson Holdings, and each other Person joined thereto as a borrower from time to time, the "Borrowers"), Hudson Technologies, Inc., a corporation organized under the laws of the State of New York, the financial institutions from time to time party thereto (collectively, the "Lenders" and individually a "Lender") and the Agent (as same may be amended, restated, amended and restated, replaced, modified and/or supplemented from time to time, the "Loan Agreement") and (ii) the Other Documents executed in connection therewith; to guaranty loans by the Lenders to the Borrowers in the aggregate amount of up to \$165,000,000 (as such amount may be increased from time to time); and

WHEREAS, the Assignor owns the United States copyrights which have been registered with the United States Copyright Office and has made applications for a United States copyright registration with the United States Copyright office with respect to applications listed on Schedule A hereto ("Copyrights"), owns the United States patents and the applications for a United States patents listed on Schedule B ("Patents"), owns the United States trademark applications and trademarks listed in Schedule C hereto, along with the good-will of the Assignor to which such trademark applications and trademarks relate ("Trademarks") and owns the United States trademark applications filed in the United States Patent and Trademark Office based on its intent to use the corresponding mark and listed on Schedule D, along with any good-will of the Assignor relating to such trademarks ("ITU Marks"); and

WHEREAS, pursuant to the Loan Agreement, the Assignor is required to and has conveyed and granted to Agent for its benefit and for the ratable benefit of each Lender, a security interest in, among other things, all right, title and interest of the Assignor in, to and under all of the Assignor's Copyrights, Patents and Trademarks, whether presently existing or hereafter arising or acquired, and all products, substitutions, replacements and proceeds thereof to secure all obligations of the Assignor and the Borrowers to Agent for its benefit and for the ratable benefit of each Lender, including contingent obligations; and

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the Assignor does hereby absolutely grant and convey to Agent for its benefit and for the ratable benefit of each Lender, a security interest in, all of the Assignor's right, title and interest in, to and under the following, whether presently existing or hereafter arising or acquired:

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- (a) Each of the Copyrights which are presently, or in the future may be, owned by the Assignor, in whole or in part, as well as any application for a United States copyright registration now or hereafter made with the United States Copyright Office by the Assignor, as the same may be updated hereafter from time to time;
- (b) Each of the Patents, which are presently, or in the future may be owned by the Assignor, in whole or in part, as well as all applications for United States patents now or hereafter owned by the Assignor, as the same may be updated hereafter from time to time; and
- (c) Each of the Trademarks, which are presently, or in the future may be owned by the Assignor, in whole or in part, together with the good-will associated with each Trademark, as well as all applications for Trademarks now or hereafter owned by the Assignor, as the same may be updated hereafter from time to time.

Said security interest includes, without limitation, all proceeds thereof, the right to sue for past, present, and future infringements thereof, all rights corresponding thereto throughout the world, and all reissues, divisions, continuations, renewals, extensions and continuations-in-part thereof.

- 1) Assignor covenants and warrants that, to the extent that any Patents, Trademarks and/or Copyrights exist:
  - (a) it is, to the best of its knowledge, the true and lawful exclusive owner of all the Copyrights listed on Schedule A and that said Copyrights constitute all the United States Copyrights registered in the United States Copyright Office and applications for United States Copyrights that the Assignor now owns;
  - (b) it is, to the best of its knowledge, the true and lawful exclusive owner and/or intended assignee of all the Patents listed on Schedule B and that said Patents constitute all the United States Patents registered in the United States Patent and Trademark Office and applications for United States Patents that the Assignor now owns;
  - (c) it is, to the best of its knowledge, the true and lawful exclusive owner of all the Trademarks listed on Schedule C and that said Trademarks constitute all the United States Trademarks registered in the United States Patent and Trademark Office and applications for Trademarks that the Assignor now owns;
  - (d) at Agent's request, on a semi-annual basis to execute such additional agreements with respect to any new Patent, Trademark and/or Copyright in which the Assignor hereinafter obtains rights or any ITU Mark which becomes registered with the United States Patent and Trademark Office. The Assignor further warrants that it is not aware of any third party claim that any of the aspects of the Assignor's present or contemplated business operations infringe or will infringe on any Patent, Trademark or Copyright. The Assignor grants to Agent an absolute power of attorney to sign any document which will be required by the United States Copyright Office or the United States Patent and Trademark Office in order to record the security interest in the Patents, Trademarks and Copyrights;
  - (e) the Patents, Trademarks and Copyrights are subsisting and have not been adjudged invalid or unenforceable;

- (f) Each of the Patents, Trademarks and Copyrights is in use and, to the best of the Assignor's knowledge, does not infringe the rights of any other person or entity;
- (g) Assignor is, to the best of its knowledge, the sole and exclusive owner of the entire and unencumbered right, title and interest in and to each of the Patents, Trademarks and Copyrights, free and clear of any liens other than Permitted Encumbrances;
- (h) Assignor has the unqualified right to enter into this Agreement and perform its terms;
- (i) Assignor believes it has used, and will use its good faith efforts to continue to use for the duration of this Agreement, proper statutory notice in connection with its use of the Patents, Trademarks and Copyrights;
- (j) Assignor has used, and will use good faith effort to continue to use for the duration of this Agreement, consistent standards of quality in its manufacture or use of products sold under the Trademarks;
- (k) At its own expense, the Assignor shall make timely payment of all post-issuance fees required pursuant to 35 U.S.C. Sec. 41 to maintain in force rights under each Patent, to the extent that Assignor deems advisable;
- (I) Except in the ordinary course of business, the Assignor hereby agrees not to divest itself of any right under any Copyright, Trademark and/or Patent, which divestiture would have a material adverse effect on Assignor's business, its properties, or its ability to perform its obligations under the Loan Agreement; and
- (m) The Assignor agrees to promptly, upon learning thereof, furnish Agent in writing all pertinent information available to the Assignor with respect to any infringement or other violation of the Assignor's rights in any Copyright, Trademark and/or Patent, which infringement or violation could have a material adverse effect on the Assignor, its properties or its ability to perform its obligations under the Loan Agreement and Other Documents (as defined in the Loan Agreement). To the extent that the Assignor deems advisable, the Assignor further agrees to prosecute any Persons infringing upon any Copyright, Trademark and/or Patent to the extent such infringement could have a material adverse effect on the Assignor, its properties or its ability to perform its obligations under the Loan Agreement or Other Documents.
- 2) Subject to the provisions of the Loan Agreement, Assignor hereby grants to Agent and its employees and agents the right to visit Assignor's facilities (during normal business hours and upon reasonable notice) which maintain or store products sold under any of the Patents, Trademarks, or Copyrights, and to inspect the products and quality control records relating thereto. Assignor shall do any and all acts reasonably required by Lenders to ensure Assignor's compliance herewith.
- 3) Assignor agrees that, until all of the Obligations shall have been satisfied in full, it will not enter into any agreement which is inconsistent with Assignor's obligations under this Agreement, without Lenders' prior written consent.
- 4) If, before the Obligations have been satisfied in full:

- (a) Assignor shall obtain rights to any new Trademark, any new Copyright, or any new patentable inventions, or become entitled to the benefit of any patent application or patent for reissue, division, continuation, renewal, extension, or continuation-in-part of any Patent or any improvement on any Patent, the provisions hereof shall automatically apply thereto and Assignor shall give to Lenders prompt notice thereof in writing; and
- (b) any ITU Mark becomes registered with the United States Patent and Trademark Office, the terms of this Agreement shall automatically apply without any further action on the part of the Assignor or Lenders (including, without limitation, the grant of a security interest by Assignor to Lenders in any such ITU Mark which becomes registered with the United States Patent and Trademark Office) and Assignor shall give to Lenders prompt notice in writing of such ITU Mark becoming registered.
- 5) Assignor authorizes Agent to modify this Agreement by amending Schedules A, B, C and D to include any future Patents, Trademarks, Copyrights or ITU Marks covered hereby.
- 6) Upon and during the occurrence of any Event of Default, and subject to the provisions of the Intercreditor Agreement:
  - a) Agent shall have, in addition to all other rights and remedies given to it by this Agreement, the Loan Agreement, and the Other Documents, those rights and remedies allowed by law and the rights and remedies of a secured party under the Uniform Commercial Code as enacted in any jurisdiction in which the Patents, Trademarks, or Copyrights may be located; and
  - b) Agent may, in addition to any other remedies which may be available to Lenders, without being deemed to have made an election of remedies, and without the assignment hereunder being deemed to be anything less than an absolute assignment, immediately, without demand of performance and without other notice (except as may be set forth below) or demand whatsoever to Assignor, all of which are hereby expressly waived, and without advertisement, sell at public or private sale (or, to the extent required by law, otherwise realize upon in a commercially reasonable manner), all or from time to time, any of the Patents, Trademarks, or Copyrights, or any interest which the Assignor may have therein, and after deducting from the proceeds of sale or other disposition of the Patents, Trademarks, or Copyrights all reasonable expenses (including all reasonable expenses for broker's fees and legal services), and may apply the residue of such proceeds to the payment of the Obligations. Any remainder of the proceeds after payment in full of the Obligations shall be paid over to the Assignor. Notice of any sale or other disposition of the Patents, Trademarks, or Copyrights shall be given to Assignor at least ten (10) business days before the time of any intended public or private sale or other disposition of the Patents, Trademarks, or Copyrights is to be made, which notice Assignor hereby agrees shall be reasonable notice of such sale or other disposition. At any such sale or other disposition, Agent may, to the extent permissible under applicable law, purchase the whole or any part of the Patents, Trademarks, or Copyrights sold, free from any right or equity of redemption on the part of Assignor, which right and equity of redemption are hereby waived and released.
- 7) At such time as Assignor shall completely satisfy all of the Obligations, this Agreement shall terminate and Agent shall execute and deliver to Assignor at Assignor's expense all releases and other instruments as may be necessary or proper to release the security interest in and to the Patents, Trademarks, or Copyrights, subject to any disposition thereof which may have been made by Agent pursuant hereto and in accordance with the terms hereof.

- 8) Any and all fees, costs and expenses, of whatever kind or nature, including reasonable attorney fees and legal expenses incurred by Agent in connection with the preparation of this Agreement and all other documents relating hereto and the consummation of this transaction, the filing or recording of any documents (including all taxes in connection therewith) in public offices, the payment or discharge of any taxes, counsel fees, maintenance fees, encumbrances or otherwise protecting, maintaining or preserving the Patents, Trademarks, or Copyrights, in defending or prosecuting any actions or proceedings arising out of or related to the Patents, Trademarks, or Copyrights, or in the enforcement by Agent of any of its rights or remedies under this Agreement, the Loan Agreement or any Other Document shall be borne and paid by Assignor on demand by Agent and until so paid shall be added to the principal amount of the Obligations and shall bear interest at the rate of interest chargeable pursuant to the Loan Agreement upon an Event of Default.
- 9) To the extent that Assignor deems it advisable, Assignor shall have the duty to prosecute diligently any actions for or of the Patents, Trademarks, or Copyrights pending as of the date of this Agreement or thereafter until the Obligations shall have been paid in full, to make federal application on registrable but unregistered Trademarks, to file and prosecute opposition and cancellation proceedings and to do any and all acts which are reasonably necessary or desirable to preserve and maintain all rights in the Patents, Trademarks, or Copyrights. Any expenses incurred in connection with the Patents, Trademarks, and Copyrights shall be borne by Assignor. The Assignor shall not abandon any Patents, Trademarks, or Copyrights other than in the ordinary course of business without the consent of Agent, which consent shall not be unreasonably withheld.
- 10) Assignor shall have the right to bring any opposition proceedings, cancellation proceedings or lawsuit in its own name to enforce or protect the Patents, Trademarks, or Copyrights, in which event Agent may, if necessary, be joined as a nominal party to such suit if Agent shall have been satisfied that it is not incurring any risk of liability because of such joinder. Assignor shall promptly, upon demand, reimburse and indemnify Agent for all damages, costs and expenses, including attorney fees, incurred by Agent in the fulfillment of the provisions of this paragraph. The obligations of the Assignor under this paragraph shall survive the termination of this Agreement.
- 11) In the event of the occurrence and continuance of a Default or an Event of Default, Assignor hereby authorizes and empowers Agent to make, constitute and appoint any officer or agent of Agent as Agent may select, in its sole discretion, as Assignor's true and lawful attorney-in-fact, with the power to endorse Assignor's name on all applications, documents, papers and instruments necessary for Agent to use the Patents, Trademarks, or Copyrights, or to grant or issue any exclusive or nonexclusive license under the Patents, Trademarks, or Copyrights to anyone else, or necessary for Agent to assign, pledge, convey or otherwise transfer title in or dispose of the Patents, Trademarks, or Copyrights to anyone else. Assignor hereby ratifies all that such attorney shall lawfully do or cause to be done by virtue hereof. This power of attorney shall be irrevocable for the life of this Agreement.
- 12) If Assignor fails to comply with any of its obligations hereunder, Agent may do so in Assignor's name or in Lenders' name, but at Assignor's expense, and Assignor hereby agrees to reimburse Lenders in full for all reasonable expenses, including reasonable attorney's fees, incurred by Lenders in protecting, defending and maintaining the Patents, Trademarks, or Copyrights.
- 13) No course of dealing between Assignor and Agent, nor any failure to exercise, nor any delay in exercising, on the part of Agent, any right, power or privilege hereunder or under the Loan Agreement, or under any Other Document shall operate as a waiver thereof; nor shall any single or partial exercise of any right, power or privilege hereunder or thereunder preclude any other or further exercise thereof or the exercise of any other right, power or privilege.

- 14) All of Agent's rights and remedies with respect to the Patents, Trademarks, or Copyrights, whether established hereby or by the Loan Agreement, or by any other agreement(s) or by law, shall be cumulative and may be exercised singly or concurrently.
- 15) The provisions of this Agreement are severable, and if any clause or provision shall be held invalid and unenforceable in whole or in part in any jurisdiction, then such invalidity or unenforceability shall affect only such clause or provision, or part thereof, in such jurisdiction, and shall not in any manner affect such clause or provision in any other jurisdiction, or any other clause or provision of this Agreement in any jurisdiction.
- 16) This Agreement is subject to modification only by a writing signed by the parties, except as provided elsewhere herein.
- 17) The benefits and burdens of this Agreement shall inure to the benefit of and be binding upon the respective successors and permitted assigns of the parties.
- 18) The validity and interpretation of this Agreement and the rights and obligations of the parties shall be governed by the laws of the State of New York.
- 19) THE PARTIES HERETO AGREE TO THE JURISDICTION OF THE FEDERAL AND STATE COURTS LOCATED IN NEW YORK IN CONNECTION WITH ANY MATTER ARISING HEREUNDER, INCLUDING THE COLLECTION AND ENFORCEMENT HEREOF. THE ASSIGNOR AND LENDERS EACH HEREBY IRREVOCABLY WAIVE ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM ARISING OUT OF OR RELATING TO THIS AGREEMENT OR ANY OTHER DOCUMENT OR THE ACTIONS OF LENDERS. THIS WAIVER IS MADE KNOWINGLY AND IN CONSIDERATION OF THE ADVANCES MADE UNDER THE LOAN AGREEMENT.
- 20) This Amended and Restated Patents, Trademarks, and Copyrights Security Agreement amends and restates, but does not extinguish the obligations evidenced by, that certain Patents, Trademarks, and Copyrights Security Agreement, dated June 22, 2012, executed by Assignor in favor of PNC. Except as otherwise specifically provided in the preceding sentence, this Agreement, the Loan Agreement and the Other Documents embody the entire agreement and understanding between the Assignor and Lenders relating to the subject matter hereof and thereof.

[SIGNATURE PAGES TO FOLLOW]

IN WITNESS WHEREOF, this Agreement has been executed and delivered as of the date first written above.

Assignor:

HUDSON TECHNOLOGIES, INC.

Name: Kevin J. Zugibe

Title: Chief Executi√e Officer

Agent:

PNC BANK, NATIONAL ASSOCIATION

Name: Thomas J/Lorenz

Title: Senior Vice President

# SCHEDULE A (Copyrights)

None

# SCHEDULE B (Patents)

Patent Title	Application #	Publication#:	Issue Date
APPARATUS FOR	08/766,957	5,802,859	08-Sep-1998
RECOVERING AND			_
ANALYZING			
VOLATILE			
REFRIGERANTS			
METHOD AND	08/240,444	5,377,499	03-Jan-1995
APPARATUS FOR			
REFRIGERANT			
RECLAMATION			
HYDRAULIC	08/299,523	5,502,974	02-Apr-1996
SYSTEM FOR			
RECOVERING			
REFRIGERANTS			
APPARATUS FOR	09/146,590	6,141,977	07-Nov-2000
RECOVERING AND			
ANALYZING			
VOLATILE			
REFRIGERANTS	00/272 201	(1(1,000	26 D 2000
APPARATUS AND	09/373,301	6,164,080	26-Dec-2000
METHOD FOR			
FLUSHING A			
REFRIGERATION			
SYSTEM AND AND	00/272 200	( 257 240	10 May 2002
APPARATUS AND	09/373,300	6,357,240	19-Mar-2002
METHOD FOR FLUSHING A			
CHILLER SYSTEM			
METHOD AND	09/373,299	6,290,778	18-Sep-2001
APPARATUS FOR	09/3/3,299	0,290,776	16-Sep-2001
SONIC CLEANING			
OF HEAT			
EXCHANGERS			
METHOD AND	09/577,703	6,505,475	14-Jan-2003
APPARATUS FOR	03,277,703	0,000,170	11000
MEASURING AND			
IMPROVING			
EFFICIENCY IN			
REFRIGERATION			
SYSTEMS			
METHOD AND	10/338,941	7,059,143	13-Jun-2006
APPARATUS FOR		. ,	
MEASURING AND			
IMPROVING			
EFFICIENCY IN			
REFRIGERATION			
SYSTEMS			

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METHOD AND	11/192 240	7.096.240	09 4 2006
METHOD AND	11/182,249	7,086,240	08-Aug-2006
APPARATUS FOR			
MEASURING AND			
IMPROVING			
EFFICIENCY IN			
REFRIGERATION			
SYSTEMS			
METHOD AND	11/463,101	7,533,536	19-May-2009
APPARATUS FOR			
MEASURING AND			
IMPROVING			
EFFICIENCY IN			
REFRIGERATION			
SYSTEMS			
METHOD AND	12/468,506	7,805,952	05-Oct-2010
APPARATUS FOR			
MEASURING AND			
IMPROVING			
EFFICIENCY IN			
REFRIGERATION			
SYSTEMS			
METHOD AND	12/898,289	8,327,653	11-Dec-2012
APPARATUS FOR			
MEASURING AND			
IMPROVING			
EFFICIENCY IN			
REFRIGERATION			
SYSTEMS			
METHOD AND	13/707,829	9,222,712	29-Dec-2015
APPARATUS FOR	,		
MEASURING AND			
IMPROVING			
EFFICIENCY IN			
REFRIGERATION			
SYSTEMS			
METHOD AND	14/980,962		
APPARATUS FOR	1 ,,,,,,,,,		
MEASURING AND			
IMPROVING			
EFFICIENCY IN			
REFRIGERATION			
SYSTEMS			
METHOD AND	10/730,791	7,599,759	06-Oct-2009
APPARATUS FOR	10//30,/71	,,577,757	00 000 2007
OPTIMIZING			
REFRIGERATION			
SYSTEMS			
METHOD AND	12/565,147	8,046,107	25-Oct-2011
APPARATUS FOR	12/303,14/	0,040,107	23-001-2011
OPTIMIZING			
OFTIMILLING			

DEEDICEDATION			
REFRIGERATION SYSTEMS			
METHOD AND	038129110	1585924	30-Dec-2015
APPARATUS FOR	030127110	1303724	30 Dec 2013
<b>OPTIMIZING</b>			
REFRIGERATION			
SYSTEMS			
METHOD AND	201001292	027469	31-Jul-2017
APPARATUS FOR	201001292	027107	31 341 2017
OPTIMIZING			
REFRIGERATION			
SYSTEMS			
METHOD AND	038129110	1585924	30-Dec-2015
APPARATUS FOR	000127110	1000721	
OPTIMIZING			
REFRIGERATION			
SYSTEMS			
METHOD AND	038129110	1585924	30-Dec-2015
APPARATUS FOR			
OPTIMIZING			
REFRIGERATION			
SYSTEMS			
METHOD AND	200500945	N/A	N/A
DEVICE FOR			
OPTIMIZATION OF			
REFRIGERATING			
SYSTEMS			
METHOD AND	2005511749	4691736	04-Mar-2011
APPARATUS FOR			
OPTIMIZING			
REFRIGERATION			
SYSTEMS			
METHOD AND	PAA2005006174	272130	24-Nov-2009
APPARATUS FOR			
OPTIMIZING			
REFRIGERATION			
SYSTEMS	12/200 202	8,463,441	11-Jun-2013
SYSTEM AND METHOD FOR	13/280,302	8,465,441	11-Jun-2013
RECYCLING NON-			
REUSABLE			
REFRIGERANT			
CONTAINERS			
METHOD AND	1020117002171	101338012	02-Dec-2013
APPARATUS FOR	102011/0021/1	101330012	02 200 2013
<b>OPTIMIZING</b>			
REFRIGERATION			
SYSTEMS			
METHOD AND	13/913,664	9,423,165	23-Aug-2016
APPARATUS FOR		, -,	<b>8</b>
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OPTIMIZING			
REFRIGERATION			
SYSTEMS			
METHOD AND	15/243,701		
APPARATUS FOR			
OPTIMIZING			
REFRIGERATION			
SYSTEMS			
SYSTEM AND	12/251,385	8,205,462	26-Jun-2012
METHOD FOR		-,,	
RECYCLING NON-			
REUSABLE			
REFRIGERANT			
CONTAINERS			
SYSTEM AND	13/532,929	8,544,287	01-Oct-2013
METHOD FOR	13/332,929	0,544,207	01-061-2013
RECYCLING NON-			
REUSABLE			
REFRIGERANT			
CONTAINERS	14/020 020	0.605.264	15 4 2014
SYSTEM AND	14/038,838	8,695,364	15-Apr-2014
METHOD FOR			
RECYCLING NON-			
REUSABLE			
REFRIGERANT			
CONTAINERS			
SYSTEM AND	14/252,899	9,519,891	13-Dec-2016
METHOD FOR			
<b>RECYCLING NON-</b>			
REUSABLE			
REFRIGERANT			
CONTAINERS			
SYSTEM AND	14/744,776		
METHOD FOR			
RETROFITTING A			
REFRIGERATION			
SYSTEM FROM			
HCFC TO HFC			
REFRIGERANT			
SYSTEM AND	14/877,609	9,435,575	06-Sep-2016
METHOD FOR			_
RETROFITTING A			
REFRIGERATION			
SYSTEM FROM			
HCFC TO HFC			
REFRIGERANT			
SYSTEM AND	15/255,826		
METHOD FOR			
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SYSTEM FROM		
HCFC TO HFC		
REFRIGERANT		

## SCHEDULE C (Trademarks)

Trademark	Application #	Publication#:	Issue Date
CHILLSMART	78/591,413	3,184,719	12/12/2006
COLDPACK	87558718	N/A	Pending.
CHILLSMART		878512	09/21/2005
CHILLSMART		2005/19997	09/21/2005
CHILLER CHEMISTRY	78/591,426	3,190,044	12/26/2006
CHILLER CHEMISTRY		878513	09/21/2005
CHILLER CHEMISTRY		2005/19998	09/21/2005
HUDSON TECHNOLOGIES, INC.	74/677,360	1,969,986	04/23/1996
GLACIER	75/253,240	2,227,148	03/02/1999
FLUID CHEMISTRY	77/638,497	3,788,857	05/11/2010
CLEAN EXCHANGE	85/041,598	4,187,266	08/07/2012

074658.17042/106146390v.3

AMERI-PURE	85/428,775	4,552,124	06/17/2014
SMARTENERGY OPS	86/305,954	4,951,990	05/03/2016
SMARTENERGY OPS OPERATIONS/PERFOR	86/305,973	4,951,991	05/03/2016
MANCE/SERVICE AND DESIGN CHILLSMART	78/591,413	3,184,719	12/12/2006

## SCHEDULE D (ITU Marks)

None

074658.17042/106146390v.3

**RECORDED: 10/17/2017**