Section 1: 10-Q (10-Q)

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2019

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ______ to ______

Commission File Number 1-11442

CHART INDUSTRIES, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**34-1712937**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**

3055 Torrington Drive, Ball Ground, Georgia 30107

(Address of Principal Executive Offices) (ZIP Code)

(770) 721-8800

(Registrant's Telephone Number, Including Area Code)

NOT APPLICABLE

(Former Name, Former Address and Former Fiscal Year, if Changed Since Last Report)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this Chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

At April 15, 2019, there were 31,732,891 outstanding shares of the Company’s Common Stock, par value $0.01 per share.

CHART INDUSTRIES, INC.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

CHART INDUSTRIES, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)
(Dollars in millions, except per share amounts)

	March 31, 2019	December 31, 2018
ASSETS		
Current Assets		
Cash and cash equivalents	$ 71.9	$ 118.1
Accounts receivable, less allowances of $9.9 and $8.5, respectively	205.2	194.8
Inventories, net	234.7	233.1
Unbilled contract revenue	68.9	54.5
Prepaid expenses	17.8	14.0
Other current assets	46.7	47.2
Total Current Assets	645.2	661.7
Property, plant, and equipment, net	384.6	361.1
Goodwill	537.1	520.7
Identifiable intangible assets, net	322.5	330.4
Other assets	23.9	23.8
TOTAL ASSETS	$ 1,913.3	$ 1,897.7
LIABILITIES AND EQUITY		
Current Liabilities		
Accounts payable	$ 121.1	$ 125.5
Customer advances and billings in excess of contract revenue	129.5	130.0
Accrued salaries, wages, and benefits	31.4	46.6
Current portion of warranty reserve	8.8	8.6
Short-term debt and current portion of long-term debt	214.8	11.2
Other current liabilities	73.6	44.7
Total Current Liabilities	579.2	366.6
Long-term debt	318.0	533.2
Long-term deferred tax liabilities	73.1	76.4
Accrued pension liabilities	11.5	11.7
Other long-term liabilities	38.0	20.8
Total Liabilities	1,019.8	1,008.7
Equity		
Common stock, par value $0.01 per share – 150,000,000 shares authorized, 31,731,862 and 31,363,650 shares issued and outstanding at March 31, 2019 and December 31, 2018, respectively	0.3	0.3
Additional paid-in capital	468.2	460.2
Retained earnings	454.8	453.9
Accumulated other comprehensive loss	(34.5)	(29.9)
Total Chart Industries, Inc. Shareholders’ Equity	888.8	884.5
Noncontrolling interests	4.7	4.5
Total Equity	893.5	889.0
TOTAL LIABILITIES AND EQUITY	$ 1,913.3	$ 1,897.7

See accompanying notes to these unaudited condensed consolidated financial statements.

CHART INDUSTRIES, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF INCOME AND COMPREHENSIVE INCOME
(UNAUDITED)
(Dollars and shares in millions, except per share amounts)

	Three Months Ended March 31,	
	2019	**2018**
Sales	$ 289.3	$ 244.1
Cost of sales	222.2	177.2
Gross profit	67.1	66.9
Selling, general, and administrative expenses	55.3	46.6
Amortization expense	7.2	5.5
Operating expenses	62.5	52.1
Operating income	4.6	14.8
Other expenses:		
Interest expense, net	5.3	6.4
Financing costs amortization	0.4	0.3
Foreign currency (gain) loss	(0.1)	1.8
Other expenses, net	5.6	8.5
(Loss) income from continuing operations before income taxes	(1.0)	6.3
Income tax (benefit) expense	(2.0)	1.6
Net income from continuing operations	1.0	4.7
Income from discontinued operations, net of tax	—	1.6
Net income	1.0	6.3
Less: Income attributable to noncontrolling interests of continuing operations, net of taxes	0.1	0.5
Net income attributable to Chart Industries, Inc.	$ 0.9	$ 5.8
Income from continuing operations	$ 0.9	$ 4.2
Income from discontinued operations, net of tax	—	1.6
Net income attributable to Chart Industries, Inc.	$ 0.9	$ 5.8
Basic earnings per common share attributable to Chart Industries, Inc.		
Income from continuing operations	$ 0.03	$ 0.14
Income from discontinued operations	—	0.05
Net income attributable to Chart Industries, Inc.	$ 0.03	$ 0.19
Diluted earnings per common share attributable to Chart Industries, Inc.		
Income from continuing operations	$ 0.03	$ 0.13
Income from discontinued operations	—	0.05
Net income attributable to Chart Industries, Inc.	$ 0.03	$ 0.18
Weighted-average number of common shares outstanding:		
Basic	31.57	30.91
Diluted	33.81	31.66
Comprehensive (loss) income, net of taxes	$ (3.5)	$ 18.8
Less: Comprehensive income attributable to noncontrolling interests, net of taxes	0.2	0.6
Comprehensive (loss) income attributable to Chart Industries, Inc., net of taxes	$ (3.7)	$ 18.2

See accompanying notes to these unaudited condensed consolidated financial statements.

CHART INDUSTRIES, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)
(Dollars in millions)

	Three Months Ended March 31,	
	2019	**2018**
OPERATING ACTIVITIES		
Net income	$ 1.0	$ 6.3
Less: Income from discontinued operations	—	1.6
Income from continuing operations	1.0	4.7
Adjustments to reconcile net income to net cash (used in) provided by operating activities:		
Depreciation and amortization	16.0	12.7
Interest accretion of convertible notes discount	1.8	2.5
Employee share-based compensation expense	2.4	2.9
Financing costs amortization	0.4	0.3
Unrealized foreign currency transaction gain	(0.3)	(0.4)
Other non-cash operating activities	2.5	1.2
Changes in assets and liabilities, net of acquisitions:		
Accounts receivable	(12.2)	15.6
Inventory	(10.4)	(19.5)
Unbilled contract revenues and other assets	(11.2)	7.4
Accounts payable and other liabilities	(20.7)	(20.8)
Customer advances and billings in excess of contract revenue	(2.5)	13.4
Net Cash (Used In) Provided By Operating Activities	(33.2)	20.0
INVESTING ACTIVITIES		
Capital expenditures	(5.9)	(6.2)
Acquisition of businesses, net of cash acquired	(2.8)	(12.5)
Government grants	(0.2)	0.1
Net Cash Used In Investing Activities	(8.9)	(18.6)
FINANCING ACTIVITIES		
Borrowings on revolving credit facilities	18.8	38.0
Repayments on revolving credit facilities	(27.0)	(26.8)
Payments for debt issuance costs	—	(0.3)
Proceeds from exercise of stock options	8.3	1.3
Common stock repurchases	(2.7)	(2.2)
Net Cash (Used In) Provided By Financing Activities	(2.6)	10.0
DISCONTINUED OPERATIONS		
Cash Provided By Operating Activities [(1)]	—	3.0
Cash Used In Investing Activities [(2)]	—	(0.4)
Cash Provided By Discontinued Operations	—	2.6
Effect of exchange rate changes on cash and cash equivalents	(1.5)	3.9
Net (decrease) increase in cash, cash equivalents, restricted cash, and restricted cash equivalents	(46.2)	17.9
Cash, cash equivalents, restricted cash, and restricted cash equivalents at beginning of period [(3)]	119.1	131.4
CASH, CASH EQUIVALENTS, RESTRICTED CASH, AND RESTRICTED CASH EQUIVALENTS AT END OF PERIOD [(3)]	$ 72.9	$ 149.3

(1) Includes depreciation expense of $0.4 and amortization expense of $0.6 for the three months ended March 31, 2018.

(2) Includes capital expenditures of $0.4 for the three months ended March 31, 2018 .

(3) Includes restricted cash and restricted cash equivalents of $1.0 in other assets at March 31, 2019 and $6.5 ($5.5 in other current assets and $1.0 in other assets) at March 31, 2018. Includes restricted cash and restricted cash equivalents of $1.0 in other assets at December 31, 2018. For further information regarding restricted cash and restricted cash equivalents balances, refer to Note 7, “Debt and Credit Arrangements.”

See accompanying notes to these unaudited condensed consolidated financial statements.

CHART INDUSTRIES, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF EQUITY (UNAUDITED)
(Dollars in millions)

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Non-controlling Interests	Total Equity
	Shares Outstanding	Amount					
Balance at December 31, 2018	31.36	$ 0.3	$ 460.2	$ 453.9	$ (29.9)	$ 4.5	$ 889.0
Net income	—	—	—	0.9	—	0.1	1.0
Other comprehensive (loss) income	—	—	—	—	(4.6)	0.1	(4.5)
Share-based compensation expense	—	—	2.4	—	—	—	2.4
Common stock issued from share-based compensation plans	0.41	—	8.3	—	—	—	8.3
Common stock repurchases	(0.04)	—	(2.7)	—	—	—	(2.7)
Balance at March 31, 2019	31.73	$ 0.3	$ 468.2	$ 454.8	$ (34.5)	$ 4.7	$ 893.5

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Non-controlling Interests	Total Equity
	Shares Outstanding	Amount					
Balance at December 31, 2017	30.81	$ 0.3	$ 445.7	$ 364.3	$ (8.1)	$ 3.0	805.2
Net income	—	—	—	5.8	—	0.5	6.3
Cumulative effect of accounting change	—	—	—	2.3	—	—	2.3
Other comprehensive income	—	—	—	—	12.4	—	12.4
Share-based compensation expense	—	—	3.2	—	—	—	3.2
Common stock issued from share-based compensation plans	0.20	—	1.3	—	—	—	1.3
Common stock repurchases	(0.04)	—	(2.2)	—	—	—	(2.2)
Other	—	—	—	—	—	0.1	0.1
Balance at March 31, 2018	30.97	$ 0.3	$ 448.0	$ 372.4	$ 4.3	$ 3.6	$ 828.6

See accompanying notes to these unaudited condensed consolidated financial statements.

NOTE 1 — Basis of Preparation

The accompanying unaudited condensed consolidated financial statements of Chart Industries, Inc. and its consolidated subsidiaries (herein referred to as the "Company," "Chart," "we," "us," or "our") have been prepared in accordance with U.S. generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by U.S. generally accepted accounting principles for annual financial statements. These financial statements should be read in conjunction with the audited financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2018. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation have been included. Operating results for the three months ended March 31, 2019 are not necessarily indicative of the results that may be expected for the year ending December 31, 2019.

Nature of Operations: We are a leading independent global manufacturer of highly engineered equipment servicing multiple market applications in Energy and Industrial Gas. Our unique product portfolio is used throughout the liquid gas supply chain in the production, storage, distribution and end-use of atmospheric, hydrocarbon, and industrial gases. Chart has domestic operations located across the United States and an international presence in Asia, Australia, Europe and the Americas.

Principles of Consolidation: The unaudited condensed consolidated financial statements include the accounts of Chart Industries, Inc. and its subsidiaries. Intercompany accounts and transactions are eliminated in consolidation.

Use of Estimates: The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements. These estimates may also affect the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates and assumptions.

Recently Issued Accounting Standards: In August 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-15, "Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract." This ASU clarifies the accounting treatment for implementation costs for cloud computing arrangements (hosting arrangements) that is a service contract. This guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within that fiscal year. Early adoption is permitted. We are currently assessing the effect that this ASU will have on our financial position, results of operations, and disclosures.

In August 2018, the FASB issued ASU 2018-14, "Compensation – Retirement Benefits – Defined Benefit Plans – General (Subtopic 715-20): Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans." This ASU adds, modifies and clarifies several disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. This guidance is effective for fiscal years ending after December 15, 2020. Early adoption is permitted. We are currently assessing the effect that this ASU will have on our financial position, results of operations, and disclosures.

In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement." This ASU adds, modifies and removes several disclosure requirements relative to the three levels of inputs used to measure fair value in accordance with Topic 820, "Fair Value Measurement." This guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within that fiscal year. Early adoption is permitted. We are currently assessing the effect that this ASU will have on our financial position, results of operations, and disclosures.

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments" and subsequently issued additional guidance that modified ASU 2016-13. ASU 2016-13 and the subsequent modifications are identified as Accounting Standards Codification ("ASC") 326." The standard requires an entity to change its accounting approach in determining impairment of certain financial instruments, including trade receivables, from an "incurred loss" to a "current expected credit loss" model. The standard will be effective for fiscal years beginning after December 15, 2019, including interim periods within such fiscal years. Early adoption is permitted. We are currently assessing the effect that ASC 326 will have on our financial position, results of operations, and disclosures.

Recently Adopted Accounting Standards: In July 2018, the FASB issued ASU 2018-09, "Codification Improvements." This ASU makes amendments to multiple codification Topics. The transition and effective date guidance are based on the facts and circumstances of each amendment. Some of the amendments in this ASU do not require transition guidance and were effective upon issuance of this ASU. However, many of the amendments in this ASU had transition guidance with effective dates for annual periods beginning after December 15, 2018. The adoption of this guidance did not have a material impact on our financial position, results of operations or disclosures.

In February 2018, the FASB issued ASU 2018-02, "Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." The FASB issued the update to provide amended guidance to "allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act." Additionally, under the new guidance an entity will be required to provide certain disclosures regarding stranded tax effects. The guidance was effective for fiscal years beginning after December 15, 2018, including interim periods within those years. The Company adopted this guidance effective January 1, 2019. The adoption of this guidance did not impact our financial position, results of operations or disclosures.

In August 2017, the FASB issued ASU 2017-12, "Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities." The ASU expands and enhances hedge accounting to become more closely aligned with an entity's risk management activities through hedging strategies. The ASU provides changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results in the financial statements and creates more transparency and better understandability around how economic results are presented in the financial statements. In addition, the new guidance makes certain targeted improvements to ease the application of accounting guidance relative to hedge effectiveness. This guidance was applied prospectively for annual periods and interim periods beginning after December 15, 2018. We adopted this guidance effective January 1, 2019. The adoption of this guidance did not impact our financial position, results of operations or disclosures.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842) and other subsequent amendments collectively identified as ASC 842, related to leases to increase transparency and comparability among organizations by requiring the recognition of right-of-use ("ROU") assets and lease liabilities on the balance sheet. Effective January 1, 2019, ("the Commencement Date") the Company adopted the new lease accounting standard using the modified retrospective transition option of applying the new standard at the adoption date for all leases with terms greater than 12 months. The adoption of the new standard resulted in the recording of ROU assets, primarily consisting of leased facilities and equipment and lease liabilities of $34.8 as of the Commencement Date. The adoption did not have a material impact on our unaudited condensed consolidated statement of income and comprehensive income or cash flows related to existing leases for the three months ended March 31, 2019. As a result, there was no cumulative-effect adjustment.

We elected certain practical expedients and as such did not reassess the following: 1) whether any expired or existing contracts are or contain leases, 2) lease classification for any expired or existing leases, 3) initial direct costs for any expired or existing leases and 4) whether existing or expired land easements are or contain leases. However, we will evaluate new or modified land easements under the new guidance after the Commencement Date. We also elected the practical expedient to not separate lease and non-lease components. In addition, we implemented internal controls and key system functionality to enable the preparation of financial information on adoption.

At lease inception, we determine if an arrangement is a lease and if it includes options to extend or terminate the lease if it is reasonably certain that the options will be exercised. Lease expense for lease payments is recognized on a straight-line basis over the lease term. Operating leases are recognized as ROU assets and are included within property, plant and equipment, net and lease liabilities are included in other current liabilities and other liabilities in our unaudited condensed consolidated balance sheet as of the Commencement Date and at March 31, 2019. ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized on the Commencement Date based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available on the Commencement Date in determining the present value of lease payments.

As of March 31, 2019, ROU assets and lease liabilities were $29.8 and $33.1 ($7.1 of which was current), respectively. The weighted-average remaining term for lease contracts was 7.2 years at March 31, 2019, with maturity dates ranging from May 2019 to August 2027. The weighted-average discount rate was 4.7% at March 31, 2019.

Certain leases contain rent escalation clauses and lease concessions that require additional rental payments in the later years of the term. Rent expense for these types of leases is recognized on a straight-line basis over the minimum lease term. We incurred $2.0 and $2.5 of rental expense under operating leases for the three months ended March 31, 2019 and March 31, 2018, respectively. Adjustments for straight-line rental expense for the respective periods was not material and as such, the majority of expense recognized was reflected in cash used in operating activities for the respective periods. This expense consisted primarily of payments for base rent on building and equipment leases. Payments related to short-term lease costs and taxes and variable service charges on leased properties were immaterial. In addition, we have the right, but no obligation, to renew certain leases for various renewal terms.

(Dollars and shares in millions, except per share amounts) – Continued

The following table summarizes future minimum lease payments for non-cancelable operating leases as of March 31, 2019 and December 31, 2018:

	March 31, 2019	December 31, 2018
2019 (1)	$ 5.8	$ 7.9
2020	6.3	6.9
2021	5.6	5.7
2022	5.3	5.3
2023	4.6	4.6
Thereafter (2)	9.1	9.2
Total future minimum lease payments	$ 36.7	$ 39.6

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(1) Amount as of March 31, 2019 represents lease payments for the remaining nine months, April 2019 through December 2019.

(2) As of March 31, 2019, future minimum lease payments for non-cancelable operating leases for period subsequent to 2023 relate to 11 leased facilities.

NOTE 2 — Discontinued Operations

On December 20, 2018, we closed the sale of our oxygen-related products business to NGK SPARK PLUG CO., LTD. (the "Divestiture"). As a result of the Divestiture, the asset group, which included our respiratory and on-site generation systems businesses, qualified for discontinued operations for the three months ended March 31, 2018. As such, the financial results of the respiratory therapy and on-site generation systems businesses are reflected in our unaudited condensed consolidated statements of income and comprehensive income as discontinued operations for the prior-year period presented.

Summarized Financial Information of Discontinued Operations

The following table represents income from discontinued operations, net of tax:

	Three Months Ended March 31, 2018
Sales	$ 35.6
Cost of sales	25.4
Selling, general and administrative expenses	7.5
Amortization expense	0.6
Operating income (1)	2.1
Other income, net	0.2
Income before income taxes	2.3
Income tax expense	0.7
Income from discontinued operations, net of tax	$ 1.6

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(1) Includes depreciation expense of $0.4 for the three months ended March 31, 2018.

NOTE 3 — Reportable Segments

As previously reported in our Annual Report on Form 10-K for the year ended December 31, 2018, the structure of our internal organization is divided into the following reportable segments, which are also our operating segments: Energy & Chemicals ("E&C"), Distribution and Storage Western Hemisphere ("D&S West") and Distribution and Storage Eastern

(Dollars and shares in millions, except per share amounts) – Continued

Hemisphere ("D&S East"). Corporate includes operating expenses for executive management, accounting, tax, treasury, corporate development, human resources, information technology, investor relations, legal, internal audit, and risk management. Corporate support functions are not currently allocated to the segments.

The following table represents information for our reportable segments and our corporate function:

	Three Months Ended March 31, 2019					
	Energy & Chemicals	D&S West	D&S East	Intersegment Eliminations	Corporate	Consolidated
Sales to external customers [1]	$ 105.6	$ 118.0	$ 68.7	$ (3.0)	$ —	$ 289.3
Depreciation and amortization expense	8.6	2.9	4.2	—	0.3	16.0
Operating (loss) income [1] [2] [3]	(1.3)	25.6	(2.3)	(1.1)	(16.3)	4.6
Capital expenditures	3.2	1.2	1.0	—	0.5	5.9

	Three Months Ended March 31, 2018					
	Energy & Chemicals	D&S West	D&S East	Intersegment Eliminations	Corporate	Consolidated
Sales to external customers	$ 89.9	$ 100.6	$ 55.1	$ (1.5)	$ —	$ 244.1
Depreciation and amortization expense	6.6	2.9	2.9	—	0.3	12.7
Operating income (loss) [2] [3]	2.8	22.2	3.7	(0.4)	(13.5)	14.8
Capital expenditures	2.0	1.1	1.9	—	1.2	6.2

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(1) Includes sales and operating loss for VRV S.r.l and its subsidiaries ("VRV"), included in the E&C and D&S East segment results since the acquisition date, November 15, 2018 as follows:

- Sales were $22.1 (E&C: $8.6, D&S East: $13.5) for the three months ended March 31, 2019.
- Operating loss was $(8.1) (E&C: $(2.8), D&S East: $(5.3)) for the three months ended March 31, 2019., which includes VRV inventory step-up of $1.7.

(2) Includes restructuring costs of $7.4 and $0.9 for the three months ended March 31, 2019 and 2018 respectively. See Note 15, Restructuring Activities.

(3) Includes transaction-related costs of $0.9 and $1.3 for the three months ended March 31, 2019 and 2018, respectively. Transaction-related costs include costs associated with business development and other one-time transactions.

Product Sales Information

	Three Months Ended March 31, 2019				
	Energy & Chemicals	D&S West	D&S East	Intersegment Eliminations	Consolidated
Natural gas processing (including petrochemical) applications	$ 70.3	$ —	$ —	$ —	$ 70.3
Liquefied natural gas (LNG) applications	14.6	22.1	12.1	—	48.8
Industrial gas applications	7.1	—	—	—	7.1
HVAC, power and refining applications	13.6	—	—	—	13.6
Bulk industrial gas applications	—	37.8	40.2	(0.3)	77.7
Packaged gas industrial applications	—	36.1	16.4	(1.0)	51.5
Cryobiological storage	—	22.0	—	(1.7)	20.3
Total	$ 105.6	$ 118.0	$ 68.7	$ (3.0)	$ 289.3

CHART INDUSTRIES, INC. AND SUBSIDIARIES
Notes to Unaudited Condensed Consolidated Financial Statements – March 31, 2019
(Dollars and shares in millions, except per share amounts) – Continued

	Three Months Ended March 31, 2018				
	Energy & Chemicals	D&S West	D&S East	Intersegment Eliminations	Consolidated
Natural gas processing (including petrochemical) applications	$ 58.7	$ —	$ —	$ —	$ 58.7
Liquefied natural gas (LNG) applications	9.0	13.0	20.4	(0.2)	42.2
Industrial gas applications	3.4	—	—	—	3.4
HVAC, power and refining applications	18.8	—	—	—	18.8
Bulk industrial gas applications	—	28.6	24.8	(0.4)	53.0
Packaged gas industrial applications	—	39.9	9.9	(0.9)	48.9
Cryobiological storage	—	19.1	—	—	19.1
Total	$ 89.9	$ 100.6	$ 55.1	$ (1.5)	$ 244.1

Total Assets	March 31, 2019	December 31, 2018
Energy & Chemicals	$ 909.6	$ 889.2
D&S West	442.8	420.3
D&S East	495.6	496.1
Corporate	65.3	92.1
Total	$ 1,913.3	$ 1,897.7

(Dollars and shares in millions, except per share amounts) – Continued

NOTE 4 — Revenue

Disaggregation of Revenue

The following table represents a disaggregation of revenue by timing of revenue along with the reportable segment for each category:

	Three Months Ended March 31, 2019				
	Energy & Chemicals	D&S West	D&S East	Intersegment Eliminations	Consolidated
Point in time	$ 74.1	$ 107.4	$ 63.9	$ (3.0)	$ 242.4
Over time	31.5	10.6	4.8	—	46.9
Total	$ 105.6	$ 118.0	$ 68.7	$ (3.0)	$ 289.3

	Three Months Ended March 31, 2018				
	Energy & Chemicals	D&S West	D&S East	Intersegment Eliminations	Consolidated
Point in time	$ 23.9	$ 91.3	$ 50.5	$ (1.5)	$ 164.2
Over time	66.0	9.3	4.6	—	79.9
Total	$ 89.9	$ 100.6	$ 55.1	$ (1.5)	$ 244.1

Refer to Note 3, “Reportable Segments,” for a table of revenue disaggregated by product application along with the reportable segment for each category.

Contract Balances

The following table represents changes in our contract assets and contract liabilities balances:

	March 31, 2019	December 31, 2018	Year-to-date Change ($)	Year-to-date Change (%)
Contract assets				
Accounts receivable, net of allowances	$ 205.2	$ 194.8	10.4	5.3 %
Unbilled contract revenue	68.9	54.5	14.4	26.4 %
Contract liabilities				
Customer advances and billings in excess of contract revenue	$ 129.5	$ 130.0	$ (0.5)	(0.4)%
Long-term deferred revenue	1.3	1.4	(0.1)	(7.1)%

Revenue recognized for the three months ended March 31, 2019 and 2018, that was included in the contract liabilities balance at the beginning of each year was $37.0, and $38.9, respectively. The amount of revenue recognized during the three months ended March 31, 2019 from performance obligations satisfied or partially satisfied in previous periods as a result of changes in the estimates of variable consideration related to long-term contracts, was not significant.

Remaining Performance Obligations

Remaining performance obligations represent the transaction price of firm signed purchase orders or other written contractual commitments from customers for which work has not been performed, or is partially completed, and excludes unexercised contract options and potential orders. As of March 31, 2019, the estimated revenue expected to be recognized in the future related to remaining performance obligations was $733.8. We expect to recognize revenue on approximately 68.5% of the remaining performance obligations over the next 12 months and with the remaining over the next few years thereafter.

(Dollars and shares in millions, except per share amounts) – Continued

NOTE 5 — Inventories

The following table summarizes the components of inventory:

	March 31, 2019	December 31, 2018
Raw materials and supplies	$ 112.5	$ 97.7
Work in process	44.7	53.0
Finished goods	77.5	82.4
Total inventories, net	$ 234.7	$ 233.1

The allowance for excess and obsolete inventory balance at March 31, 2019 and December 31, 2018 was $8.7 and $9.0, respectively.

NOTE 6 — Goodwill and Intangible Assets

Goodwill

The following table represents the changes in goodwill by segment:

	Energy & Chemicals	D&S West	D&S East	Consolidated
Balance at December 31, 2018	$ 295.8	$ 151.3	$ 73.6	$ 520.7
Foreign currency translation adjustments	(0.6)	—	(1.7)	(2.3)
Purchase price adjustment [1]	7.7	0.8	10.2	18.7
Balance at March 31, 2019	$ 302.9	$ 152.1	$ 82.1	$ 537.1
Accumulated goodwill impairment loss at March 31, 2019 and December 31, 2018	$ 64.6	$ 82.5	$ —	$ 147.1

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(1) For the three months ended March 31, 2019, we made an adjustment to the preliminary purchase price allocation of $17.9 ($7.7 in E&C and $10.2 in D&S East) for the VRV acquisition and $0.8 for the Skaff acquisition. For further information see Note 9, “Business Combinations”.

(Dollars and shares in millions, except per share amounts) – Continued

Intangible Assets

The following table displays the gross carrying amount and accumulated amortization for finite-lived intangible assets and indefinite-lived intangible assets (exclusive of goodwill) [(1)]:

		March 31, 2019		December 31, 2018	
	Weighted-average Estimated Useful Life	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Finite-lived intangible assets:					
Customer relationships	14 years	$ 252.3	$ (96.1)	$ 254.0	$ (92.0)
Unpatented technology	12 years	38.9	(5.5)	39.4	(5.1)
Land use rights	50 years	12.4	(1.3)	12.2	(1.3)
Trademarks and trade names	14 years	12.9	(1.0)	13.5	(1.1)
Patents and other	7 years	12.8	(1.1)	14.0	(1.5)
Total finite-lived intangible assets	14 years	$ 329.3	$ (105.0)	$ 333.1	$ (101.0)
Indefinite-lived intangible assets:					
Trademarks and trade names		98.2	—	98.3	—
Total intangible assets		$ 427.5	$ (105.0)	$ 431.4	$ (101.0)

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(1) Amounts include the impact of foreign currency translation. Fully amortized amounts are written off.

Amortization expense for intangible assets subject to amortization was $7.2 and $5.5 for the three months ended March 31, 2019 and 2018, respectively. We estimate amortization expense to be recognized during the next five years as follows:

For the Year Ending December 31,	
2019	$ 21.0
2020	26.8
2021	20.2
2022	19.3
2023	19.2

See Note 9, “Business Combinations” for further information related to intangible assets acquired during 2018.

Government Grants

We received certain government grants related to land use rights for capacity expansion in China (“China Government Grants”). China Government Grants are generally recorded in other current liabilities and other long-term liabilities in our unaudited condensed consolidated balance sheets and generally recognized into income over the useful life of the associated assets (10 to 50 years).

China Government Grants are presented in our unaudited condensed consolidated balance sheets as follows:

	March 31, 2019	December 31, 2018
Current	$ 0.5	$ 0.5
Long-term	7.9	7.7
Total China Government Grants	$ 8.4	$ 8.2

We also received government grants from certain local jurisdictions within the United States, which are recorded in other assets in the unaudited condensed consolidated balance sheets and were not significant for the periods presented.

(Dollars and shares in millions, except per share amounts) – Continued

NOTE 7 — Debt and Credit Arrangements

Summary of Outstanding Borrowings

The following table represents the components of our borrowings:

	March 31, 2019	December 31, 2018
Convertible notes due November 2024:		
Principal amount	$ 258.8	$ 258.8
Unamortized discount	(48.6)	(50.4)
Unamortized debt issuance costs	(4.3)	(4.5)
Convertible notes due November 2024, net of unamortized discount and debt issuance costs	205.9	203.9
Senior secured revolving credit facility due November 2022	318.0	329.3
Foreign facilities	8.9	11.2
Total debt, net of unamortized discount and debt issuance costs	532.8	544.4
Less: current maturities [(1)]	(214.8)	(11.2)
Long-term debt	$ 318.0	$ 533.2

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[(1)] Includes $205.9 of convertible notes due 2024, net of unamortized discount and debt issuance costs.

2024 Convertible Notes

On November 6, 2017, we issued 1.00% Convertible Senior Subordinated Notes due November 2024 (the “2024 Notes”) in the aggregate principal amount of $258.8, pursuant to an Indenture, dated as of such date (the “Indenture”). The 2024 Notes bear interest at an annual rate of 1.00%, payable on May 15 and November 15 of each year, beginning on May 15, 2018, and will mature on November 15, 2024 unless earlier converted or repurchased.

The 2024 Notes are senior subordinated unsecured obligations of the Company and are not guaranteed by any of our subsidiaries. The 2024 Notes are senior in right of payment to our future subordinated debt, equal in right of payment with the Company’s future senior subordinated debt, and are subordinated in right of payment to our existing and future senior indebtedness, including indebtedness under our existing credit agreement.

A conversion of the 2024 Notes may be settled in cash, shares of our common stock or a combination of cash and shares of our common stock, at our election (subject to, and in accordance with, the settlement provisions of the Indenture). The initial conversion rate for the 2024 Notes is 17.0285 shares of common stock (subject to adjustment as provided for in the Indenture) per $1,000 principal amount of the 2024 Notes, which is equal to an initial conversion price of approximately $58.725 per share, representing a conversion premium of approximately 35% above the closing price of our common stock of $43.50 per share on October 31, 2017. In addition, following certain corporate events that occur prior to the maturity date as described in the Indenture, we will pay a make-whole premium by increasing the conversion rate for a holder who elects to convert its 2024 Notes in connection with such a corporate event in certain circumstances. For purposes of calculating earnings per share, if the average market price of our common stock exceeds the applicable conversion price during the periods reported, shares contingently issuable under the 2024 Notes will have a dilutive effect with respect to our common stock. Since our closing common stock price of $90.52 at the end of the period exceeded the conversion price of $58.725, the if-converted value exceeded the principal amount of the 2024 Notes by approximately $140.1 at March 31, 2019. As described below, we entered into convertible note hedge transactions, which are expected to reduce the potential dilution with respect to our common stock upon conversion of the 2024 Notes.

Holders of the 2024 Notes may convert their 2024 Notes at their option at any time prior to the close of business on the business day immediately preceding August 15, 2024 only under the following circumstances: (1) during any fiscal quarter commencing after December 31, 2017 (and only during such fiscal quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding fiscal quarter is greater than or equal to 130% of the applicable conversion price for the 2024 Notes on each applicable trading day; (2) during the five business day period after any 10 consecutive trading day period (the “measurement period”) in which the “trading price” (as defined in the Indenture) per one thousand U.S. dollar principal amount of Notes for each trading day of such measurement period was less than 97% of the product of the last reported sale price of our common stock and the applicable conversion rate for the 2024 Notes on each such trading day; or (3) upon the occurrence of specified corporate events described in the Indenture.

(Dollars and shares in millions, except per share amounts) – Continued

On or after August 15, 2024 until the close of business on the second scheduled trading day immediately preceding November 15, 2024, holders may convert their 2024 Notes at the option of the holder regardless of the foregoing circumstances. Upon conversion, we may settle the conversion by paying or delivering either shares of our common stock, solely cash, or a combination of cash and shares of our common stock, at our election. It is our intention to settle the principal amount of the 2024 Notes in cash and excess conversion value in shares of our common stock.

We reassess the convertibility of the 2024 Notes and the related balance sheet classification on a quarterly basis. As of March 31, 2019, the 2024 Notes were convertible at the option of the shareholders. This conversion right, which will remain available until June 30, 2019, was triggered since the closing price of our common stock was greater than or equal to $76.3425 (130% of the conversion price of the 2024 Notes) for at least 20 days during the last 30 consecutive days ending on March 31, 2019. Since we would be required to pay cash and or issue stock to holders if they elect to convert their 2024 Notes during the second quarter of 2019, the $210.3 long-term liability component of the 2024 Notes was classified as a current liability in the unaudited condensed consolidated balance sheet as of March 31, 2019. There have been no conversions as of the date of this filing. In the event that holders of the 2024 Notes elect to convert, we expect to fund any resultant cash settlement from either working capital, borrowings under our credit facility, or both.

We allocated the gross proceeds of the 2024 Notes between the liability and equity components of the 2024 Notes. The initial liability component of $200.1, which was recorded as long-term debt, represents the fair value of similar debt instruments that have no conversion rights. The initial equity component of $58.7, which was recorded as additional paid-in capital, represents the debt discount and was calculated as the difference between the fair value of the liability component and gross proceeds of the 2024 Notes. The liability component was recognized at the present value of its associated cash flows using a 4.8% straight-debt rate and is being accreted to interest expense over the term of the 2024 Notes.

We recorded $5.3 in deferred debt issuance costs associated with the 2024 Notes, which are being amortized over the term of the 2024 Notes using the effective interest method. We also recorded $1.5 in equity issuance costs, which was recorded as a reduction to additional paid-in capital.

The following table summarizes interest accretion of the 2024 Notes discount, 1.0% contractual interest coupon and financing costs amortization associated with the 2024 Notes:

	Three Months Ended March 31,	
	2019	**2018**
2024 Notes, interest accretion of convertible notes discount	$ 1.8	$ 1.7
2024 Notes, 1.0% contractual interest coupon	0.6	0.6
2024 Notes, total interest expense	$ 2.4	$ 2.3
2024 Notes, financing costs amortization	$ 0.2	$ 0.2

Convertible Note Hedge and Warrant Transactions Associated with the 2024 Notes

In connection with the pricing of the 2024 Notes, we entered into convertible note hedge transactions (the “Note Hedge Transactions”) with certain parties, including the initial purchasers of the 2024 Notes (the “Option Counterparties”). The Note Hedge Transactions are expected generally to reduce the potential dilution upon any future conversion of the 2024 Notes. Payments for the Note Hedge Transactions totaled approximately $59.5 and were recorded as a reduction to additional paid-in capital in the December 31, 2017 consolidated balance sheet.

We also entered into separate, privately negotiated warrant transactions (the “Warrant Transactions”) with the Option Counterparties to acquire up to 4.41 shares of our common stock. Proceeds received from the issuance of the Warrant Transactions totaled approximately $46.0 and were recorded as an addition to additional paid-in capital in the December 31, 2017 consolidated balance sheet. The strike price of the Warrant Transactions will initially be $71.775 per share (subject to adjustment), which is approximately 65% above the last reported sale price of our common stock on October 31, 2017. The Warrant Transactions could have a dilutive effect to our stockholders to the extent that the market price per share of our common stock, as measured under the terms of the Warrant Transactions, exceeds the applicable strike price of the warrants.

(Dollars and shares in millions, except per share amounts) – Continued

The Note Hedge Transactions and Warrant Transactions effectively increased the conversion price of the 2024 Notes. The net cost of the Note Hedge Transactions and Warrant Transactions was approximately $13.5.

2018 Convertible Notes

On August 1, 2018, our 2.00% Convertible Senior Subordinated Notes due August 2018 (the "2018 Notes") matured. The aggregate outstanding principal was $57.1 at August 1, 2018. During the nine months ended September 30, 2018, we settled upon maturity the 2018 Notes for total cash consideration of $57.1. Additionally, $0.6 of interest, which had previously been accrued, was paid at settlement.

The following table summarizes interest accretion of the 2018 Notes discount, 2.00% contractual interest coupon, and financing costs amortization associated with the 2018 Notes:

	Three Months Ended March 31, 2018
2018 Notes, interest accretion of convertible notes discount	$ 0.8
2018 Notes, 2.0% contractual interest coupon	0.6
2018 Notes, total interest expense	$ 1.4

Convertible Note Hedge, Capped Call and Warrant Transactions Associated with the 2018 Notes

The convertible note hedge and capped call transactions associated with the 2018 Notes expired in August 2018, with immaterial exercises. Approximately 90% of the separate warrants associated with the 2018 Notes expired without exercise. Prior to the expiration date of February 26, 2019, a portion of the separate warrants were exercised. These exercises were not material.

Senior Secured Revolving Credit Facility

We have a five-year $550.0 senior secured revolving credit facility (the "SSRCF"), which matures on November 3, 2022. The SSRCF includes a $25.0 sub-limit for the issuance of swingline loans and a $100.0 base sub-limit along with a $100.0 discretionary sub-limit to be used for letters of credit. There is a foreign currency limit of $250.0 under the SSRCF which can be used for foreign currency denominated letters of credit and borrowings in a foreign currency, in each case in currencies agreed upon with the lenders. In addition, the facility permits borrowings up to $250.0 sub-limit made by our wholly-owned subsidiaries, Chart Industries Luxembourg S.à r.l. ("Chart Luxembourg") and Chart Asia Investment Company Limited ("Chart Asia"). The SSRCF also includes an expansion option permitting us to add up to an aggregate $225.0 in term loans or revolving credit commitments from its lenders.

Revolving loans under the SSRCF bear interest, at the applicable Borrower's election, at a rate per annum equal to either (i) the greatest of (a) the Prime Rate (as defined in the SSRCF) in effect on such day, (b) the NYFRB Rate (as defined in the SSRCF) in effect on such day plus 1/2 of 1.0% and (c) the Adjusted LIBOR (as defined in the SSRCF) for a one-month interest period on such day (or if such day is not a business day, the immediately preceding business day) plus 1.0% (the "Adjusted Base Rate"), plus a margin that varies with our leverage ratio, or (ii) the Adjusted LIBOR (as defined in the SSRCF) for the relevant interest period in effect for such day, plus a margin that varies with our leverage ratio.

In addition, we are required to pay a commitment fee of between 0.20% and 0.375% of the unused revolver balance and a letter of credit participation fee equal to the daily aggregate letter of credit exposure at the rate per annum equal to the Applicable Margin for Eurocurrency Revolving Facility Borrowings (as defined in the SSRCF, ranging from 1.5% to 2.5%, depending on the leverage ratio calculated at each fiscal quarter end). A fronting fee must be paid on each letter of credit that is issued equal to 0.125% per annum of the stated dollar amount of the letter of credit.

Significant financial covenants for the SSRCF include a maximum leverage ratio of 4.50 for the four fiscal quarter-period ending December 31, 2018, with such required ratio stepping down over five subsequent quarters until it reaches 3.50 for each such period ending on or after March 31, 2020, and a minimum interest coverage to EBITDA ratio of 3.00. The required leverage ratio can be relaxed on up to two occasions, upon notification to the lenders, to 4.00 for up to four consecutive fiscal quarters, for acquisitions and plant expansions of $100.0 or greater. The SSRCF contains a number of other customary covenants including, but not limited to, restrictions on our ability to incur additional indebtedness, create liens or other encumbrances, sell assets, enter into sale and lease-back transactions, make certain payments, investments, loans, advances or guarantees, make acquisitions and engage in mergers or consolidations and pay dividends or distributions. At March 31, 2019, we were in compliance with all covenants.

We recorded $3.2 in deferred debt issuance costs associated with the SSRCF, which are being amortized over the five-year term of the SSRCF. At March 31, 2019, unamortized debt issuance costs associated with the SSRCF were $2.9. For the three months ended March 31, 2019 and 2018, deferred financing fees amortization was $0.2 and $0.1, respectively.

As of March 31, 2019, there was $318.0 in borrowings outstanding under the SSRCF ("SSRCF Borrowings") bearing a weighted-average interest rate of 3.9% and $49.4 in letters of credit issued and bank guarantees supported by the SSRCF. At March 31, 2019, the SSRCF had availability of $182.6. For the three months ended March 31, 2019, and 2018, interest expense related to the SSRCF Borrowings and swingline loans outstanding was $3.2 and $2.5, respectively. The obligations under the SSRCF are guaranteed by the Company and substantially all of its U.S. subsidiaries and secured by substantially all of the assets of Chart and our U.S. subsidiaries and 65% of the capital stock of our material non-U.S. subsidiaries (as defined by the SSRCF) that are owned by U.S. subsidiaries.

Foreign Facilities – China

Chart Cryogenic Engineering Systems (Changzhou) Company Limited ("CCESC"), a wholly-owned subsidiary of the Company, CAIRE Medical Technology (Chengdu) Co., Ltd (formerly known as Chart Biomedical (Chengdu) Co. Ltd., a wholly-owned subsidiary of the Company, and Chart Cryogenic Distribution Equipment (Changzhou) Company Limited ("CCDEC"), a joint venture of the Company, maintain joint banking facilities (the "China Facilities") which include a revolving facility with 50.0 million Chinese yuan (equivalent to $7.4) in borrowing capacity which can be utilized for either revolving loans, bonds/guarantees, or bank draft acceptances. Any borrowings made by CCESC, CCDEC or Chengdu under the China Facilities are guaranteed by the Company. At March 31, 2019, there was 34.0 million Chinese yuan (equivalent to $5.0) outstanding under this facility, bearing interest at 4.90%. CCESC and CCDEC, together, had a combined total of 2.77 million Chinese yuan (equivalent to $0.4), in bank guarantees at March 31, 2019.

Chart Cryogenic Distribution Equipment (Changzhou) Company Limited ("CCDEC"), a joint venture of the Company, maintained an unsecured credit facility whereby CCDEC was able to borrow up to 70.0 million Chinese yuan (equivalent to $10.4) for working capital purposes. This facility is effective until August 28, 2019. There were no borrowings under this facility during its term. CCDEC had 5.2 million Chinese yuan (equivalent to $0.8), in bank guarantees at March 31, 2019.

CCESC has a term loan that is secured by certain CCESC land use rights and allows for up to 86.6 million Chinese yuan (equivalent to $12.9) in borrowings. The loan has a term of eight years with semi-annual installment payments of at least 10.0 million Chinese yuan and a final maturity date of May 26, 2024. At March 31, 2019, there was 6.6 million Chinese yuan (equivalent to $1.0) outstanding on this loan, bearing interest at 5.39% with a maturity date of June 30, 2019.

Foreign Facilities – India

VRV Asia Pacific Private Limited, a wholly-owned subsidiary of the Company, maintains a secured credit facility with capacity of up to 600.0 million Indian rupees (equivalent to $8.7), which can be utilized for overdraft facilities, working capital demand loans, bank guarantees, letters of credit, or export packing credits. At March 31, 2019, there was 106.9 million Indian rupees (equivalent to $1.5) outstanding as export packing credits bearing an average interest rate of 4.35% whereas the 151.9 million Indian rupees (equivalent to $2.2) outstanding as letters of credit and bank guarantees which are not subject to interest charges. At December 31, 2018, there was 144.0 million Indian rupees (equivalent to $2.1) outstanding as letters of credit and bank guarantees which were not subject to interest charges.

Foreign Facilities – Europe

Chart Ferox, a.s. ("Ferox"), a wholly-owned subsidiary of the Company, maintains a secured credit facility with capacity of up to 135.0 million Czech koruna (equivalent to $5.9) and two secured credit facilities with capacity of up to 7.0 million euros (equivalent to $7.9). All three facilities (the "Ferox Credit Facilities") allow Ferox to request bank guarantees and letters of credit. None of these facilities allow revolving credit borrowings. Under two of the facilities, Ferox must pay letter of credit and guarantee fees equal to 0.70% per annum on the face amount of each guarantee or letter of credit, and under one facility, Ferox must pay the letter of credit and guarantee fees equal to 0.50%. Ferox's land, buildings, and cash collateral secure the credit facilities. At March 31, 2019 there were bank guarantees of 144.1 million Czech koruna (equivalent to $6.3) supported by the Ferox Credit Facilities.

(Dollars and shares in millions, except per share amounts) – Continued

Chart Luxembourg maintains an overdraft facility with $5.0 in borrowing capacity. There were no borrowings under the Chart Luxembourg facility as of March 31, 2019.

Cryo Diffusion S.A.S., a wholly-owned subsidiary of the Company, maintains a secured credit facility with a capacity of up to 1.1 million euros (equivalent to $1.4), which can be utilized for working capital purposes. At March 31, 2019, there was 1.1 euros (equivalent to $1.2) outstanding bearing an average interest rate at 1.49%.

Letters of Credit

Chart Energy & Chemicals, Inc. ("Chart E&C"), a wholly-owned subsidiary of the Company, had $1.0 in deposits in a bank outside of the SSRCF to secure letters of credit. The deposits are treated as restricted cash and restricted cash equivalents in the unaudited condensed consolidated balance sheets ($1.0 in other assets at March 31, 2019 and $1.0 in other assets at December 31, 2018).

Fair Value Disclosures

The fair value of the 2024 Notes was approximately 163% and 124% of their par value as of March 31, 2019 and December 31, 2018, respectively. The 2024 Notes are actively quoted instruments and, accordingly, the fair value of the 2024 Notes was determined using Level 1 inputs.

NOTE 8 — Product Warranties

We provide product warranties with varying terms and durations for the majority of our products. We estimate our warranty reserve by considering historical and projected warranty claims, historical and projected cost-per-claim, and knowledge of specific product issues that are outside our typical experience. We record warranty expense in cost of sales in the unaudited condensed consolidated statements of income and comprehensive income. Product warranty claims not expected to occur within one year are included as part of other long-term liabilities in the unaudited condensed consolidated balance sheets.

The following table represents changes in our consolidated warranty reserve:

Balance at December 31, 2018	$	8.9
Issued – warranty expense		1.1
Warranty usage		(1.0)
Balance at March 31, 2019	$	9.0

During the second quarter of 2018, we established a reserve related to a recall notice issued for certain aluminum cryobiological tanks in our D&S West segment manufactured in our New Prague, Minnesota facility during a limited time period. See Note 14, "Commitments and Contingencies" for additional information.

NOTE 9 — Business Combinations

VRV Acquisition

On November 15, 2018, Chart completed the acquisition of VRV pursuant to the terms of the Amended and Restated Share Purchase Agreement (the "Amendment") with the original parties as well as VRV that replaced in full the original Purchase Agreement. Immediately thereafter, we assigned all of our rights and obligations under the Amendment to VRV Holdings S.r.l. ("Holdings"), a newly formed Italian subsidiary of Chart. The Amendment provided a revised transaction structure pursuant to which Holdings acquired VRV Technoservice S.r.l. ("VRV Technoservice"), a newly formed Italian company wholly owned by VRV (the "Acquisition"). Prior to the Acquisition, as contemplated in the Amendment, VRV contributed substantially all of its business to VRV Technoservice. VRV Technoservice changed its name to VRV S.r.l. following the Acquisition.

The Acquisition purchase price was 191.1 million euros (equivalent to $216.1), net of cash assumed of 1.3 million euros (equivalent to $1.4), is inclusive of the base purchase price of 125.0 million euros (equivalent to $141.3) paid in cash, assumed indebtedness of VRV, which was paid off immediately at closing or shortly thereafter, of 63.7 million euros (equivalent to $72.0), and net working capital and other agreed-upon purchase price adjustments finalized during the first quarter of 2019 of 2.5 million euros (equivalent to $2.8) which was settled early in the second quarter of 2019. Additional indebtedness of VRV of 4.4 million euros (equivalent to $4.9) was assumed at the acquisition date and paid off during the first and second quarters of 2019. All U.S. dollar equivalent dollar amounts are based on the exchange rate as of the acquisition date. We funded the Acquisition, including the subsequent payoff of assumed indebtedness, with borrowings of 140.0 million euros (equivalent to $160.3) from our senior secured revolving credit facility and the remainder with cash on hand.

VRV, which has operations in Italy, France and India, is a diversified multinational corporation with highly automated, purpose-built facilities for the design and manufacture of pressure equipment serving the cryogenic and energy & petrochemical end markets. VRV’s results are included in our E&C and D&S East segments from the date of Acquisition.

As defined in our significant accounting policy for business combinations in Note 2, of our Annual Report on Form 10-K for the year ended December 31, 2018, we preliminarily allocated the Acquisition consideration to tangible and identifiable intangible assets acquired and liabilities assumed based on their preliminary estimated fair values as of the Acquisition date. The preliminary fair value of the acquired tangible and identifiable intangible assets were determined based on inputs that are unobservable and significant to the overall fair value measurement. It is also based on estimates and assumptions made by management at the time of the Acquisition. As such, this was classified as Level 3 fair value hierarchy measurements and disclosures.

The Acquisition consideration allocation below is preliminary, pending completion of the fair value analyses of acquired assets and liabilities as well as certain other analyses. Given the acquisition closed late in the fourth quarter of 2018, we expect significant adjustments in the purchase price allocation. Those areas that are subject to change, include the following:

- researching and analyzing the differences between Chart accounting policies and those used by VRV,
- finalizing the valuation of working capital accounts,
- completing our review of VRV’s revenue recognition policies, including assessing estimates utilized for projects using the percentage of completion method,
- gathering sufficient information to estimate the fair value of acquired intangible assets, including assessing projections and other assumptions used in our valuation models, and determining whether the intangible assets identified below represent a complete listing of acquired intangible assets, and
- evaluating income tax accounting considerations, including income tax effects of the above matters.

Where we are still in process of completing our analysis, we used our best estimate based on currently available information.

The preliminary estimated useful lives of identifiable finite-lived intangible assets range from 2 to 12 years. The excess of the purchase price over the estimated fair values is assigned to goodwill. The preliminary estimated goodwill was established due to benefits including the combination of strong engineering and manufacturing cultures which will continue to further develop full service solutions for our worldwide customer base, as well as the benefits derived from the anticipated synergies of VRV integrating with Chart’s E&C and D&S East segments. Goodwill recorded for the VRV acquisition is not expected to be deductible for tax purposes.

As additional information becomes available, we will further revise the preliminary Acquisition consideration allocation during the remainder of the measurement period, which shall not exceed twelve months from the closing of the Acquisition, and we believe such revisions or changes may be material.

CHART INDUSTRIES, INC. AND SUBSIDIARIES
Notes to Unaudited Condensed Consolidated Financial Statements – March 31, 2019
(Dollars and shares in millions, except per share amounts) – Continued

The following table summarizes the preliminary estimated fair values of the assets acquired and liabilities assumed in the VRV acquisition as of the acquisition date:

	March 31, 2019	Adjustments	As Previously Reported December 31, 2018
Net assets acquired:			
Identifiable intangible assets	$ 66.6	$ —	$ 66.6
Property, plant and equipment	70.5	—	70.5
Goodwill	81.1	17.9	63.2
Other net assets	2.8	(15.1)	17.9
Debt	(4.9)	—	(4.9)
Net assets acquired	$ 216.1	$ 2.8	$ 213.3

During the first quarter of 2019, net assets acquired included adjustments to other net assets and goodwill based on U.S. GAAP purchase accounting primarily due to inventory valuation and balance sheet accounts related to revenue recognition. Net assets acquired, including goodwill, was also adjusted to reflect the net working capital and other agreed-upon purchase price adjustments of $2.8 negotiated during the first quarter of 2019.

Information regarding preliminary identifiable intangible assets acquired in the VRV acquisition is presented below:

	Weighted-average Estimated Useful Life	Preliminary Estimated Asset Fair Value
Finite-lived intangible assets:		
Customer relationships	12.0 years	$ 28.1
Unpatented technology	12.0 years	15.9
Other identifiable intangible assets (1)	4.0 years	11.8
Trademarks and trade names	14.0 years	10.8
Total finite-lived intangible assets acquired	9.0 years	$ 66.6

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(1) Other identifiable intangible assets is included in “Patents and other” in Note 6, “Goodwill and Intangible Assets”.

The following unaudited supplemental pro forma sales are based on our historical consolidated financial statements and VRV’s historical consolidated financial statements as adjusted to give effect to the November 15, 2018 acquisition of VRV. The unaudited supplemental pro forma sales information for the periods presented gives effect to the Acquisition as if it had occurred on January 1, 2018. The unaudited supplemental pro forma sales for the three months ended March 31, 2018 for Chart Industries including VRV would have been approximately $313.5. It is impracticable to disclose the pro forma net income and pro forma net income per share information because of significant differences between Chart accounting policies following U.S. GAAP and those followed by VRV.

The unaudited pro forma sales information is presented for informational purposes only and is not necessarily indicative of the results of operations that actually would have resulted had the Acquisition been in effect at the beginning of the period presented. In addition, the unaudited pro forma sales results are not intended to be a projection of future results and do not reflect any operating efficiencies or cost savings that might be achievable.

(Dollars and shares in millions, except per share amounts) – Continued

Skaff Acquisition

On January 2, 2018, we acquired 100% of the equity interests of Skaff Cryogenics and Cryo-Lease, LLC (together "Skaff") for an approximate purchase price of $12.5, net of cash acquired. Skaff provides quality repair service and re-manufacturing of cryogenic and liquefied natural gas storage tanks and trailers and also maintains a portfolio of cryogenic storage equipment that is leased to customers for temporary and permanent needs. Skaff is headquartered in Brentwood, New Hampshire and provides services and equipment to customers in North America. Skaff's results are included in the D&S West operating segment. During the three months ended March 31, 2019, the Skaff purchase price allocation was finalized, which resulted in an adjustment to the opening balance sheet increasing long-term deferred tax liabilities and goodwill each by $0.8.

Additional information related to the Skaff acquisition has not been presented because the impact on our consolidated results of operations and financial position is not material.

Contingent Consideration

The estimated fair value of contingent consideration relating to the 2015 Thermax acquisition of our D&S West segment, was $1.8 at the date of acquisition and was valued according to a discounted cash flow approach, which includes assumptions regarding the probability of achieving certain earnings targets and a discount rate applied to the potential payments. Potential payments may be paid before July 1, 2019 based on the attainment of certain earnings targets. The potential payments related to Thermax contingent consideration are between $0.0 and $11.3. We expect any payments to be insignificant.

Valuations are performed using Level 3 inputs and are evaluated on a quarterly basis based on forecasted sales and earnings targets. Contingent consideration liabilities are classified as other current liabilities and other long-term liabilities in the unaudited condensed consolidated balance sheets. Changes in fair value of contingent consideration, including accretion, are recorded as selling, general, and administrative expenses in the unaudited condensed consolidated statements of income and comprehensive income. The fair value of contingent consideration liabilities was insignificant at both March 31, 2019 and December 31, 2018.

NOTE 10 — Accumulated Other Comprehensive Loss

The following tables represent changes in accumulated other comprehensive (loss) income by component:

	Foreign currency translation adjustments	Pension liability adjustments, net of taxes	Accumulated other comprehensive loss
Balance at December 31, 2018	$ (17.5)	$ (12.4)	$ (29.9)
Other comprehensive loss	(4.9)	—	(4.9)
Amounts reclassified from accumulated other comprehensive loss, net of income taxes	—	0.3	0.3
Net current-period other comprehensive (loss) income, net of taxes	(4.9)	0.3	(4.6)
Balance at March 31, 2019	$ (22.4)	$ (12.1)	$ (34.5)

	Foreign currency translation adjustments	Pension liability adjustments, net of taxes	Accumulated other comprehensive (loss) income
Balance at December 31, 2017	$ 2.2	$ (10.3)	$ (8.1)
Other comprehensive income	12.1	—	12.1
Amounts reclassified from accumulated other comprehensive (loss) income, net of income taxes	—	0.3	0.3
Net current-period other comprehensive income, net of taxes	12.1	0.3	12.4
Balance at March 31, 2018	$ 14.3	$ (10.0)	$ 4.3

(Dollars and shares in millions, except per share amounts) – Continued

NOTE 11 — Earnings Per Share

The following table presents calculations of net earnings per share of common stock:

	Three Months Ended March 31,	
	2019	2018
Income from continuing operations	$ 0.9	$ 4.2
Income from discontinued operations, net of tax	—	1.6
Net income attributable to Chart Industries, Inc.	$ 0.9	$ 5.8
Earnings per common share – basic:		
Income from continuing operations	$ 0.03	$ 0.14
Income from discontinued operations	—	0.05
Net income attributable to Chart Industries, Inc.	$ 0.03	$ 0.19
Earnings per common share – diluted:		
Income from continuing operations	$ 0.03	$ 0.13
Income from discontinued operations	—	0.05
Net income attributable to Chart Industries, Inc.	$ 0.03	$ 0.18
Weighted average number of common shares outstanding – basic	31.57	30.91
Incremental shares issuable upon assumed conversion and exercise of share-based awards	0.55	0.75
Incremental shares issuable due to dilutive effect of convertible notes	1.20	—
Incremental shares issuable due to dilutive effect of warrants	0.49	—
Weighted average number of common shares outstanding – diluted	33.81	31.66

Diluted earnings per share does not reflect the following potential common shares as the effect would be anti-dilutive:

	Three Months Ended March 31,	
	2019	2018
Share-based awards	0.14	0.33
Convertible note hedge (1)	1.20	—
Warrants	—	5.18
Total anti-dilutive securities	1.34	5.51

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(1) The convertible note hedge offsets any dilution upon actual conversion of the 2024 Notes up to a common stock price of $71.775 per share. For further information, refer to Note 7, “Debt and Credit Arrangements.”

NOTE 12 — Income Taxes

Income tax (benefit) expense from continuing operations of $(2.0) and $1.6 for the three months ended March 31, 2019 and 2018, respectively, represents taxes on both U.S. and foreign earnings at a combined effective income tax rate of 200.0% and 25.4%, respectively. The effective income tax rate of 200% for the three months ended March 31, 2019 differed from the U.S. federal statutory rate of 21% primarily due to excess tax benefits associated with stock compensation and the effect of income earned by certain of our foreign entities being taxed at higher rates than the U.S. federal statutory rate, partially offset by losses incurred by certain of our Chinese operations for which no benefit was recorded.

The effective income tax rate of 25.4% for the three months ended March 31, 2018, differed from the U.S. federal statutory rate of 21% primarily due to the effect of income earned by certain of the Company’s foreign entities being taxed at higher rates than the U.S. federal statutory rate as well as losses incurred by certain of our Chinese operations for which no benefit was recorded.

(Dollars and shares in millions, except per share amounts) – Continued

As of March 31, 2019 and December 31, 2018, we had a liability for gross unrecognized tax benefits of $2.4 and $2.3, respectively. This amount includes $1.8 and $0.1 of unrecognized tax benefits as of March 31, 2019 and December 31, 2018, respectively, which, if ultimately recognized, would reduce our annual effective income tax rate. We recognize interest and penalties related to uncertain tax positions in income tax expense. These amounts were not significant for the periods presented.

NOTE 13 — Share-based Compensation

During the three months ended March 31, 2019, we granted 0.10 stock options and 0.07 restricted stock units, and 0.03 performance units. The total fair value of awards granted to employees during the three months ended March 31, 2019 was $9.8. In addition, our non-employee directors received stock awards with a total fair value of $0.1. During the three months ended March 31, 2019, participants in our stock option plans exercised options to purchase 0.25 shares of our common stock, while 0.01 stock options were forfeited.

Stock options generally have a four-year graded vesting period. Restricted stock and restricted stock units generally vest ratably over a three-year period. Performance units generally vest at the end of a three-year performance period based on the attainment of certain pre-determined performance condition targets. During the three months ended March 31, 2019, 0.11 restricted stock units and 0.02 performance units vested while 0.01 restricted stock units were forfeited.

Share-based compensation expense was $2.4 and $2.9 for the three months ended March 31, 2019 and 2018, respectively. Share-based compensation expense is included in selling, general, and administrative expenses in the unaudited condensed consolidated statements of income and comprehensive income. As of March 31, 2019, total share-based compensation of $14.6 is expected to be recognized over the weighted-average period of approximately 2.6 years.

NOTE 14 — Commitments and Contingencies

Aluminum Cryobiological Tank Recall

In April 2018, we received several customer inquiries regarding the performance of certain aluminum cryobiological tanks (in the D&S West segment) manufactured at our New Prague, Minnesota facility. An investigation determined that certain aluminum tanks manufactured at the facility during a limited certain period should be repaired or replaced. As such, on April 23, 2018, we issued a recall notice for the impacted product lines. Our D&S West segment recorded an expense of $4.0 to cost of goods sold during the second quarter of 2018 related to the estimated costs of the recall. The remaining liability is included in other current liabilities in the March 31, 2019 unaudited condensed consolidated balance sheet.

The following table represents the establishment of and changes in the aluminum cryobiological tank recall reserve:

Recall reserve - established April 2018	$	3.8
Reserve usage		(3.9)
Change in estimate - expense		0.2
Balance at March 31, 2019	$	0.1

Stainless Steel Cryobiological Tank Legal Proceedings

During the second quarter of 2018, Chart was named in lawsuits (including a class action lawsuit filed in the U.S. District Court for the Northern District of California) filed against Chart and other defendants with respect to the alleged failure of a stainless steel cryobiological storage tank (model MVE 808AF-GB) at the Pacific Fertility Center in San Francisco, California. We are evaluating the merits of such claims in light of the limited information available to date regarding use, maintenance and operation of the tank which has been out of our custody for the past six years when it was sold to the Pacific Fertility Center through an independent distributor. Accordingly, an accrual related to any damages that may result from the lawsuits has not been recorded because a potential loss is not currently probable or estimable.

We have asserted various defenses against the claims in the lawsuits, including a defense that since manufacture, we were not in any way involved with the installation, ongoing maintenance or monitoring of the tank or related fertility center cryogenic systems at any time since the initial delivery of the tank.

Aluminum Cryobiological Tank Legal Proceeding

Chart has been named in purported class action lawsuits filed in the Ontario Superior Court of Justice against the Company and other defendants with respect to the alleged failure of an aluminum cryobiological storage tank (model FNL XC 47/11-6 W/11) at The Toronto Institute for Reproductive Medicine in Etobicoke, Ontario. We have confirmed that the tank in question was part of the aluminum cryobiological tank recall commenced on April 23, 2018. We have asserted various defenses against the claims in the lawsuits and are in the early stages of litigation. Accordingly, an accrual related to any damages that may result from the lawsuit has not been recorded because a potential loss is not currently probable or estimable.

(Dollars and shares in millions, except per share amounts) – Continued

NOTE 15 — Restructuring Activities

During the first quarter of 2019, we implemented certain cost reduction or avoidance actions, including facility consolidations and a streamlining of the commercial activities surrounding our Lifecycle business in E&C, geographic realignment of our manufacturing capacity in D&S East, as well as departmental restructuring, including headcount reductions. These actions resulted in a total charge of $7.4 during the quarter consisting of employee severance costs, disposals of property, plant and equipment and other costs. We expect to incur restructuring charges with E&C and D&S East of $1.5 and $0.4, respectively, during 2019 for severance and facility exit related activities that are recognized when the specific costs are incurred. We expect this restructuring will be substantially completed by the end of the third quarter of 2019.

Restructuring charges in the first quarter of 2018, were related to the timing of recognizing certain severance and disposal related activities associated with a 2017 restructuring plan which was substantially completed at the end of 2017.

The following table is a summary of the severance and other restructuring costs, which included employee-related costs, facility rent and exit costs, relocation, recruiting, travel and other, for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,	
	2019	2018
Severance:		
Cost of sales	$ 0.5	$ —
Selling, general, and administrative expenses	1.0	0.5
Total severance costs	1.5	0.5
Other restructuring:		
Cost of sales	5.0	0.3
Selling, general, and administrative expenses	0.9	0.1
Total other restructuring costs	5.9	0.4
Total restructuring costs	$ 7.4	$ 0.9

The following tables summarize our restructuring activities for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31, 2019				
	Energy & Chemicals	D&S West	D&S East	Corporate	Consolidated
Balance as of December 31, 2018	$ —	$ —	$ 0.8	$ 0.1	$ 0.9
Restructuring costs	4.5	0.3	2.4	0.2	7.4
Property, plant and equipment impairment and disposals	(3.2)	—	(1.7)	—	(4.9)
Cash payments and other	(0.6)	—	(0.5)	(0.2)	(1.3)
Balance as of March 31, 2019	$ 0.7	$ 0.3	$ 0.8	$ 0.1	$ 1.9

(Dollars and shares in millions, except per share amounts) – Continued

	Three Months Ended March 31, 2018				
	Energy & Chemicals	D&S West	D&S East	Corporate	Consolidated
Balance as of December 31, 2017	$ 0.2	$ 1.2	$ 0.2	$ 1.1	$ 2.7
Restructuring costs	0.2	—	0.2	0.5	0.9
Cash payments	(0.2)	(1.2)	(0.4)	(0.2)	(2.0)
Balance as of March 31, 2018	$ 0.2	$ —	$ —	$ 1.4	$ 1.6

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Overview

Chart Industries, Inc. and its consolidated subsidiaries (the "Company," "Chart," "we," "us," or "our") is a leading independent global manufacturer of highly engineered equipment servicing multiple market applications in Energy and Industrial Gas. Our unique product portfolio is used throughout the liquid gas supply chain in the production, storage, distribution and end-use of atmospheric, hydrocarbon, and industrial gases. Chart has domestic operations located across the United States and an international presence in Asia, Australia, Europe and the Americas.

On November 15, 2018, we completed the acquisition of VRV S.r.l. and its subsidiaries (collectively "VRV"). Additionally, on December 20, 2018, we closed on the sale of all of the equity interests in our oxygen-related products business NGK SPARK PLUG CO., LTD. (the "Divestiture").

The financial information presented and discussion of results that follows is presented on a continuing operations basis.

First Quarter 2019 Highlights

First quarter 2019 orders of $461.2 million increased sequentially 68.8% over the fourth quarter of 2018 (66.2% organically), and increased 60.0% compared to the first quarter of 2018 (51.2% organically) primarily due to order strength in our Energy & Chemicals ("E&C") segment including a $135 million order for cold box and brazed aluminum heat exchanger equipment content on Venture Global's Calcasieu Pass liquefied natural gas (LNG) export terminal project, and a $20 million order for Golar's floating LNG Gimi project. The first quarter of 2019 continued to reflect the strong demand seen in 2018 across our end use markets in E&C and Distribution and Storage ("D&S").

First quarter 2019 sales of $289.3 million increased 18.5% from the first quarter of 2018 (9.5% organically), with increases in all our segments. Sales for VRV, included in both the E&C and Distribution & Storage Eastern Hemisphere ("D&S East") segment results since the November 15, 2018 acquisition date, were $22.1 million for the three months ended March 31, 2019.

First quarter 2019 gross margin as a percent of sales of 23.2% decreased from 27.4% in the first quarter of 2018 and 25.5% in the fourth quarter of 2018, and included restructuring costs of $5.5 million in connection with facility consolidation in our E&C segment, commercial realignment in our Lifecycle business also in our E&C segment, and geographic realignment of our manufacturing capacity in D&S East. Excluding the impact of these restructuring activities, gross margin as a percentage of sales for the quarter ended March 31, 2019 was 25.1%. Both period-over-period decreases were driven by lower margins in D&S East, related to costs of integration in VRV and unfavorable product mix and lower absorption in China.

Outlook

Our 2019 full year outlook reflects organic year-to-date order growth in our segments and the positive contributions from 2018 acquisitions VRV and Skaff Cryogenics and Cryo-Lease (together "Skaff"). We continue to anticipate that the forecasted global supply/demand LNG gas balance will be reached in 2022-2023, thereby driving LNG export facility orders in 2019 and 2020. A majority of upcoming projects for U.S. LNG export have transitioned from utilizing traditional single train baseload plants to multi-train mid-scale projects, with a modular approach to achieve baseload capacities. This is important to us because multi-train mid-scale projects may use Chart's patented IPSMR® technology as well as our brazed aluminum heat exchangers and cold boxes as the main liquefaction heat exchanger technology.

As mentioned above, E&C booked large LNG orders for Venture Global's Calcasieu Pass liquefied natural gas (LNG) export terminal project and the Golar Gimi project, for which approximately $28 million to $30 million of project revenue is expected to be recognized during the second half of 2019, subject to project timing.

We continue to invest in our automation, process improvement, and productivity activities across the Company, with total anticipated 2019 capital investment of $35.0 million to $40.0 million. The total anticipated 2019 capital spend is inclusive of anticipated capital spending at VRV, potential investment in the LNG fuel systems production line in Europe and automation projects in our New Prague, Minnesota facility.

Consolidated Results for the Three Months Ended March 31, 2019 and 2018, and December 31, 2018

The following table includes key metrics used to evaluate our business and measure our performance and represents selected financial data for our operating segments for the three months ended March 31, 2019 and 2018 and December 31, 2018 (dollars in millions). Financial data for the three months ended December 31, 2018 has been included to provide additional information regarding our business trends on a sequential quarter basis.

Selected Financial Information

	Three Months Ended			Current Quarter vs. Prior Year Quarter		Current Quarter vs. Prior Sequential Quarter	
	March 31, 2019	March 31, 2018	December 31, 2018	Variance ($)	Variance (%)	Variance ($)	Variance (%)
Sales							
Energy & Chemicals	$ 105.6	$ 89.9	$ 101.7	$ 15.7	17.5 %	$ 3.9	3.8 %
D&S West	118.0	100.6	118.3	17.4	17.3 %	(0.3)	(0.3)%
D&S East	68.7	55.1	72.0	13.6	24.7 %	(3.3)	(4.6)%
Intersegment eliminations	(3.0)	(1.5)	(1.9)	(1.5)	100.0 %	(1.1)	57.9 %
Consolidated	$ 289.3	$ 244.1	$ 290.1	$ 45.2	18.5 %	$ (0.8)	(0.3)%
Gross Profit							
Energy & Chemicals	$ 19.3	$ 19.4	$ 21.6	$ (0.1)	(0.5)%	$ (2.3)	(10.6)%
D&S West	40.0	36.1	37.8	3.9	10.8 %	2.2	5.8 %
D&S East	8.9	11.8	15.3	(2.9)	(24.6)%	(6.4)	(41.8)%
Intersegment eliminations	(1.1)	(0.4)	(0.8)	(0.7)	175.0 %	(0.3)	37.5 %
Consolidated	$ 67.1	$ 66.9	$ 73.9	$ 0.2	0.3 %	$ (6.8)	(9.2)%
Gross Profit Margin							
Energy & Chemicals	18.3 %	21.6%	21.2%				
D&S West	33.9 %	35.9%	32.0%				
D&S East	13.0 %	21.4%	21.3%				
Consolidated	23.2 %	27.4%	25.5%				

	Three Months Ended			Current Quarter vs. Prior Year Quarter		Current Quarter vs. Prior Sequential Quarter	
	March 31, 2019	March 31, 2018	December 31, 2018	Variance ($)	Variance (%)	Variance ($)	Variance (%)
SG&A Expenses							
Energy & Chemicals	$ 15.8	$ 12.7	$ 12.5	$ 3.1	24.4 %	$ 3.3	26.4 %
D&S West	13.3	12.7	13.3	0.6	4.7 %	—	— %
D&S East	9.9	7.7	8.8	2.2	28.6 %	1.1	12.5 %
Corporate	16.3	13.5	6.8	2.8	20.7 %	9.5	139.7 %
Consolidated	$ 55.3	$ 46.6	$ 41.4	$ 8.7	18.7 %	$ 13.9	33.6 %
SG&A Expenses (% of Sales)							
Energy & Chemicals	15.0 %	14.1%	12.3%				
D&S West	11.3 %	12.6%	11.2%				
D&S East	14.4 %	14.0%	12.2%				
Consolidated	19.1 %	19.1%	14.3%				
Operating Income (Loss) (1)							
Energy & Chemicals	$ (1.3)	$ 2.8	$ 4.7	$ (4.1)	(146.4)%	$ (6.0)	(127.7)%
D&S West (2)	25.6	22.2	23.5	3.4	15.3 %	2.1	8.9 %
D&S East	(2.3)	3.7	5.8	(6.0)	(162.2)%	(8.1)	(139.7)%
Corporate (3) (4)	(16.3)	(13.5)	(6.9)	(2.8)	20.7 %	(9.4)	136.2 %
Intersegment eliminations	(1.1)	(0.4)	(0.8)	(0.7)	175.0 %	(0.3)	37.5 %
Consolidated	$ 4.6	$ 14.8	$ 26.3	$ (10.2)	(68.9)%	$ (21.7)	(82.5)%
Operating Margin (Loss)							
Energy & Chemicals	(1.2)%	3.1%	4.6%				
D&S West	21.7 %	22.1%	19.9%				
D&S East	(3.3)%	6.7%	8.1%				
Consolidated	1.6 %	6.1%	9.1%				

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(1) Restructuring costs for the three months ended:

- March 31, 2019 were $7.4 million ($4.5 million – E&C, $0.3 million – D&S West, $2.4 million – D&S East, and $0.2 million – Corporate).
- March 31, 2018 were $0.9 million ($0.2 million – E&C, $0.2 million – D&S East, and $0.5 million – Corporate).
- December 31, 2018 were $0.9 million ($0.2 million – E&C, 0.8 million – D&S East, and a credit of $0.1 million – Corporate).

(2) Includes transaction-related costs of $0.9 million, $1.3 million and $2.1 million for the three months ended March 31, 2019, March 31, 2018, and December 31, 2018, respectively.

Results of Operations for the Three Months Ended March 31, 2019 and 2018, and December 31, 2018

Sales for the first quarter of 2019 compared to the same quarter in 2018 increased $45.2 million, from $244.1 million to $289.3 million, or 18.5% (9.5% organically), with increases across all segments. D&S West sales increased by $17.4 million, or 17.3%, primarily as a result of strong bulk and packaged gas sales. Furthermore, sales for VRV, included in both the E&C and D&S East segment results since the November 15, 2018 acquisition date were $22.1 (E&C: $8.6, D&S East: $13.5). Excluding the impact of VRV, the sales increase in our E&C segment was mainly due to growth in natural gas liquids (NGL) and petrochemical applications, especially for heat exchangers. Sequentially over the fourth quarter of 2018, sales were relatively flat, with a 0.3% decline (3.2% organically), which is stronger than typical given the historical decline often seen between the fourth and first quarters.

Gross profit increased during the first quarter of 2019 compared to the first quarter of 2018 by $0.2 million. Excluding restructuring charges of $5.5 million and $0.3 million for the first quarter of 2019 and 2018, respectively, gross profit increased by $5.4 million, or 8.0%, primarily driven by volume in D&S West. Sequentially over the fourth quarter of 2018, gross profit decreased by $6.8 million, or 9.2%. Excluding restructuring charges of $5.5 million and $0.1 million in the first quarter of 2019 and in the fourth quarter of 2018, respectively, gross profit decreased by $1.4 million or 1.9%, primarily driven by integration-related costs in VRV and product mix and absorption impacts in China, both in D&S East. First quarter 2019 gross margin as a percent of sales of 23.2% decreased from 27.4% in the first quarter of 2018 and decreased sequentially from the fourth quarter of 2018 gross margin as a percent of sales of 25.5%. Excluding restructuring charges, first quarter 2019 gross margin as a percent of sales of 25.1% decreased from 27.5% in the first quarter of 2018 and decreased sequentially from the fourth quarter of 2019 gross margin as a percent of sales of 25.5%.

SG&A expenses increased by $8.7 million ($3.9 million organically), or 18.7% (8.4% organically), during the first quarter of 2019 compared to the first quarter of 2018. Excluding the impact of VRV transaction-related costs of $0.9 million for the first quarter of 2019 and restructuring charges of $1.9 million and $0.6 million for the first quarter of 2019 and 2018, respectively, SG&A expenses increased by $6.5 million, or 14.1% during the first quarter of 2019 compared to the first quarter of 2018. This increase was largely driven by SG&A expenses associated with VRV as well as higher accounting and consulting fees at Corporate primarily due to our change in independent auditor.

During the first quarter of 2019, we implemented certain cost reduction or avoidance actions, including facility closures and relocations. These actions were primarily related to the consolidation of certain of our facilities within our E&C segment, streamlining commercial activities within our Lifecycle business, geographic realignment of manufacturing capacity in D&S East, as well as departmental restructuring, including headcount reductions. These actions resulted in property, plant and equipment disposals and severance costs (together “restructuring costs”) of $7.4 million in the first quarter of 2019, which were recorded in cost of sales ($5.5 million) and SG&A ($1.9 million). We anticipate these restructuring actions will result in incremental annualized savings of $6.5 million and an anticipated positive impact of $3.6 million on 2019 results. Restructuring costs were $0.9 million in the first quarter of 2018 and were recorded in cost of sales ($0.3 million) and SG&A ($0.6 million), which were related to costs to relocate the corporate office from Garfield Heights, Ohio to Ball Ground, Georgia and consolidation of certain facilities in China.

Interest Expense, Net and Financing Costs Amortization

Net interest expense for the three months ended March 31, 2019 and 2018 was $5.3 million and $6.4 million, respectively. Interest expense for the three months ended March 31, 2019 included $0.6 million of 1.0% cash interest and $1.8 million of non-cash interest accretion expense related to the carrying value of the convertible notes due 2024, and $3.2 million in interest related to borrowings on our senior secured revolving credit facility. For the three months ended March 31, 2019 and 2018, financing costs amortization was 0.4 million and $0.3 million, respectively.

Foreign Currency (Gain) Loss

For the three months ended March 31, 2019, foreign currency gains were $0.1 million while foreign currency losses were $1.8 million for the three months ended March 31, 2018. Gains increased by $1.9 million during the three months ended March 31, 2019 due to exchange rate volatility, especially with respect to the euro and Chinese yuan.

Income Tax Expense

Income tax (benefit) expense of $(2.0) million and $1.6 million for three months ended March 31, 2019 and 2018, represents taxes on both U.S. and foreign earnings at a combined effective income tax rate of 200.0% and 25.4%, respectively. The effective income tax rate of 200.0% for the three months ended March 31, 2019 differed from the U.S. federal statutory rate of 21% primarily due to tax benefits associated with share-based compensation and income taxes on certain foreign entities earnings being taxed at higher rates than the U.S. federal statutory rate, partially offset by certain Chinese operations losses for which no benefit was recorded.

The effective income tax rate of 25.4% for the three months ended March 31, 2018 differed from the U.S. federal statutory rate of 21% primarily due to the effect of income earned by certain of the Company’s foreign entities being taxed at higher rates than the federal statutory rate as well as losses incurred by certain of our Chinese operations for which no benefit was recorded.

Net Income from Continuing Operations

As a result of the foregoing, net income from continuing operations attributable to the Company for the three months ended March 31, 2019 and 2018 was $0.9 million and $4.2 million, respectively.

Discontinued Operations

The results from our oxygen-related products business formerly reported in our BioMedical segment are reflected in our unaudited condensed consolidated financial statements as discontinued operations for the prior period presented. For further information, refer to Note 2, "Discontinued Operations."

Segment Results

Our reportable and operational segments include: E&C, D&S West and D&S East. Corporate includes operating expenses for executive management, accounting, tax, treasury, corporate development, human resources, information technology, investor relations, legal, internal audit, and risk management. Corporate support functions are not currently allocated to the segments. For further information, refer to Note 3, "Reportable Segments" note of our unaudited condensed consolidated financial statements included elsewhere in this report. The following tables include key metrics used to evaluate our business and measure our performance and represents selected financial data for our operating segments for the three months ended March 31, 2019 and 2018 (dollars in millions):

Energy & Chemicals

Results for the Three Months Ended March 31, 2019 and 2018

	Three Months Ended		Current Quarter vs. Prior Year Quarter	
	March 31, 2019	March 31, 2018	Variance ($)	Variance (%)
Sales	$ 105.6	$ 89.9	$ 15.7	17.5 %
Gross Profit	19.3	19.4	(0.1)	(0.5)%
Gross Profit Margin	18.3 %	21.6%		
SG&A Expenses	$ 15.8	$ 12.7	$ 3.1	24.4 %
SG&A Expenses (% of Sales)	15.0 %	14.1%		
Operating (Loss) Income	$ (1.3)	$ 2.8	$ (4.1)	(146.4)%
Operating (Loss) Margin	(1.2)%	3.1%		

For the first quarter of 2019, E&C segment sales increased as compared to the same quarter in 2018. Sales for VRV, included in the E&C segment results since the acquisition date, November 15, 2018, were $8.6 for the three months ended March 31, 2019. Excluding the impact of VRV, sales increased mainly due to growth in natural gas liquids (NGL) and petrochemical applications, especially for heat exchangers.

For the first quarter of 2019, E&C segment gross profit decreased by $(0.1) million (decreased by $0.2 million, organically) as compared to the same quarter in 2018. Excluding restructuring charges of $3.5 million and $0.1 million for the first quarter of 2019 and 2018, respectively, gross profit increased by $3.3 million or 16.9%. Gross profit as a percentage of E&C sales was negatively impacted by 3.3 percentage points primarily related to costs relative to the restructuring of our E&C segment discussed above.

E&C segment SG&A expenses increased during the first quarter of 2019 as compared to the same quarter in 2018 primarily driven by the VRV acquisition and restructuring charges, which added SG&A expenses of $1.8 million and $1.0 million, respectively. Excluding these costs, SG&A expenses as a percent of sales was 14.0%.

D&S West

Results for the Three Months Ended March 31, 2019 and 2018

	Three Months Ended		Current Quarter vs. Prior Year Quarter	
	March 31, 2019	March 31, 2018	Variance ($)	Variance (%)
Sales	$ 118.0	$ 100.6	$ 17.4	17.3%
Gross Profit	40.0	36.1	3.9	10.8%
Gross Profit Margin	33.9%	35.9%		
SG&A Expenses	$ 13.3	$ 12.7	$ 0.6	4.7%
SG&A Expenses (% of Sales)	11.3%	12.6%		
Operating Income	$ 25.6	$ 22.2	$ 3.4	15.3%
Operating Margin	21.7%	22.1%		

D&S West segment sales increased during the first quarter of 2019 as compared to the same quarter in 2018 primarily due to an increase in sales within bulk industrial gas products, LNG and cryobiological storage products. Sales activity for over the road trucking LNG fueling systems increased with sales of $17.7 million during the first quarter of 2019, which represented an increase of 68% compared to the first quarter of 2018 and a 63% increase as compared to the fourth quarter of 2018.

D&S West segment gross profit increased during the first quarter of 2019 as compared to the same quarter in 2018 mainly driven by higher volume, while the related margin decreased, which was primarily driven by unfavorable product mix.

D&S West segment SG&A expenses increased slightly during the first quarter of 2019 as compared to the same quarter in 2018.

D&S East

Results for the Three Months Ended March 31, 2019 and 2018

	Three Months Ended		Current Quarter vs. Prior Year Quarter	
	March 31, 2019	March 31, 2018	Variance ($)	Variance (%)
Sales	$ 68.7	$ 55.1	$ 13.6	24.7 %
Gross Profit	8.9	11.8	(2.9)	(24.6)%
Gross Profit Margin	13.0 %	21.4%		
SG&A Expenses	$ 9.9	$ 7.7	$ 2.2	28.6 %
SG&A Expenses (% of Sales)	14.4 %	14.0%		
Operating Income	$ (2.3)	$ 3.7	$ (6.0)	(162.2)%
Operating Margin	(3.3)%	6.7%		

For the first quarter of 2019, D&S East segment sales increased as compared to the same quarter in 2018. Sales for VRV, included in the D&S East segment results since the acquisition date, November 15, 2018, were $13.5 million for the three months ended March 31, 2019. Excluding the impact of VRV, sales were relatively flat with favorable sales of trailers, standard tanks and packaged gas tanks in Europe offset by lower sales in China largely relative to a decline in LNG products.

During the first quarter of 2019, D&S East segment gross profit and the related margin percentage decreased by $2.9 million (decreased by $1.7 million, organically) as compared to the same quarter in 2018. Excluding restructuring charges of $2.0 million and $0.2 million, respectively, gross profit and related margin percentage decreased by $1.0 million and 3.0 percentage points, respectively. The restructuring charges that negatively impacted the D&S East gross profit and the related margin percentage was primarily related to restructuring costs relative to the closing of our China brazed aluminum heat exchanger facility. Gross profit as a percentage of sales was also driven lower by VRV and China due to unfavorable product mix and lower absorption.

D&S East segment SG&A expenses increased during the first quarter of 2019 as compared to the same quarter in 2018 primarily driven by the VRV acquisition and restructuring charges, which added SG&A expenses of $3.0 million and $0.4 million, respectively. Excluding the impact of VRV and restructuring charges, SG&A expenses decreased mainly driven by lower employee-related costs in China due to workforce reductions.

Corporate

Corporate SG&A expenses increased by $2.8 million during the first quarter of 2019 as compared to the same quarter in 2018 mainly driven by higher accounting and consulting fees associated with our change in independent auditor and related activities.

Liquidity and Capital Resources

Debt Instruments and Related Covenants

Our debt instruments and related covenants are described in Note 7, “Debt and Credit Arrangements” to our unaudited condensed consolidated financial statements included elsewhere in this report.

Sources and Use of Cash

Our cash and cash equivalents totaled $71.9 million at March 31, 2019, a decrease of $46.2 million from the balance at December 31, 2018. Our foreign subsidiaries held cash of approximately $57.2 million and $71.4 million, at March 31, 2019, and December 31, 2018, respectively, to meet their liquidity needs. No material restrictions exist to accessing cash held by our foreign subsidiaries. We expect to meet our U.S. funding needs without repatriating non-U.S. cash and incurring incremental U.S. taxes. Cash equivalents are primarily invested in money market funds that invest in high quality, short-term instruments, such as U.S. government obligations, certificates of deposit, repurchase obligations, and commercial paper issued by corporations that have been highly rated by at least one nationally recognized rating organization, and in the case of cash equivalents in China, obligations of local banks. We believe that our existing cash and cash equivalents, funds available under our SSRCF or other financing alternatives, and cash provided by operations will be sufficient to meet our normal working capital needs, and investments in properties, facilities, and equipment for the foreseeable future.

Cash used in operating activities was $(33.2) million for the three months ended March 31, 2019, a decrease of $53.2 million from the balance at December 31, 2018, largely due to lower investment in working capital.

Cash used in investing activities was $8.9 million and $18.6 million for the three months ended March 31, 2019 and 2018, respectively. During the three months ended March 31, 2019, we used $5.9 million of cash for capital expenditures. During the three months ended March 31, 2018, we used $12.5 million of cash for the Skaff acquisition and 6.2 million for capital expenditures.

Cash used in financing activities was $2.6 million for the three months ended March 31, 2019 while cash provided by financing activities was $10.0 million for the three months ended March 31, 2018. During the three months ended March 31, 2019 we borrowed $18.8 million on our SSRCF mainly to fund working capital needs and repaid $27.0 million in SSRCF borrowings. We received $8.3 million in proceeds from stock option exercises and used $2.7 million for the purchase of common stock which was surrendered to cover tax withholding elections during the three months ended March 31, 2019. During the three months ended March 31, 2018, we borrowed $34.0 million on our SSRCF mainly to fund the Skaff acquisition and working capital needs. We repaid $26.0 million in SSRCF borrowings during the three months ended March 31, 2018. We also borrowed 25.0 million Chinese yuan (equivalent to $4.0 million) and repaid 5.0 Chinese yuan (equivalent to $0.8 million) on certain of our China facilities. We received $1.2 million in proceeds from stock option exercises and used $2.2 million for the purchase of common stock which was surrendered to cover tax withholding elections during the three months ended March 31, 2018.

Cash Requirements

We do not currently anticipate any unusual cash requirements for working capital needs for the year ending December 31, 2019. Management anticipates we will be able to satisfy cash requirements for our ongoing business for the foreseeable future with cash generated by operations, existing cash balances and available borrowings under our credit facilities. Our convertible notes due 2024 currently meet the requirements for early conversion. Should note holders elect to convert, we may settle in cash, shares of our common stock or a combination of cash and shares of our common stock, at our election. Capital expenditures for the remaining nine months of 2019 is expected to be in the range of $29.0 million to $34.0 million.

Orders and Backlog

We consider orders to be those for which we have received a firm signed purchase order or other written contractual commitment from the customer. Backlog is comprised of the portion of firm signed purchase orders or other written contractual commitments from customers for which work has not been performed, or is partially completed, that we have not recognized as revenue and excludes unexercised contract options and potential orders. Our backlog as of March 31, 2019 was $733.8 million compared to $476.9 million as of March 31, 2018 and $568.2 million as of December 31, 2018.

The tables below represents orders received and backlog by segment for the periods indicated (dollars in millions):

	Three Months Ended		
	March 31, 2019	March 31, 2018	December 31, 2018
Orders			
Energy & Chemicals	$ 263.9	$ 93.7	$ 86.9
D&S West	114.1	130.6	116.8
D&S East	83.2	63.9	69.6
Consolidated	$ 461.2	$ 288.2	$ 273.3

	As of		
	March 31, 2019	March 31, 2018	December 31, 2018
Backlog			
Energy & Chemicals	$ 410.5	$ 213.3	$ 253.0
D&S West	127.1	137.3	129.8
D&S East	196.2	126.3	185.4
Consolidated	$ 733.8	$ 476.9	$ 568.2

E&C segment orders for the three months ended March 31, 2019 were $263.9 million compared to $93.7 million for the three months ended March 31, 2018 and $86.9 million for the three months ended December 31, 2018. E&C segment orders include $12.8 million and $2.5 million in orders related to VRV for the three months ended March 31, 2019 and December 31, 2018, respectively. Included in our first quarter of 2019 E&C segment orders was a $135 million order for the cold box and brazed aluminum heat exchanger equipment content on Venture Global's Calcasieu Pass liquefied natural gas (LNG) export terminal project. E&C segment backlog totaled $410.5 million as of March 31, 2019, compared to $213.3 million as of March 31, 2018 and $253.0 million as of December 31, 2018. E&C segment backlog as of March 31, 2019 and December 31, 2018 includes $42.4 million and $39.3 million related to VRV, respectively. Excluding VRV, the increase in backlog as compared to the balance as of March 31, 2018 was primarily driven by petrochemical and natural gas processing applications. Included in E&C segment backlog for the three months ended March 31, 2019 is approximately $40.0 million related to the previously announced Magnolia LNG order where production release is delayed until late 2019.

D&S West segment orders for the three months ended March 31, 2019 were $114.1 million compared to $130.6 million for the three months ended March 31, 2018, which was the highest order quarter in the history of D&S West, and $116.8 million for the three months ended December 31, 2018. Although down from first and fourth quarters of 2018, first quarter order levels continued to be strong; by way of comparison, the average order level for the past eight quarters was $112 million for D&S West. The segment signed multiple significant long-term agreements in the first quarter of 2019. D&S West segment backlog totaled $127.1 million at March 31, 2019 compared to $137.3 million as of March 31, 2018 and $129.8 million as of December 31, 2018.

D&S East segment orders for the three months ended March 31, 2019 were $83.2 million compared to $63.9 million for the three months ended March 31, 2018 and $69.6 million for the three months ended December 31, 2018. D&S East segment orders include $12.7 million and $8.7 million in orders related to VRV for the three months ended March 31, 2019 and December 31, 2018, respectively. Excluding the impact of VRV, the increase from the fourth quarter of 2018 in D&S East segment orders was mainly attributable to favorable LNG systems, trailers and packaged gas in Europe. The increase in D&S East segment orders during the three months ended March 31, 2019 when compared to the same quarter last year was mainly driven favorable trailers and LNG engineered tanks and systems in Europe, partially offset by unfavorable LNG and packaged gas products in Asia. D&S East segment backlog at March 31, 2019 totaled $196.2 million compared to $126.3 million as of March 31, 2018 and $185.4 million as of December 31, 2018.

Off-Balance Sheet Arrangements

We do not have any material off-balance sheet arrangements.

Application of Critical Accounting Policies

Our unaudited condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles. As such, some accounting policies have a significant impact on amounts reported in these unaudited condensed consolidated financial statements. A summary of those significant accounting policies can be found in our Annual Report on Form 10-K for the year ended December 31, 2018. In particular, judgment is used in areas such as revenue from contracts with customers, goodwill, indefinite-lived intangibles, long-lived assets (including finite-lived intangible assets), product warranty costs, and pensions. There have been no significant changes to our critical accounting policies since December 31, 2018.

Forward-Looking Statements

We are making this statement in order to satisfy the “safe harbor” provisions contained in the Private Securities Litigation Reform Act of 1995. This Quarterly Report on Form 10-Q includes “forward-looking statements.” These forward-looking statements include statements relating to our business, including statements regarding revenues, cost synergies and earnings related to our recent VRV acquisition. In some cases, Forward-looking statements may be identified by terminology such as "may," "will," "should," "could," "expects," "anticipates," "believes," "projects," "forecasts," “outlook,” “guidance,” "continue," or the negative of such terms or comparable terminology.

Forward-looking statements contained herein (including future cash contractual obligations, liquidity, cash flow, orders, results of operations, projected revenues, margins, capital expenditures, industry and business trends, cost synergies and savings objectives and government initiatives, among other matters) or in other statements made by us are made based on management’s expectations and beliefs concerning future events impacting us and are subject to uncertainties and factors relating to our operations and business environment, all of which are difficult to predict and many of which are beyond our control, that could cause the Company’s actual results to differ materially from those expressed or implied by forward-looking statements made by us or on our behalf. These include: those found in the risk factors discussed in Item 1A. “Risk Factors” and the factors discussed in Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations” of our Annual Report on Form 10-K for the year ended December 31, 2018, which should be reviewed carefully; Chart’s ability to successfully integrate VRV, and achieve anticipated revenue, earnings and accretion; estimated segment revenues, future revenue, earnings, cash flows and margin targets and run rates. These factors should not be construed as exhaustive and there may also be other risks that we are unable to predict at this time.

All forward-looking statements attributable to us or persons acting on our behalf apply only as of the date of this Quarterly Report and are expressly qualified in their entirety by the cautionary statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, as the same may be updated from time to time. We undertake no obligation to update or revise forward-looking statements which may be made to reflect events or circumstances that arise after the filing date of this document or to reflect the occurrence of unanticipated events, except as otherwise required by law.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

In the normal course of business, our operations are exposed to fluctuations in interest rates and foreign currency values that can affect the cost of operating and financing. Accordingly, we address a portion of these risks through a program of risk management.

Interest Rate Risk: Our primary interest rate risk exposure results from the SSRCF’s various floating rate pricing mechanisms. If interest rates were to increase 200 basis points (2 percent) from the weighted-average interest rate of 3.90% at March 31, 2019, and assuming no changes in the $318.0 million of borrowings outstanding under the SSRCF at March 31, 2019, our additional annual expense would be approximately $6.4 million on a pre-tax basis.

Foreign Currency Exchange Rate Risk: We operate in the United States and other foreign countries, which creates exposure to foreign currency exchange fluctuations in the normal course of business, which can impact our financial position, results of operations, cash flow, and competitive position. The financial statements of foreign subsidiaries are translated into their U.S. dollar equivalents at end-of-period exchange rates for assets and liabilities, while income and expenses are translated at average monthly exchange rates. Translation gains and losses are components of other comprehensive income as reported in the unaudited condensed consolidated statements of comprehensive income. Translation exposure is primarily with the euro, the Czech koruna, the Chinese yuan, Indian rupee and the Japanese yen. During the first quarter of 2019, the U.S. dollar strengthened in relation to the euro by 2%, and weakened in relation to the Chinese yuan by 2%. At March 31, 2019, a hypothetical further 10% weakening of the U.S. dollar would not materially affect our financial statements.

Chart's primary transaction exchange rate exposures are with the euro, the Japanese yen, the Czech koruna, the Australian dollar, the British pound, the Indian rupee, and the Chinese yuan. Transaction gains and losses arising from fluctuations in currency exchange rates on transactions denominated in currencies other than the functional currency are recognized in the unaudited condensed consolidated statements of income and comprehensive income as a component of foreign currency (gain) loss. We enter into foreign exchange forward contracts to hedge anticipated and firmly committed foreign currency transactions. We do not use derivative financial instruments for speculative or trading purposes. The terms of the contracts are generally one year or less. At March 31, 2019, a hypothetical 10% weakening of the U.S. dollar would not materially affect our outstanding foreign exchange forward contracts.

Market Price Sensitive Instruments

In connection with the pricing of the 2024 Notes, we entered into privately-negotiated convertible note hedge transactions (the "Note Hedge Transactions") with certain parties, including affiliates of the initial purchasers of the 2024 Notes (the "Option Counterparties"). These Note Hedge Transactions are expected to reduce the potential dilution upon any future conversion of the 2024 Notes.

We also entered into separate, privately-negotiated warrant transactions with the Option Counterparties to acquire up to 4.41 million shares of our common stock. The warrant transactions will have a dilutive effect with respect to our common stock to the extent that the price per share of our common stock exceeds the strike price of the warrants unless we elect, subject to certain conditions, to settle the warrants in cash. The strike price of the warrant transactions related to the 2024 Notes was initially $71.775 per share. Further information is located in Note 7, "Debt and Credit Arrangements" to our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We perform an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer, President and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15 under the Securities and Exchange Act of 1934, as amended (the "Exchange Act"). Based upon that evaluation, such officers concluded that as of March 31, 2019, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act (1) is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and (2) is accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow for timely decisions regarding required disclosure.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

As disclosed in Note 14, "Commitments and Contingencies", Chart was named in lawsuits (including purported class action lawsuits filed in the U.S. District Court for the Northern District of California) filed against Chart and other defendants with respect to the alleged failure of a stainless steel cryobiological storage tank (model MVE 808AF-GB) at the Pacific Fertility Center in San Francisco, California, and Chart has also been named in purported class action lawsuits filed in the Ontario Superior Court of Justice against Chart and other defendants with respect to the alleged failure of an aluminum cryobiological storage tank (model FNL XC 47/11-6 W/11) at The Toronto Institute for Reproductive Medicine in Etobicoke, Ontario. We hereby incorporate by reference into this Item 1 the disclosure under the headings "Note 14, Commitments and Contingencies – Stainless Steel Cryobiological Tank Legal Proceedings" and "Note 14, Commitments and Contingencies – Aluminum Cryobiological Tank Legal Proceedings".

Although we have not completed our factual investigations into these proceedings, which remain in their early stages, we believe that we have strong factual and legal defenses to the claims and intend to vigorously assert such defenses.

Item 1A. Risk Factors

In addition to the other information set forth in this report, you should carefully consider the risk factors disclosed in Item 1A. "Risk Factors," of our Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

	Issuer Purchases of Equity Securities					
Period	Total Number of Shares Purchased		Average Price Paid Per Share	Total Number of Shares Purchased As Part of Publicly Announced Plans or Programs		Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs
January 1 – 31, 2019	29,642	$	66.53	—	$	—
February 1 – 28, 2019	9,711		76.39	—		—
March 1 – 31, 2019	—		—	—		—
Total	39,353		68.96	—		—

During the first quarter of 2019, 39,353 shares of common stock were surrendered to us by participants under our share-based compensation plans to satisfy tax withholding obligations relating to the vesting or payment of equity awards for an aggregate purchase price of approximately $2,713,783. The total number of shares repurchased represents the net shares issued to satisfy tax withholdings. All such repurchased shares were subsequently retired during the three months ended March 31, 2019.

As discussed in “Note 7, Debt and Credit Arrangements – 2018 Convertible Notes – Convertible Note Hedge, Capped Call and Warrant Transactions Associated with the 2018 Notes” during the first quarter of 2019 certain warrants associated with the 2018 Notes were exercised with 1,473 shares of common stock issued in connection with such exercise.

Item 4. Mine Safety Disclosures

Not applicable.

Item 6. Exhibits

The following exhibits are included with this report:

10.1	Employment Agreement, dated effective January 14, 2019, by and between Chart Industries, Inc. and Jeffrey Lass (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed with the Securities and Exchange Commission on March 29, 2019 (File No. 001-11442)).*
10.2	Employment Agreement, dated March 26, 2019, by and between Chart Industries, Inc. and Herbert G. Hotchkiss.* (x)
10.3	Chart Industries, Inc. Cash Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed, with the Securities and Exchange Commission on March 29, 2019 (File No. 001-11442)).*
31.1	Rule 13a-14(a) Certification of the Company's Chief Executive Officer. (x)
31.2	Rule 13a-14(a) Certification of the Company's Chief Financial Officer. (x)
32.1	Section 1350 Certification of the Company's Chief Executive Officer. (xx)
32.2	Section 1350 Certification of the Company's Chief Financial Officer. (xx)
101.INS	XBRL Instance Document (x)
101.SCH	XBRL Taxonomy Extension Schema Document (x)
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document (x)
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document (x)
101.LAB	XBRL Taxonomy Extension Label Linkbase Document (x)
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document (x)

(x) Filed herewith.

(xx) Furnished herewith.

* Management contract or compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Chart Industries, Inc.
(Registrant)

Date: April 18, 2019

By: /s/ Jillian C. Evanko
Jillian C. Evanko
Chief Executive Officer and President
(Principal Executive Officer)
(Duly Authorized Officer)

By: /s/ Jeffrey R. Lass
Jeffrey R. Lass
Vice President, Chief Financial Officer and Treasurer
(Principal Financial Officer)

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Section 2: EX-10.2 (EXHIBIT 10.2)

Exhibit 10.2

EMPLOYMENT AGREEMENT

EMPLOYMENT AGREEMENT (the “Agreement”) dated March 26, 2019 by and between Chart Industries, Inc. (the “Company”) and Herbert G. Hotchkiss (the “Executive”).

The Company desires to employ Executive and to enter into an agreement embodying the terms of such employment; and

Executive desires to accept such employment and enter into such an agreement.

In consideration of the premises and mutual covenants herein and for other good and valuable consideration, the parties agree as follows:

1. Term of Employment. Subject to the provisions of Section 8 of this Agreement, Executive shall be employed by the Company, on the terms and subject to the conditions set forth in this Agreement, for the period commencing on March 26, 2019, and ending on the second anniversary of said date (the “Employment Term”). Thereafter the Employment Term shall automatically be extended on March 26 of each year for a period of one year from such date. In addition, in the event of a Change in Control (as defined below), the Employment Term shall automatically be extended for a period of three years beginning on the date of the Change in Control and ending on the third anniversary of the date of such Change in Control (unless further extended under the immediately preceding sentence). The Company or Executive may give notice to the other party that the Employment Term shall no longer be extended (the “Non-Renewal Notice”), in which event the Employment Term shall expire on the latest of: (i) such second anniversary of the original Employment Term commencement date, (ii) such third anniversary of a Change in Control, or (iii) the first anniversary of the delivery of such Non-Renewal Notice. In any case, the Employment Term may be terminated earlier under the terms and conditions set forth herein.

2. Position.

a. Title. During the Employment Term, Executive shall serve as the Company's Vice President, General Counsel & Secretary. In such position, Executive shall have such duties, authority and responsibility as shall be determined from time to time by the Board of Directors of the Company (the "Board") or the Chief Executive Officer of the Company, which duties, authority and responsibility are consistent with the position of Vice President, General Counsel & Secretary of the Company.

b. Best Efforts. During the Employment Term, Executive will devote Executive's full business time and best efforts to the performance of Executive's duties hereunder and will not engage in any other business, profession or occupation for compensation or otherwise which would conflict or interfere with the rendition of such services either directly or indirectly, without the prior written consent of the Board; provided that nothing herein shall preclude Executive, subject to the prior approval of the Board, from accepting appointment to or continue to serve on any board of directors or trustees of any business corporation or any charitable organization; provided in each case, and in the aggregate, that such activities do not conflict or interfere with the performance of Executive's duties hereunder or conflict with Section 10.

c. Place of Employment. In connection with Executive's employment by the Company, Executive shall be currently based in Ball Ground, GA, but will be required to travel as required by the Executive's duties and responsibilities.

3. Base Salary. During the Employment Term, the Company shall pay Executive a base salary at the annual rate of $350,000, payable in regular installments in accordance with the Company's usual payment practices. Executive shall be entitled to such increases in Executive's base salary, if any, as may be determined from time to time in the sole discretion of the Board or any duly authorized committee thereof. Executive's annual base salary, as in effect from time to time, is hereinafter referred to as the "Base Salary."

4. Annual Bonus. With respect to each full fiscal year during the Employment Term (commencing with the 2019 fiscal year), Executive shall be eligible to earn an annual bonus award (an "Annual Bonus") of an amount, expressed as a percentage of Executive's Base Salary, as determined by the Board, or any duly authorized committee thereof, within the first three months of each fiscal year of the Employment Term (with it being understood that such percentage of Executive's Base Salary is the "Target"), based upon the achievement of the performance targets established by the Board, or any duly authorized committee thereof, within the first three months of each fiscal year during the Employment Term. The Annual Bonus, if any, shall be paid to Executive within two and one-half (2.5) months after the end of the applicable fiscal year. Any Annual Bonus payable hereunder shall be determined in accordance with the terms of the Company's cash incentive plan, as currently in effect and as it may be amended from time to time, including any successor plan "(the Incentive Compensation Plan"). In the event of a Change In Control as defined in the Incentive Compensation Plan, the annual bonus may be pro-rated in accordance with the terms of the Incentive Compensation Plan.

5. Employee Benefits. During the Employment Term, Executive shall be entitled to participate in the Company's employee benefit plans (other than annual bonus and incentive plans) providing for health, life and disability insurance, retirement, deferred compensation and fringe benefits, as well as any equity compensation plans, as in effect from time to time (collectively "Employee Benefits"), on the same basis as those benefits are generally made available to other senior executives of the Company. Executive's right to participate in any Employee Benefits shall be subject to the applicable eligibility criteria for participation and Executive shall not be entitled to any benefits under, or based on, any Employee Benefits for any purposes of this Agreement if Executive does not during the Employment Term satisfy the eligibility criteria for participation in such Employee Benefits. Any equity incentive granted, awarded and held by the Executive shall be governed by the

applicable terms of any such grant and award, and shall not be impacted by the terms of this Agreement, except to the extent taken into account in determinations under Section 9.

6. Vacation. During the Employment Term, Executive shall be entitled to four weeks vacation and other paid time off benefits in accordance with the policies in Ball Ground, GA, and to be taken at such times as chosen by Executive.

7. Business Expenses and Perquisites.

a. Expenses. During the Employment Term, reasonable business expenses incurred by Executive in the performance of Executive's duties hereunder shall be reimbursed by the Company in accordance with Company policies.

b. Perquisites. During the Employment Term, Executive shall be eligible for an automobile allowance of up to $800 per month, consistent with the Company's current practices.

8. Termination. The Employment Term and Executive's employment hereunder may be terminated by either party at any time and for any reason; provided that Executive will be required to give the Company at least 60 days advance written notice of any resignation of Executive's employment. The provisions of this Section 8 governs Executive's rights upon Termination of Employment with the Company and its affiliates. "Termination of Employment" as used in this Agreement means the separation from service, within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended from time to time ("Code", any reference in this Agreement to a Section of the Code shall include all lawful regulations and pronouncements promulgated thereunder, as well as any successor Sections of the Code having the same or similar purpose), of Executive with the Company and all of its affiliates, for any reason, including without limitation, quit, discharge, or retirement, or a leave of absence (including military leave, sick leave, or other bona fide leave of absence such as temporary employment by the government if the period of such leave exceeds the greater of six months, or the period for which Executive's right to reemployment is provided either by statute or by contract) or permanent decrease in service to a level that is no more than Twenty Percent (20%) of its prior level. For this purpose, whether a Termination of Employment has occurred is determined based on whether it is reasonably anticipated that no further services will be performed by Executive after a certain date or that the level of bona fide services Executive will perform after such date (whether as an employee or as an independent contractor) would permanently decrease to no more than Twenty Percent (20%) of the average level of bona fide services performed (whether as an employee or an independent contractor) over the immediately preceding 36-month period (or the full period of services if Executive has been providing services less than 36 months). The terms "Terminate" or "Terminated," when used in reference to Executive's employment or the Employment Period, shall refer to a Termination of Employment as set forth in this paragraph. "Date of Termination" refers to the effective date of Executive's Termination of Employment.

a. Termination By the Company For Cause or By Executive Resignation Without Good Reason.

(i) Events. The Employment Term and Executive's employment hereunder may be terminated by the Company for Cause (as defined below) and shall terminate automatically upon Executive's resignation without Good Reason (as defined in Section 8(c)); provided that Executive will be required to give the Company at least 60 days advance written notice of a resignation without Good Reason.

(ii) For Cause. For purposes of this Agreement, "Cause" shall mean the Executive's (A) willful failure to perform duties which, if curable, is not cured promptly, or in any event within ten (10) days, following the first written notice of such failure from the Company, (B) commission of, or plea of guilty or no contest to a (x) felony or (y) crime involving moral turpitude, (C) willful malfeasance or misconduct which is demonstrably injurious to the Company or its subsidiaries or affiliates, (D) material breach of the material terms of this Agreement, including, without limitation, any non-competition, non-solicitation or confidentiality provisions, (E) commission of any act of gross negligence, corporate waste, disloyalty or unfaithfulness to the Company which adversely affects the business of the Company or its subsidiaries or affiliates, or (F) any other act or course of conduct which will demonstrably have a material adverse effect on the Company, a subsidiary or affiliate's business.

(iii) Compensation. If Executive's employment is terminated by the Company for Cause, or if Executive resigns without Good Reason, Executive shall be entitled to receive the amounts in clauses (A) through (D) below referred to herein as "Accrued Rights":

(A) the Base Salary through the Date of Termination;

(B) any Annual Bonus earned, but unpaid, as of the Date of Termination for the immediately preceding fiscal year, paid in accordance with Section 4 (except to the extent payment is otherwise deferred pursuant to any applicable deferred compensation arrangement with the Company);

(C) reimbursement, within 60 days following submission by Executive to the Company of appropriate supporting documentation, for any unreimbursed business expenses properly incurred by Executive in accordance with Company policy prior to the date of Executive's Termination of Employment; provided claims for such reimbursement (accompanied by appropriate supporting documentation) are submitted to the Company within 90 days following the date of Executive's Termination of Employment; and

(D) such Employee Benefits, if any, as to which Executive may be entitled under the employee benefit plans of the Company, including payment for any accrued but unused vacation within 30 days following the date of Executive's Date of Termination.

Following such Termination of Employment by the Company for Cause or resignation by Executive without Good Reason, except as set forth in this Section 8(a)(iii), Executive shall have no further rights to any compensation or any other benefits under this Agreement.

b. Disability or Death.

(i) Events. The Employment Term and Executive's employment hereunder shall terminate upon Executive's death and may be terminated by the Company if Executive becomes physically or mentally incapacitated and is therefore unable for a period of six (6) consecutive months or for an aggregate of nine (9) months in any twenty-four (24) consecutive month period to perform Executive's duties (such incapacity is hereinafter referred to as "Disability"). In no event shall an Executive's employment be continued beyond the 29th month of absence due to Executive's Disability. Any question as to the existence of the Disability of Executive as to which Executive and the Company cannot agree shall be determined in writing by a qualified independent physician mutually acceptable to Executive and the Company. If Executive and the Company cannot agree as to a qualified independent physician, each shall appoint such a physician and those two physicians shall select a third who shall make such determination in writing. The determination of Disability made in writing to the Company and Executive shall be final and conclusive for all purposes of the Agreement.

(ii) Compensation. Upon Executive's Termination of Employment hereunder for either Disability or death, Executive or Executive's estate (as the case may be) shall be entitled to receive:

(A) the Accrued Rights; and

(B) a pro rata portion of the Annual Bonus, if any, that Executive would have been entitled to receive pursuant to Section 4 hereof for such year based upon the Company's actual results for the year of termination and the percentage of the fiscal year that shall have elapsed through the Executive's Date of Termination, payable to Executive pursuant to Section 4 had Executive's employment not terminated.

Following Executive's Termination of Employment due to death or Disability, except as set forth in this Section 8 (b)(ii), Executive shall have no further rights to any compensation or any other benefits under this Agreement.

c. Termination by the Company Without Cause or Resignation by Executive for Good Reason.

(i) Events. The Employment Term and Executive's employment hereunder may be terminated by the Company without Cause or by Executive's resignation for Good Reason at any time including during the Protected Period (as defined below).

(ii) Good Reason. For purposes of this Agreement, "Good Reason" shall mean, without Executive's consent: (i) a material diminution in Executive's base salary (excluding any general salary reduction similarly affecting substantially all other senior executives of the Company as a result of a material adverse change in the Company's prospects or business); (ii) a material diminution in Executive's authority, duties, or responsibilities; (iii) a material change in the geographic location at which Executive must perform services; or (iv) any other action or inaction that constitutes a material breach by the Company of this Agreement; provided, however, that "Good Reason" shall not be deemed to exist unless: (A) the Executive has provided notice to the Company of the existence of one or more of the conditions listed in (i) through (iv) within 90 days after the initial occurrence of such condition or conditions; and (B) such condition or conditions have not been cured by the Company within 30 days after receipt of such notice. Simply the receipt by the Executive of a Non-Renewal Notice from the Company shall not, in and of itself, be deemed to be an event of "Good Reason" under this Agreement.

(iii) Protected Period. For purposes of this Agreement, "Protected Period" shall mean the period of time commencing on the date of a Change in Control and ending two years after such date.

(iv) Change in Control. For purposes of this Agreement, "Change in Control" shall mean, with respect to the Executive, the happening of any of the following events (but only if with respect to the Executive, such event would constitute a change in the ownership or effective control of the corporation, or in the ownership of a substantial portion of the assets of the corporation, as defined under Section 409A of the Code):

(A) a change in the ownership of the Company (or any affiliate which either employs the Executive or is a direct or indirect parent of such employer) by which any one person, or more than one person acting as a group, acquires ownership of stock of the Company (or such an affiliate) that, together with stock held by such person or group, constitutes more than Fifty Percent (50%) of the total fair market value or total voting power of the stock of the Company (or such an affiliate). However, if any one person, or more than one person acting as a group, is considered to own more than 50% of the total fair market value or total voting power of the stock of the Company (or such an affiliate), the acquisition of additional stock by the same person or persons is not considered to cause a Change in Control. (An increase in the percentage of stock owned by any one person, or persons acting as a group, as a result of a transaction in which the Company (or such an affiliate) acquires its stock in exchange for property will be treated as an acquisition of stock for purposes of this definition. This parenthetical phrase applies only when there is a transfer of stock of the Company (or issuance of stock of the Company) (or such an affiliate) and stock in the Company (or such an affiliate) remains outstanding after the transaction.)

(B) a change in effective control of the Company (or any affiliate which either employs the Executive or is a direct or indirect parent of such employer) by which:

(1) any one person, or more than one person acting as a group, acquires (or has acquired during the 12-month period ending on the date of the most recent acquisition by such person or persons) ownership of stock of the Company (or such an affiliate) possessing Thirty Percent (30%) or more of the total voting power of the stock of the Company (or such an affiliate); or

(2) a majority of members of the Board of Directors is replaced during any 12-month period by Directors whose appointment or election is not endorsed by a majority of the members of the Board of Directors before the date of the appointment or election.

(C) a change in the ownership of a substantial portion of the assets of the Company (or any affiliate which either employs the Executive or is a direct or indirect parent of such employer) by which any one person, or more than one person acting as a group, acquires (or has acquired during the 12-month period ending on the date of the most recent acquisition by such person or persons) assets from the Company (or such an affiliate) that have a total gross fair market value equal to or more than Forty Percent (40%) of the total gross fair market value of all of the assets of the Company (or such an affiliate) immediately prior to such acquisition or acquisitions. For this purpose, gross fair market value means the value of the assets of the corporation, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets.

For purposes of this definition, persons will be considered to be acting as a group if they are owners of a corporation that enters into a merger, consolidation, purchase or acquisition of stock, or similar business transaction with the Company. If a person, including an entity, owns stock in both corporations that enter into a merger, consolidation, purchase or acquisition of stock, or similar transaction, such shareholder is considered to be acting as a group with other shareholders only with respect to the ownership in that corporation before the transaction giving rise to the change and not with respect to the ownership interest in the other corporation.

(v) Compensation if Terminated Outside of Protected Period. If, at any time other than during the Protected Period, the Executive's employment is terminated by the Company without Cause (other than by reason of death or Disability) or if Executive resigns for Good Reason within 6 months of the condition giving rise to the Good Reason, Executive shall be entitled to receive:

(A) the Accrued Rights;

(B) subject to Executive's (x) continued compliance with the provisions of Sections 10 and 11 and (y) execution and delivery of a general release of claims against the Company and its affiliates in a form reasonably acceptable to the Company, payment in one lump sum of:

(1) 100% of the greater of the current Base Salary or Executive's highest Base Salary paid within the Employment Term; plus

(2) the greater of (i) 100% of Executive's Target Annual Bonus for the fiscal year in which Executive's Termination of Employment occurs or (ii) 100% of Executive's Target Annual Bonus for the fiscal year immediately preceding the fiscal year in which Executive's Termination of Employment occurs,

payable to Executive in one lump sum immediately following the expiration of the revocation period provided for in such release, but in no event later than two and a half (2-1/2) months after the end of the year in which the Executive's Termination of Employment occurred; and

(C) a lump sum payment equal to the premium subsidy the Company would have otherwise paid on Executive's behalf under the Company's health insurance plan had he remained employed for the twelve (12) months period following the Date of Termination.

(vi) Compensation if Terminated during Protected Period. If, during the Protected Period, either the Executive's employment is Terminated by the Company without Cause (other than by reason of death or Disability) or if Executive resigns for Good Reason, Executive shall be entitled to receive:

(A) the Accrued Rights;

(B) subject to Executive's (x) continued compliance with the provisions of Sections 10 and 11 and (y) execution and delivery of a general release of claims against the Company and its affiliates in a form reasonably acceptable to the Company, payment in one lump sum of:

(1) 100% of the greater of the current Base Salary or Executive's highest Base Salary paid within the Employment Term; plus

(2) the greater of (i) 100% of Executive's Target Annual Bonus for the fiscal year in which Executive's Termination of Employment occurs or (ii) 100% of Executive's Target Annual Bonus for the fiscal year immediately preceding the fiscal year in which the Change in Control occurs;

payable generally within ten (10) business days after Executive's Date of Termination, or, if later, upon the expiration of the revocation period provided for in such release, except when such payment is delayed and paid in accordance with Section 9(b) for a determination under Section 9, but in no event later than two and a half (2-1/2) months after the end of the year in which the Executive's Termination of Employment occurred; and

(C) a lump sum payment equal to the premium subsidy the Company would have otherwise paid on Executive's behalf under the Company's health insurance plan had he remained employed for the twelve (12) months period following the Date of Termination.

Following Executive's Termination of Employment by the Company without Cause (other than by reason of Executive's death or Disability) or by Executive's resignation for Good Reason, except as set forth in this Section 8(c), Executive shall have no further rights to any compensation or any other benefits under this Agreement.

d. Expiration of Employment Term.

(i) Election Not to Renew the Employment Term. In the event either party provides the other with the Non-Renewal Notice pursuant to Section 1, unless Executive's employment is earlier terminated pursuant to paragraphs (a), (b) or (c) of this Section 8, the expiration of the Employment Term and the Executive's Termination of Employment hereunder (whether or not Executive continues as an employee of the Company thereafter) shall be deemed to occur on the close of business on the last day of such Employment Term and Executive shall be entitled to receive the Accrued Rights. The Company's providing of a Non-Renewal Notice under Section 1 shall not prejudice in any way Executive's right to assert an event of Good Reason (as such term is defined above), whether related to such Non-Renewal Notice or otherwise, at any time during the Employment Term.

Following such termination of Executive's employment hereunder, except as set forth in this Section 8(d)(i), Executive shall have no further rights to any compensation or any other benefits under this Agreement.

(ii) Continued Employment Beyond the Expiration of the Employment Term. Unless the parties otherwise agree in writing, continuation of Executive's employment with the Company beyond the expiration of the Employment Term shall be deemed an employment at-will and shall not be deemed to extend any of the provisions of this Agreement and Executive's employment may thereafter be terminated at will by either Executive or the Company; provided that the provisions of Sections 10, 11 and 12 of this Agreement shall survive any termination of this Agreement or Executive's Termination of Employment hereunder.

e. Notice of Termination. Any purported Termination of Employment by the Company or by Executive (other than due to Executive's death) shall be communicated by written Notice of Termination to the other party hereto in accordance with Section 13(i) hereof. For purposes of this Agreement, a "Notice of Termination" shall mean a notice which shall indicate the specific termination provision in this Agreement relied upon and shall set forth in reasonable detail the facts and circumstances claimed to provide a basis for Termination of Employment under the provision so indicated.

f. Board/Committee Resignation. Upon termination of Executive's employment for any reason, Executive agrees to resign, as of the date of such termination and to the extent applicable, from the Board (and any committees thereof) and the Board of Directors (and any committees thereof) of any of the Company's affiliates.

9. Conditional Reduction in Payments.

a. Notwithstanding anything in this Agreement to the contrary, in the event that it shall be determined (as hereafter provided) that any payment or distribution provided for pursuant to the terms of this Agreement for the benefit of Executive, when aggregated with any other payments or benefits received or receivable by Executive (individually and collectively, a "Payment"), would constitute "parachute payments" within the meaning of Section 280G of the Code, and would be subject to the excise tax imposed by Section 4999 of the Code or to any similar tax imposed by state or local law, or to any interest or penalties with respect to such taxes (such tax or taxes, together with any such interest and penalties, being hereafter collectively referred to as the “Excise Tax”), then Executive’s payments under Section 8 hereof shall be either:

(i) delivered in full, or

(ii) reduced to the minimum extent necessary so that no portion of the Payment, after such reduction, constitutes an Excess Parachute Payment (as defined in Section 280G(b) of the Code) (the amount of such reduction shall be referred to as the “Excess Amount”);

whichever of the foregoing amounts, taking into account the applicable federal, state and local income taxes and the Excise Tax, results in the receipt by Executive on an after-tax basis of the greatest amount of benefits, notwithstanding that all or some portion of such benefits may be taxable under Section 4999 of the Code.

b. All determinations required to be made under this Section 9, including whether an Excise Tax is payable by Executive and the amount of such Excise Tax and whether a reduction in the Payment is to be made and the amount of such Excess Amount, if any, shall be made by a nationally recognized accounting firm proposed by the Company and reasonably acceptable to Executive (which accounting firm shall be the “Accounting Firm” hereunder). The Company or Executive shall direct the Accounting Firm to submit its determination and detailed supporting calculations to both the Company and Executive within 30 calendar days after the Date of Termination, if applicable, and any other time or times as may be requested by the Company or Executive. The Company shall pay Executive’s payments under Section 8 hereof, as reduced or not reduced pursuant to the final determination of the Accounting Firm and Subsection 9(a) above, no later than the time otherwise required hereunder. If the Accounting Firm determines that no Excise Tax is payable by Executive, it shall, at the same time as it makes such determination, furnish the Company and Executive an opinion that Executive has substantial authority not to report any Excise Tax on Executive’s federal, state or local income or other tax return.

c. As a result of the uncertainty in the application of Section 4999 of the Code and the possibility of similar uncertainty regarding applicable state or local tax law at the time of any determination by the Accounting Firm hereunder, it is possible that, pursuant to a final determination of a court or an Internal Revenue Service proceeding which has been finally and conclusively resolved, an Excess Parachute Payment was received by Executive which would have been intended to be reduced by the Excess Amount pursuant to Subsection 9(a) above. In such case, then such amount received by Executive shall be deemed to be an overpayment, and Executive shall repay the amount equal to the Excess Amount (to the extent received by Executive) to the Company on demand (but no less than ten days after Executive receives written demand).

d. The Company and Executive shall each provide the Accounting Firm access to and copies of any books, records and documents in the possession of the Company or

Executive, as the case may be, reasonably requested by the Accounting Firm, and otherwise cooperate with the Accounting Firm in connection with the preparation and issuance of the determinations and calculations contemplated by Subsection 9(b). Any determination by the Accounting Firm as to the amount of any Excess Amount shall be binding upon the Company and Executive.

e. The fees and expenses of the Accounting Firm for its services in connection with the determinations and calculations contemplated by Subsection 9(b) shall be borne by the Company.

10. Non-Competition.

a. Executive acknowledges and recognizes the highly competitive nature of the businesses of the Company and its affiliates and accordingly agrees as follows:

(i) During the Employment Term and the twelve (12) months following the date of Executive's Termination of Employment (the "Restricted Period"), Executive will not, whether on Executive's own behalf or on behalf of or in conjunction with any person, firm, partnership, joint venture, association, corporation or other business organization, entity or enterprise whatsoever ("Person"), directly or indirectly solicit or assist in soliciting in competition with the Company, the business of any client or customer or prospective client or customer:

(A) with whom Executive had personal contact or dealings on behalf of the Company during the one year period preceding the earlier of the Executive's Termination of Employment or such solicitation;

(B) with whom employees reporting to Executive have had personal contact or dealings on behalf of the Company during the one year immediately preceding the Executive's Termination of Employment; or

(C) for whom Executive had direct or indirect responsibility during the one year immediately preceding Executive's Termination of Employment.

(ii) During the Restricted Period, Executive will not directly or indirectly:

(A) engage in (1) the business of manufacturing equipment used in (x) the production, storage and end-use of hydrocarbon and industrial gases business or (y) low temperature and cryogenic applications, (2) any other businesses which the Company or its subsidiaries engage in during the term of Executive's employment with the Company and (3) any businesses which, as of the date of Executive's Termination of Employment, the Company or its subsidiaries both (x) have specific plans to conduct in the future (and as to which Executive is aware of such planning) and (y) have allocated or invested capital as of the date of such Termination of Employment (a "Competitive Business");

(B) enter the employ of, or render any services to, any Person (or any division or controlled or controlling affiliate of any Person) who or which engages in a Competitive Business;

(C) acquire a financial interest in, or otherwise become actively involved with, any Competitive Business, directly or indirectly, as an individual, partner, shareholder, officer, director, principal, agent, trustee or consultant; or

(D) interfere with, or attempt to interfere with, business relationships (whether formed before, on or after the date of this Agreement) between the Company or any of its affiliates and customers, clients, suppliers, partners, members or investors of the Company or its affiliates.

(iii) Notwithstanding anything to the contrary in this Agreement, Executive may, directly or indirectly own, solely as an investment, securities of any Person engaged in the business of the Company or its affiliates which are publicly traded on a national or regional stock exchange or quotation system or on the over-the-counter market if Executive (i) is not a controlling person of, or a member of a group which controls, such person and (ii) does not, directly or indirectly, own 5% or more of any class of securities of such Person.

(iv) During the Restricted Period, Executive will not, whether on Executive's own behalf or on behalf of or in conjunction with any Person, directly or indirectly:

(A) solicit or encourage any employee of the Company or its affiliates to leave the employment of the Company or its affiliates; or

(B) hire any such employee who was employed by the Company or its affiliates as of the date of Executive's Termination of Employment with the Company or who left the employment of the Company or its affiliates coincident with, or within one year prior to or after, the termination of Executive's employment with the Company.

(v) During the Restricted Period, Executive will not, directly or indirectly, solicit or encourage to cease to work with the Company or its affiliates any consultant then under contract with the Company or its affiliates.

b. It is expressly understood and agreed that although Executive and the Company consider the restrictions contained in this Section 10 to be reasonable, if a final judicial determination is made by a court of competent jurisdiction that the time or territory or any other restriction contained in this Agreement is an unenforceable restriction against Executive, the provisions of this Agreement shall not be rendered void but shall be deemed amended to apply as to such maximum time and territory and to such maximum extent as such court may judicially determine or indicate to be enforceable. Alternatively, if any court of competent jurisdiction finds that any restriction contained in this Agreement is unenforceable, and such restriction cannot be amended so as to make it enforceable, such finding shall not affect the enforceability of any of the other restrictions contained herein.

11. Confidentiality; Intellectual Property.

a. Confidentiality.

(i) Executive will not at any time (whether during or after Executive's employment with the Company) (x) retain or use for the benefit, purposes or account of Executive or any other Person other than the Company; or (y) disclose, divulge, reveal, communicate, share, transfer or provide access to any Person outside the Company (other than its professional advisers who are bound by confidentiality obligations or other than in performing his or her duties on behalf of the Company consistent with Company policies), any non-public, proprietary or confidential information--including without limitation trade secrets, know-how, research and development, software, databases, inventions, processes, formulae, technology, designs and other intellectual property, information concerning finances, investments, profits, pricing, costs, products, services, vendors, customers, clients, partners, investors, personnel, compensation, recruiting, training, advertising, sales, marketing, promotions, government and regulatory activities and approvals -- concerning the past, current or future business, activities and operations of the Company, its subsidiaries or affiliates and/or any third party that has disclosed or provided any of the same to the Company on a confidential basis ("Confidential Information") without the prior written authorization of the Board or a duly authorized committee thereof.

(ii) "Confidential Information" shall not include any information that is (a) generally known to the industry or the public other than as a result of Executive's breach of this covenant or any breach of other confidentiality obligations by third parties; (b) made legitimately available to Executive by a third party without breach of any confidentiality obligation; or (c) required by law to be disclosed; provided that Executive shall give prompt written notice to the Company of such requirement, disclose no more information than is so required, and cooperate with any attempts by the Company to obtain a protective order or similar treatment.

(iii) Upon termination of Executive's employment with the Company for any reason, Executive shall (x) cease and not thereafter commence use of any Confidential Information or intellectual property (including without limitation, any patent, invention, copyright, trade secret, trademark, trade name, logo, domain name or other source indicator) owned or used by the Company, its subsidiaries or affiliates; (y) immediately destroy, delete, or return to the Company, at the Company's option, all originals and copies in any form or medium (including memoranda, books, papers, plans, computer files, letters and other data) in Executive's possession or control (including any of the foregoing stored or located in Executive's office, home, laptop or other computer, whether or not Company property) that contain Confidential Information or otherwise relate to the business of the Company, its affiliates and subsidiaries, except that Executive may retain only those portions of any personal notes, notebooks and diaries that do not contain any Confidential Information; and (z) notify and fully cooperate with the Company regarding the delivery or destruction of any other Confidential Information of which Executive is or becomes aware.

b. Intellectual Property.

(i) If Executive has created, invented, designed, developed, contributed to or improved any works of authorship, inventions, intellectual property, materials, documents or other work product (including without limitation, research, reports, software, databases, systems, applications, presentations, textual works, content, or audiovisual materials) ("Works"), either alone or with third parties, at any time during Executive's employment by the Company and within the scope of such employment and/or with the use of any of the Company's resources ("Company Works"), Executive shall promptly and fully disclose the same, to the best of his or her knowledge, to the Company and hereby irrevocably assigns, transfers and conveys, to the maximum extent permitted by applicable law, all rights and intellectual property rights therein (including rights under patent, industrial property, copyright, trademark, trade secret, unfair competition and related laws) to the Company to the extent ownership of any such rights does not vest originally in the Company.

(ii) Executive shall take all reasonably requested actions and execute all reasonably requested documents (including any licenses or assignments required by a government contract) at the Company's expense (but without further remuneration) to assist the Company in validating, maintaining, protecting, enforcing, perfecting, recording, patenting or registering any of the Company's rights in the Company Works.

(iii) Executive shall not improperly use for the benefit of, bring to any premises of, divulge, disclose, communicate, reveal, transfer or provide access to, or share with the Company any confidential, proprietary or non-public information or intellectual property relating to a former employer or other third party without the prior written permission of such third party. Executive hereby indemnifies, holds harmless and agrees to defend the Company and its officers, directors, partners, employees, agents and representatives from any breach of the foregoing covenant. Executive shall comply with all relevant policies and guidelines of the Company, including regarding the protection of confidential information and intellectual property and potential conflicts of interest. Executive acknowledges that the Company may amend any such policies and guidelines from time to time, and that Executive remains at all times bound by their most current version.

(iv) The provisions of Section 11 shall survive the Executive's Termination of Employment for any reason.

12. Specific Performance. Executive acknowledges and agrees that the Company's remedies at law for a breach or threatened breach of any of the provisions of Section 10 or Section 11 would be inadequate and the Company would suffer irreparable damages as a result of such breach or threatened breach. In recognition of this fact, Executive agrees that, in the event of such a breach or threatened breach, in addition to any remedies at law, the Company, without posting any bond, shall be entitled to cease making any payments or providing any benefit otherwise required by this Agreement and obtain equitable relief in the form of specific performance, temporary restraining order, temporary or permanent injunction or any other equitable remedy which may then be available.

13. Miscellaneous.

a. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to conflicts of laws principles thereof.

b. Dispute Resolution. Except as otherwise provided in Section 12 of this Agreement, any controversy, dispute, or claim arising out of, in connection with, or in relation to, the interpretation, performance or breach of this Agreement, including, without limitation, the validity, scope, and enforceability of this section, may at the election of any party, be solely and finally settled by arbitration conducted in Atlanta, Georgia, by and in accordance with the then existing rules for commercial arbitration of the American Arbitration Association, or any successor organization and with the Expedited Procedures thereof (collectively, the "Rules"). Each of the parties hereto agrees that such arbitration shall be conducted by a single arbitrator selected in accordance with the Rules; provided that such arbitrator shall be experienced in deciding cases concerning the matter which is the subject of the dispute. Any of the parties may demand arbitration by written notice to the other and to the Arbitrator set forth in this Section 13(b) ("Demand for Arbitration"). Each of the parties agrees that if possible, the award shall be made in writing no more than 30 days following the end of the proceeding. Any award rendered by the arbitrator(s) shall be final and binding and judgment may be entered on it in any court of competent jurisdiction. Each of the parties hereto agrees to treat as confidential the results of any arbitration (including, without limitation, any findings of fact and/or law made by the arbitrator) and not to disclose such results to any unauthorized person. The parties intend that this agreement to arbitrate be valid, enforceable and irrevocable. In the event of any arbitration with regard to this Agreement, each party shall pay its own legal fees and expenses except to the extent set forth in Section 13(p), provided, however, that the Company agrees to pay the cost of the Arbitrator’s fees.

c. Entire Agreement/Amendments. This Agreement contains the entire understanding of the parties with respect to the employment of Executive by the Company. There are no restrictions, agreements, promises, warranties, covenants or undertakings between the parties with respect to the subject matter herein other than those expressly set forth herein. This Agreement may not be altered, modified, or amended except by written instrument signed by the parties hereto.

d. No Waiver. The failure of a party to insist upon strict adherence to any term of this Agreement on any occasion shall not be considered a waiver of such party’s rights or deprive such party of the right thereafter to insist upon strict adherence to that term or any other term of this Agreement.

e. Severability. In the event that any one or more of the provisions of this Agreement shall be or become invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions of this Agreement shall not be affected thereby.

f. Assignment. This Agreement, and all of Executive's rights and duties hereunder, shall not be assignable or delegable by Executive. Any purported assignment or delegation by Executive in violation of the foregoing shall be null and void ab initio and of no force and effect. This Agreement may be assigned by the Company to a person or entity which is an affiliate or a successor in interest to substantially all of the business operations of the Company. The Company will require any person or entity which is an affiliate or a successor in interest to substantially all of the business operations of the Company to assume all obligations of the Company under this Agreement.

g. Set-Off; No Mitigation. The Company's obligation to pay Executive the amounts provided and to make the arrangements provided hereunder shall be subject to set-off, counterclaim or recoupment of amounts owed by Executive to the Company or its affiliates (the "debt"), where such debt is incurred in the ordinary course of the service relationship between Executive and the Company, the entire amount of reduction in any of the Company's taxable years does not exceed $5,000 and the reduction is made at the same time and in the same amount as the debt otherwise would have been due and collected from Executive. Executive shall not be required to mitigate the amount of any payment provided for pursuant to this Agreement by seeking other employment.

h. Successors; Binding Agreement. This Agreement shall inure to the benefit of and be binding upon personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

i. Notice. For the purpose of this Agreement, notices and all other communications provided for in the Agreement shall be in writing and shall be deemed to have been duly given when delivered by hand or overnight courier or three days after it has been mailed by United States registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth below in this Agreement, or to such other address as either party may have furnished to the other in writing in accordance herewith, except that notice of change of address shall be effective only upon receipt.

If to the Company:

Chart Industries, Inc.
3055 Torrington Drive
Ball Ground, Georgia 30107
Facsimile: (770) 721-8801
Attention: Chief Executive Officer and Chief Human Resources Officer

If to Executive:

To the most recent address of Executive set forth in the personnel records of the Company.

j. Executive Representation. Executive hereby represents to the Company that the execution and delivery of this Agreement by Executive and the Company and the performance by Executive of Executive's duties hereunder shall not constitute a breach of, or otherwise contravene, the terms of any employment agreement or other agreement or policy to which Executive is a party or otherwise bound.

k. Prior Agreements. This Agreement supercedes all prior agreements and understandings (including verbal agreements) between Executive and the Company and/or its affiliates regarding the terms and conditions of Executive's employment with the Company and/or its affiliates, except that this Agreement does not supercede any stock option agreement, performance unit agreement, restricted stock agreement or indemnification agreement.

l. Cooperation. Executive shall provide Executive's reasonable cooperation in connection with any action or proceeding (or any appeal from any action or proceeding) which relates to events occurring during Executive's employment hereunder. This provision shall survive any termination of this Agreement.

m. Withholding Taxes. The Company may withhold from any amounts payable under this Agreement such Federal, state and local taxes as may be required to be withheld pursuant to any applicable law or regulation.

n. Counterparts. This Agreement may be signed in counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

o. Compliance with Section 409A. Notwithstanding anything herein to the contrary, (i) if at the time of Executive's Termination of Employment with the Company Executive is a "specified employee" as defined in Section 409A of the Code, and the deferral of the commencement of any payments or benefits otherwise payable hereunder as a result of such Termination of Employment is necessary in order to prevent the imposition of any accelerated or additional tax under Section 409A of the Code, then the Company will defer the commencement of the payment of any such payments or benefits hereunder (without any reduction in such payments or benefits ultimately paid or provided to Executive) until the date that is six months following Executive's Termination of Employment with the Company (or the earliest date as is permitted under Section 409A of the Code), (ii) any reimbursements provided under the Agreement, including, but not limited to, in Sections 8.a.(iii)(c) and 13(p), shall be made no later than the end of Executive's taxable year following Executive's taxable year in which such expense was incurred; in addition, the amounts eligible for reimbursement, or in-kind benefits to be provided, during any one taxable year under this Agreement may not affect the expenses eligible for reimbursement in any other taxable year under this Agreement, and (iii) if any other payments of money or other benefits due to Executive hereunder could cause the application of an accelerated or additional tax under Section 409A of the Code, such payments or other benefits shall be deferred if deferral will make such payment or other benefits compliant under Section 409A of the Code, or otherwise such payment or other benefits shall be restructured, to the extent possible, in a manner, determined by the Board or any duly authorized committee thereof, that does not cause such an accelerated or additional tax or result in an additional cost to the Company. The Company shall consult with Executive in good faith regarding the implementation of the provisions of this Section 13(o); provided that neither the Company nor any of its employees or representatives shall have any liability to Executive with respect thereto.

p. Enforcement Costs. The Company is aware that upon the occurrence of a Change in Control the Board of Directors or a shareholder of the Company may then cause or attempt to cause the Company to refuse to comply with its obligations under this Agreement, or may cause or attempt to cause the Company to institute, or may institute, litigation or arbitration seeking to have this Agreement declared unenforceable, or may take, or attempt to take, other action to deny Executive the benefits intended under this Agreement. In these circumstances, the purpose of this Agreement could be frustrated. It is the intent of the Company that Executive not be required to incur the expenses associated with the enforcement of Executive's rights under this Agreement by litigation, arbitration or other legal action because the cost and expense thereof would substantially detract from the benefits intended to be extended to Executive hereunder, nor be bound to negotiate any settlement of Executive's rights hereunder under threat of incurring such expenses. Accordingly, if at any time following a Change in Control, it should appear to Executive that the Company has failed to comply with any of its obligations under this Agreement or the Company or any other person takes any action to declare this Agreement void or unenforceable, or institutes any litigation, arbitration or other legal action designed to deny, diminish or recover from Executive the benefits intended to be provided to Executive hereunder, and Executive has complied with all of Executive's obligations under Sections 10 and 11, then the Company irrevocably authorizes Executive from time to time to retain counsel of Executive's choice at the expense of the Company as provided in this Section 13(p) to represent Executive in connection with the initiation or defense of any litigation, arbitration or other legal action, whether by or against the Company or any Director, officer, shareholder or other person affiliated with the Company, in any jurisdiction. The Company's obligations under this Section 13(p) shall not be conditioned on Executive's success in the prosecution or defense of any such litigation, arbitration or other legal action. Notwithstanding any existing or prior attorney-client relationship between the Company and such counsel, the Company irrevocably consents to Executive entering into an attorney-client relationship with such counsel, and in that connection the Company and Executive agree that a confidential relationship shall exist between Executive and such counsel. The reasonable fees and expenses of counsel selected from time to time by Executive as hereinabove provided shall be paid or reimbursed to Executive by the Company on a regular, periodic basis no later than 30 days after presentation by Executive of a statement or statements prepared by such counsel in accordance with its customary practices, up to a maximum of $250,000 per year for each of the two years following the year in which the Change in Control occurs, provided that Executive presents such statement(s) no later than 30 days prior to the end of Executive's taxable year following the year in which such expenses were incurred. Notwithstanding the foregoing, this Section 13(p) shall not apply at any time unless a Change in Control has occurred.

[Signatures on following page]

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

CHART INDUSTRIES, INC.
(“Company”)

By:__/s/ Gerald F. Vinci________________ __/s/ Herbert G. Hotchkiss_______________

Name: Gerald F. Vinci Herbert G. Hotchkiss

Title: Chief Human Resources Officer

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Section 3: EX-31.1 (EXHIBIT 31.1)

Exhibit 31.1

CERTIFICATION

I, Jillian C. Evanko, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Chart Industries, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. I am responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under my supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to me by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under my supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report my conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: April 18, 2019

/s/ Jillian C. Evanko

Jillian C. Evanko

Chief Executive Officer and President

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Section 4: EX-31.2 (EXHIBIT 31.2)

Exhibit 31.2

CERTIFICATION

I, Jeffrey R. Lass, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Chart Industries, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. I am responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under my supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to me by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under my supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report my conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: April 18, 2019

/s/ Jeffrey R. Lass

Jeffrey R. Lass

Vice President, Chief Financial Officer and Treasurer

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Section 5: EX-32.1 (EXHIBIT 32.1)

Exhibit 32.1

Certification
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code), the undersigned officer of Chart Industries, Inc., a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

(a) The Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2019 (the "Form 10-Q") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(b) The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company as of, and for, the periods presented in the Form 10-Q.

Dated: April 18, 2019

/s/ Jillian C. Evanko

Jillian C. Evanko
Chief Executive Officer and President

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Form 10-Q or as a separate disclosure document.

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

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Section 6: EX-32.2 (EXHIBIT 32.2)

Exhibit 32.2

Certification
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code), the undersigned officer of Chart Industries, Inc., a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

(a) The Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2019 (the "Form 10-Q") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(b) The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company as of, and for, the periods presented in the Form 10-Q.

Dated: April 18, 2019

/s/ Jeffrey R. Lass

Jeffrey R. Lass
Vice President, Chief Financial Officer and Treasurer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Form 10-Q or as a separate disclosure document.

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

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