

PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT7855228

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	CONFIRMATORY GRANT OF SECURITY INTEREST IN UNITED STATES PATENTS

CONVEYING PARTY DATA

Name	Execution Date
COMPRESSOR PRODUCTS INTERNATIONAL LLC	03/17/2023
HOWDEN ROOTS LLC	03/17/2023
CHART INC.	03/17/2023
CHART ENERGY & CHEMICALS, INC.	03/17/2023
BLUEINGREEN, LLC	03/17/2023

RECEIVING PARTY DATA

Name:	JPMORGAN CHASE BANK, N.A.
Street Address:	IL1-1145/54/63, P.O. BOX 6026
City:	CHICAGO
State/Country:	ILLINOIS
Postal Code:	60680-6026

PROPERTY NUMBERS Total: 52

Property Type	Number
Patent Number:	8997936
Patent Number:	9206796
Patent Number:	9212781
Patent Number:	9506602
Patent Number:	9709219
Patent Number:	9938969
Patent Number:	10208868
Patent Number:	10876685
Patent Number:	7096889
Patent Number:	7461670
Patent Number:	8720648
Patent Number:	8069950
Patent Number:	7806235
Patent Number:	8622082
Patent Number:	8555927
Patent Number:	8561477

PATENT

Property Type	Number
Patent Number:	D570236
Patent Number:	D591627
Patent Number:	D597630
Patent Number:	D615619
Patent Number:	D613631
Patent Number:	D639193
Patent Number:	D656224
Patent Number:	9790825
Patent Number:	9790994
Patent Number:	10465687
Patent Number:	7318350
Patent Number:	11435034
Application Number:	17690363
Application Number:	17463334
Application Number:	17338816
Application Number:	17375756
Application Number:	17348972
Application Number:	17318323
Application Number:	17331681
Application Number:	17731337
Application Number:	17856287
Application Number:	17529470
Application Number:	17881776
Application Number:	17881117
Application Number:	17715711
Application Number:	17842021
Application Number:	17686842
Application Number:	17908996
Application Number:	17524458
Application Number:	17835489
Application Number:	17743811
Application Number:	18051583
Application Number:	18048947
Application Number:	18053044
Application Number:	17943451
Application Number:	18063306

CORRESPONDENCE DATA

Fax Number:

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: 8004945225

Email: ipteam@cogencyglobal.com

Correspondent Name: STEWART WALSH

Address Line 1: 1025 CONNECTICUT AVE NW, SUITE 712

Address Line 2: COGENCY GLOBAL INC.

Address Line 4: WASHINGTON, D.C. 20036

ATTORNEY DOCKET NUMBER:	1938873 PAT 1
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NAME OF SUBMITTER:	DAHLIA GOTTLIEB
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SIGNATURE:	/Dahlia Gottlieb/
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DATE SIGNED:	03/20/2023
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Total Attachments: 9

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**CONFIRMATORY GRANT OF SECURITY INTEREST
IN UNITED STATES PATENTS**

THIS CONFIRMATORY GRANT OF SECURITY INTEREST IN UNITED STATES PATENTS (this “Confirmatory Grant”) is made effective as of March 17, 2023, by and from Compressor Products International LLC, a Delaware limited liability company, Howden Roots LLC, a Delaware limited liability company, Chart Inc., a Delaware corporation, Chart Energy & Chemicals, Inc., a Delaware corporation, and BlueinGreen, LLC, an Arkansas limited liability company (the “Grantors” and each, a “Grantor”), to and in favor of JPMorgan Chase Bank, N.A. (the “Grantee”), for itself and as Administrative Agent for the benefit of the Secured Parties (each as defined in the Credit Agreement referenced below).

Reference is made to that certain Credit Agreement, dated as of October 18, 2021, by and among Chart Industries, Inc., a Delaware corporation (the “Company”), Chart Industries Luxembourg S.à r.l., a private limited liability company (*société à responsabilité limitée*), incorporated under the laws of Luxembourg, having its registered office at 2, rue des Dahlias, L-1411 Luxembourg and registered with the Luxembourg Trade and Companies Register under number B 148.907 (“Chart Luxembourg”), Chart Asia Investment Company Limited, a private limited company incorporated under the laws of Hong Kong with company number 1174361 and having its registered office address at 31/F., Tower Two, Times Square, 1 Matheson Street, Causeway Bay, Hong Kong (“Chart Hong Kong” and, together with the Company and Chart Luxembourg, the “Borrowers”), the financial institution listed on the signature pages thereof as Lenders and JPMorgan Chase Bank, N.A., as Administrative Agent (the “Administrative Agent”) (as amended by Amendment No. 1 dated as of November 21, 2022, Amendment No. 2, dated as of 16, 2023, Amendment No. 3 and as further amended, restated, supplemented or otherwise modified from time to time prior to the date hereof, the “Credit Agreement”).

WHEREAS, each Grantor and certain other Subsidiaries of the Company have guaranteed and secured the performance and payment of the Secured Obligations pursuant to the Credit Agreement and that certain Fifth Amended and Restated Guarantee and Collateral Agreement, dated as of October 18, 2021 (as amended by Amendment No. 1, dated as of December 22, 2022, and as further amended, restated, supplemented or otherwise modified from time to time prior to the date hereof, the “Collateral Agreement”).

WHEREAS, the Grantors own the patents listed on Exhibit A attached hereto (the “Patents”), which Patents are issued or pending with the United States Patent and Trademark Office.

WHEREAS, this Confirmatory Grant has been granted in conjunction with the security interest granted under the Collateral Agreement to the Grantee for itself and the benefit of the Secured Parties. The rights and remedies of the Grantee with respect to the security interest granted herein are without prejudice to and are in addition to those set forth in the Collateral Agreement and the other Security Documents, all terms and provisions of which are incorporated herein by reference. In the event that any provisions of this Confirmatory Grant are deemed to conflict with the Collateral Agreement, the provisions of the Collateral Agreement shall govern.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is hereby agreed that:

- 1) Definitions. All capitalized terms not defined herein shall have the respective meaning given to them in the Credit Agreement or Collateral Agreement, as applicable.
- 2) The Security Interest.

(a) This Confirmatory Grant is made to secure the satisfactory performance and payment of all the Secured Obligations. Upon the performance and payment in full of all Secured Obligations (other than contingent indemnification obligations), the Grantee shall promptly, upon such satisfaction, execute, acknowledge, and deliver to each Grantor all reasonably requested instruments in writing releasing the security interest in the Patents acquired under this Confirmatory Grant.

(b) Each Grantor hereby grants to the Grantee a security interest in (1) all of such Grantor's right, title and interest in and to the Patents now owned or from time to time after the date hereof owned or acquired by such Grantor, together with (2) all proceeds and products of the Patents, and (3) all causes of action arising prior to or after the date hereof for infringement of the Patents or unfair competition regarding the same.

3) Counterparts. This Confirmatory Grant may be executed in any number of counterparts and by different parties in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. Signature pages may be detached from multiple separate counterparts and attached to a single counterpart.

4) Governing Law. This Confirmatory Grant and the rights and obligations of the parties hereto shall be governed by, and construed and interpreted in accordance with, the law of the State of New York.

[Signature Page Follows]

IN WITNESS WHEREOF, the Grantors have executed this Confirmatory Grant effective as of the date first written above.

COMPRESSOR PRODUCTS INTERNATIONAL
LLC

By: 

Name: Jillian C. Evanko

Title: President

HOWDEN ROOTS LLC

By: _____

Name: Marinella Vigouroux

Title: Treasurer

IN WITNESS WHEREOF, the Grantors have executed this Confirmatory Grant effective as of the date first written above.

**COMPRESSOR PRODUCTS INTERNATIONAL
LLC**

By: _____
Name: Jillian C. Evanko
Title: President

HOWDEN ROOTS LLC

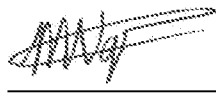
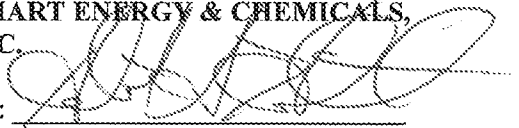
By:  _____
Name: Marinella Vigouroux
Title: Treasurer

CHART INC.
CHART ENERGY & CHEMICALS,
INC.

By: 
Name: Herbert G. Hotchkiss
Title: Secretary

Signature Page to
Confirmatory Grant of Security Interest in United States Patents

PATENT
REEL: 063119 FRAME: 0578

BLUEINGREEN, LLC

By: 

Name: Herbert G. Hotchkiss

Title: Secretary

**CONFIRMATORY GRANT OF SECURITY INTEREST
IN UNITED STATES PATENTS**

Exhibit A - SCHEDULE OF PATENTS

Title	Patent No. Issue Date	App No. Filing Date	Record Owner
Environmental compressor protection assembly	8997936 04/07/2015	12/06/2011	Compressor Products International LLC
Check valve and method and apparatus for extending life of check valve	9206796 12/08/2015	09/04/2013	Compressor Products International LLC
Fluid divider block suitable for use at high pressures	9212781 12/15/2015	10/15/2013	Compressor Products International LLC
Lubricator pump adjuster	9506602 11/29/2016	06/29/2012	Compressor Products International LLC
Environmental compressor protection assembly	9709219 07/18/2017	02/05/2016	Compressor Products International LLC
Check valve and method and apparatus for extending life of check valve	9938969 04/10/2018	11/23/2015	Compressor Products International LLC
Fluid divider block suitable for use at high pressures	10208868 02/19/2019	11/18/2015	Compressor Products International LLC
Lubricator pump adjuster	10876685 12/29/2020	10/26/2016	Compressor Products International LLC
FLUID DIVIDER BLOCK SUITABLE FOR USE AT HIGH PRESSURES	7096889 8/29/2006	04/01/2004	Compressor Products International LLC
CYCLE INDICATOR FOR FLUID DISTRIBUTION SYSTEMS	7461670 12/09/2008	7/21/2005	Compressor Products International LLC
CHECK VALVE AND METHOD AND APPARATUS FOR EXTENDING LIFE OF CHECK VALVES	8720648 5/13/2004	4/26/2006	Compressor Products International LLC
ENVIRONMENTAL COMPRESSOR PROTECTION ASSEMBLY	8069950 12/06/2011	10/4/2007	Compressor Products International LLC
ENVIRONMENTAL COMPRESSOR PROTECTION ASSEMBLY	7806235 10/5/2010	10/4/2007	Compressor Products International LLC
Check Valve and Method and Apparatus for Extending Life of Check Valves	8622082 1/7/2014	4/14/2009	Compressor Products International LLC
FLUID DIVIDER BLOCK SUITABLE FOR USE AT HIGH PRESSURES	8555927 10/15/2013	10/20/2009	Compressor Products International LLC
FLUID FLOW MONITOR AND CONTROL SYSTEM	8561477 10/22/2013	5/25/2011	Compressor Products International LLC
CYCLE INDICATOR FOR FLUID DISTRIBUTION SYSTEMS	D570236 6/3/2008	3/3/2008	Compressor Products International LLC

Title	Patent No. Issue Date	App No. Filing Date	Record Owner
CYCLE INDICATOR FOR FLUID DISTRIBUTION SYSTEMS	D591627 5/5/2009	6/3/2008	Compressor Products International LLC
ENVIRONMENTAL COMPRESSOR PROTECTION ASSEMBLY	D597630 8/4/2009	8/1/2008	Compressor Products International LLC
FLUID DIVIDER BLOCK	D615619 5/11/2010	1/30/2009	Compressor Products International LLC
CYCLE INDICATOR FOR FLUID DISTRIBUTION SYSTEMS	D613631 4/13/2010	5/5/2009	Compressor Products International LLC
CYCLE INDICATOR FOR FLUID DISTRIBUTION SYSTEMS	D639193 6/7/2011	4/12/2010	Compressor Products International LLC
FLUID DIVIDER BLOCK	D656224 3/20/2012	5/10/2010	Compressor Products International LLC
Device to direct lubricant in a lubricating assembly and implementation thereof	9790825 10/17/2017	11/30/2014	Howden Roots LLC
Device to retain lubricant in a lubricating assembly and implementation thereof	9790994 10/17/2017	11/30/2014	Howden Roots LLC
Device for conditioning flow of working fluids	10465687 11/05/2019	08/09/2017	Howden Roots LLC
AIR COMPRESSOR AND BLOWER		17/690363 03/09/2022	Howden Roots LLC
Rod packing		17/463,334 8/31/2021	Compressor Products International, LLC
Valve Monitoring System and Method	7318350 1/15/2008	5/20/2005	Compressor Products International, LLC
CRYOGENIC FLUID DISPENSING SYSTEM WITH HEAT MANAGEMENT		17/338,816 6/4/2021	Chart Inc.
PUMP SEAL		17/375,756 7/14/2021	Chart Inc.
Cryogenic Fluid Dispensing System and Method		17/348,972 06/16/2021	Chart Inc.
Vaporizer with Defrosting Function		17/318,323 05/12/2021	Chart Inc.
SYSTEMS AND METHODS FOR CONTROLLED DEVELOPMENT AND DELIVERY OF GAS AND LIQUID MIXTURES		17/331,681 05/27/2021	BlueinGreen, LLC
TANK SYSTEMS WITH AN INSULATION ASSEMBLY	11435034 09/06/2022	16/029,116 07/06/2018	Chart Inc.
CRYOGENIC FLUID FUELING SYSTEM		17/731,337 4/28/2022	Chart Inc.
STORAGE TANK WITH PRESSURE ACTUATED FILL TERMINATION ASSEMBLY		17/856,287 07/01/2022	Chart Inc.
Getter Material, Tanks Containing the Same, and		17/529,470 11/18/2021	Chart Inc.

Title	Patent No. Issue Date	App No. Filing Date	Record Owner
Methods of Making and Using Getter Material to Absorb Hydrogen			
Mixed Refrigerant System and Method		17/881,776 08/05/2022	Chart Energy & Chemicals, Inc.
Mixed Refrigerant System and Method		17/881,117 08/04/2022	Chart Energy & Chemicals, Inc.
Dehydrogenation Separation Unit with Mixed Refrigerant Cooling		17/715,711 04/07/2022	Chart Energy & Chemicals, Inc.
Carrier Gas Stream Processing System and Method ¹		17/842,021 06/16/2022	Chart Energy & Chemicals, Inc.
CRYOGENIC FLUID COUPLING		17/686,842 03/04/2022	Chart Inc.
Liquid Density Measurement Device, System and Method		17/908,996 09/02/2022	Chart Inc.
Device and Method for Filling Cryogenic Tanks		17/524,458 11/11/2021	Chart Inc.
Hydrogen Liquefaction System and Method		17/835,489 06/08/2022	Chart Energy & Chemicals, Inc.
SIDE DRAW REFLUX HEAVY HYDROCARBON REMOVAL SYSTEM AND METHOD		17/743,811 05/13/2022	Chart Energy & Chemicals, Inc.
Carbon Capture System and Method with Exhaust Gas Recirculation ²		18/051583 11/01/2022	Chart Energy & Chemicals, Inc.
Gas Purification and Liquefaction System and Method Using Liquid Nitrogen		18/048947 10/24/2022	Chart Energy & Chemicals, Inc.
Hydrogen Liquefaction with Stored Hydrogen Refrigeration Source		18/053044 11/07/2022	Chart Energy & Chemicals, Inc.
Cryogenic Pump		17/943451 9/13/2022	Chart Energy & Chemicals, Inc.
Cryogenic Fuel Tank Venting System and Method		18/063306 12/08/2022	Chart Inc.

¹ Note: Missing inventor assignment. Applies to below five marks as well.

² Note: results not available on USPTO. Secured with U.S. Trust. Applies to below five marks as well.