

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT7715016

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	PATENT CONFIRMATORY GRANT	
CONVEYING PARTY DATA		
Name		Execution Date
CHART INC.		12/22/2022
RECEIVING PARTY DATA		
Name:	U.S. BANK TRUST COMPANY, NATIONAL ASSOCIATION, AS THE NOTES COLLATERAL AGENT	
Street Address:	13737 NOEL ROAD, 8TH FLOOR	
City:	DALLAS	
State/Country:	TEXAS	
Postal Code:	75240	
PROPERTY NUMBERS Total: 41		
Property Type	Number	
Patent Number:	7144228	
Patent Number:	7137651	
Patent Number:	6944570	
Patent Number:	10288367	
Patent Number:	10125751	
Patent Number:	9939109	
Patent Number:	9903534	
Patent Number:	9885447	
Patent Number:	9829156	
Patent Number:	9752727	
Patent Number:	9746132	
Patent Number:	9581295	
Patent Number:	9551330	
Patent Number:	9441877	
Patent Number:	9388943	
Patent Number:	8075645	
Patent Number:	11248747	
Patent Number:	10451221	
Patent Number:	11346504	
Patent Number:	11118736	

PATENT

Property Type	Number
Patent Number:	11371654
Patent Number:	10890293
Patent Number:	11174991
Patent Number:	11262026
Patent Number:	11473729
Patent Number:	11402067
Patent Number:	11435034
Patent Number:	11300345
Patent Number:	6758060
Application Number:	15794291
Application Number:	16725590
Application Number:	17229972
Application Number:	17856287
Application Number:	16951115
Application Number:	17908996
Application Number:	17186069
Application Number:	17731337
Application Number:	17686842
Application Number:	17529470
Application Number:	17524458
Application Number:	18063306

CORRESPONDENCE DATA

Fax Number:

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ATTORNEY DOCKET NUMBER:	1866275 PAT 3
NAME OF SUBMITTER:	DAHLIA GOTTLIEB
SIGNATURE:	/Dahlia Gottlieb/
DATE SIGNED:	12/28/2022

Total Attachments: 7

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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 December 22, 2022, by and from Chart Inc., a Delaware corporation (the “Grantor”), to and in favor of U.S. Bank Trust Company, National Association (the “Grantee”), for itself and as Notes Collateral Agent for the benefit of the Notes Secured Parties (each as defined in the Indenture referenced below).

WHEREAS, Chart Industries, Inc., a Delaware corporation (the “Issuer”), the Guarantors party thereto from time to time, U.S. Bank Trust Company, National Association, as trustee (the “Trustee”) and U.S. Bank Trust Company, National Association, as collateral agent (the “Notes Collateral Agent”) have entered into that certain Indenture, dated as of December 22, 2022 (the “Indenture”).

WHEREAS, the Grantor and certain other Subsidiaries of the Issuer have guaranteed and secured the performance and payment of the Guaranteed Obligations pursuant to the Indenture and that certain Collateral Agreement, dated as of December 22, 2022 (the “Collateral Agreement”).

WHEREAS, the Grantor owns 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 Notes 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 Notes 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 Indenture 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 Guaranteed Obligations. Upon the performance and payment in full of all Guaranteed Obligations (other than contingent indemnification obligations), the Grantee shall promptly, upon such satisfaction, execute, acknowledge, and deliver to the Grantor all reasonably requested instruments in writing releasing the security interest in the Patents acquired under this Confirmatory Grant.

(b) The Grantor hereby grants to the Grantee a security interest in (1) all of the 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 the 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]

CHART INC.

By: 

Name: Jillian C. Evanko

Title: Chief Executive Officer

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

PATENT
REEL: 062793 FRAME: 0697

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
Cryogenic fluid delivery system	7,144,228 December 5, 2006	10/601,458 June 23, 2003	Chart Inc.
Fluid piping systems and pipe spools suitable for sub sea use	7,137,651 November 21, 2006	10/817,710 April 2, 2004	Chart Inc.
Differential pressure gauge for cryogenic fluids which selects a density value based on pressure measurement	6,944,570 September 13, 2005	10/879,773 ¹ June 29, 2004	Chart Inc.
Cooling of cryogenic meters sensing reverse flow	10,288,367 May 14, 2019	14/208,128 Mar 13, 2014	Chart Inc.
Multimode Gas Delivery for Rail Tender	10125751 Nov 13, 2018	14/553,967 Nov 25, 2014	Chart Inc.
Bulk liquid cooling and pressurized dispensing system and method	9,939,109 Apr 10, 2018	13/216,666 Aug 24, 2011	Chart Inc.
Cryogenic liquid delivery system and method with active pressure building capabilities	9,903,534 Feb 27, 2018	14/044,622 Oct 2, 2013	Chart Inc.
Metering system and method for cryogenic liquids	9,885,447 Feb 6, 2018	14/089,096 Nov 25, 2013	Chart Inc.
Integrated cryogenic fluid delivery device with vaporizer having a conformal geometry	9,829,156 Nov 28, 2017	14/177,781 Feb 11, 2014	Chart Inc.
Heat management system and method for cryogenic liquid dispensing systems	9,752,727 Sep 5, 2017	14/092,329 Nov 27, 2013	Chart Inc.

¹ Missing inventor assignment.

Self-saturating liquefied natural gas delivery system utilizing hydraulic pressure	9,746,132 Aug 29, 2017	13/623,048 Sep 19, 2012	Chart Inc.
Economizer biasing valve for cryogenic fluids	9,581,295 Feb 28, 2017	13/413,104 Mar 6, 2012	Chart Inc.
Frangible closure coupling for liquid natural gas tank	9,551,330 Jan 24, 2017	14/553,933 Nov 25, 2014	Chart Inc.
Integrated pre-cooled mixed refrigerant system and method	9,441,877 Sep 13, 2006	12,726,142 Mar 17, 2010	Chart Inc.
Ullage tank for vertical storage tank	9,388,943 Jul 12, 2016	13/693,005 Dec 3, 2012	Chart Inc.
Catalysts, system and method for hydrogen production	8,075,645 Dec 13, 2011	12/384,796 Apr 8, 2009	Chart Inc.
LNG Delivery System With Saturated Fuel Reserve	11,248,747 Feb 15, 2022	15/314875 Nov 29, 2016	Chart Inc.
Interchangeable Dosing Arm Device, System And Method	10,451,221 Oct 22, 2019	15/787,859 Oct 19, 2017	Chart Inc.
Differential Pressure Filling System And Method For A Dosing Vessel		15/794,291 Oct 26, 2017 20180112824	Chart Inc.
Cryogenic Container With Reserve Pressure Building Chamber	11,346,504 May 31, 2022	15/873,182 Jan 17, 2018	Chart Inc.
Space Conserving Integrated Cryogenic Fluid Delivery System	11,118,736 Sep 14, 2021	15,924,779 Mar 19, 2018	Chart Inc.
Pressure Building Cryogenic Fluid Delivery System	11,371,654 6/28/2022	15/962,107 Apr 25, 2018	Chart Inc.
Cryogenic Fluid Transfer System And Method	10,890,293 Jan 12, 2021	16/293,985 Mar 6, 2019	Chart Inc.
Cryogenic Fluid Dispensing System	11,174,991 Nov 16, 2021	16/395,758 Apr 26, 2019	Chart Inc.

Having a Chilling Reservoir			
Cryogenic Liquid Dispensing System Having a Raised Basin Jan Kubica, Martin Lansky	11,262,026 Mar 1, 2022	16/570,174 Sep 13, 2019	Chart Inc.
Vapor Pressure Regulator For Cryogenic Liquid Storage Tanks And Tanks Including The Same		16/725,590 Dec 23, 2019 20200208779	Chart Inc.
Gas Dispensing System with Tank Pressure and Heat Management		17/229,972 Apr 14, 2021 20210317953	Chart Inc.
Multiple Head Dosing Arm Device, System And Method	11,473,729 Oct 18, 2022	16/553,963 Aug 28, 2019	Chart Inc.
Storage Tank With Pressure Actuated Fill Termination Assembly	11,402,067 Aug 2, 2022	16/728,301 Dec 27, 2019	Chart Inc.
Storage Tank With Pressure Actuated Fill Termination Assembly		17/856,287 Jul 1, 2022 20220341545	Chart Inc.
Ambient Air Vaporizer with Icephobic/Waterphobic Treatment ²		16/951,115 Nov 18, 2020 20210164619	Chart Inc.
Liquid Density Measurement Device, System and Method		17/908,996 9/02/2022 ³	Chart Inc.
Delivery Tank With Pressure Reduction, Saturation And Desaturation Features ⁴		17/186,069 2021-02-26 20210270420	Chart Inc.
Cryogenic Fluid Fueling System		17/731,337 4/28/2022 20220349526	Chart Inc.

² Missing inventor assignment.

³ Application Dispatched from Preexam.

⁴ Missing inventor assignment.

Cryogenic Fluid Coupling		17/686,842 3/04/2022 20220282837	Chart Inc.
Getter Material, Tanks Containing the Same, and Methods of Making and Using Getter Material to Absorb Hydrogen		17/529,470 11/18/2021 20220163168	Chart, Inc.
Device and Method for Filling Cryogenic Tanks		17/524,458 11/11/2021 20220146046	Chart Inc.
Cryogenic Fuel Tank Venting System and Method		18/063,306 12/08/2022 ⁵	Chart Inc.
Tank Systems with an Insulation Assembly	11,435,034 Sep 6, 2022	16/029,116 Jul 6, 2018	Chart Inc.
Shock-Survivable Dewar	11,300,345 B2 2022-04-12	15,852,224 2017-12-22	Chart Inc.
Separating nitrogen from methane in the production of LNG	6,758,060 Jul 6, 2004	10/367,148 Feb 14, 2003	Chart Inc.

⁵ Application not available yet.